



## CCRAS ANNUAL REPORT 2019-20

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**Audited Annual Accounts in Separate Booklet is Annexed with Annual Report**





## ABBREVIATIONS

1.	AFI	- Ayurvedic Formulary of India
2.	AHC	- Ayurvedic Health Centre
3.	A-HIMS	- AYUSH Health Information Management System
4.	AIIMS	- All India Institute of Medical Sciences
5.	AMHCP	- Ayurveda Mobile Health Care Programme
6.	APC	- Ayurvedic Pharmacopoeia Committee
7.	API	- Ayurvedic Pharmacopoeia of India
8.	ASU	- Ayurveda, Siddha & Unani
9.	BHU	- Banaras Hindu University
10.	BRS	- Botanical Reference Substance
11.	COA	- Certificate of Analysis
12.	Co-I	- Co Investigator
13.	CTD	- Comprehensive Technical Dossier
14.	CTRI	- Clinical Trial Registry of India
15.	DTL	- Drug Testing Laboratory
16.	EHR	- Electronic Health Record
17.	EMR	- Extra Mural Research
18.	IAEC	- Institutional Animal Ethical Committee
19.	ICD	- International Classification of Diseases
20.	ICMR	- Indian Council of Medical Research
21.	IEC	- Institutional Ethical Committee
22.	IEC	- Information, Education and Communication
23.	IMR	- Intra Mural Research
24.	IPD	- In-Patient Department
25.	ISC	- Internal Scrutiny Committee
26.	JDRAS	- Journal of Drug Research in Ayurvedic Sciences
27.	JRAS	- Journal of Research in Ayurvedic Sciences
28.	KAP	- Knowledge, Aptitude and Practice
29.	LHT	- Local Health Tradition
30.	MEBS	- Medico-Ethno Botanical Survey
31.	NCD	- Non Communicable Diseases
32.	NER	- North East Region
33.	NPCDCS	- National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke
34.	NRDR	- National Raw Drug Repository
35.	OPD	- Out-Patient Department
36.	PI	- Principal Investigator
37.	QCI	- Quality Council of India
38.	QOL	- Quality Of Life



39. RCH - Reproductive & Child Health
40. RMIS - Research Management Information System
41. SAB - Scientific Advisory Board
42. SACTP - Standardized Ayurvedic Case Taking Protocol
43. SAG - Scientific Advisory Group
44. SCSP - Scheduled Castes Sub Plan
45. THCRP - Tribal Health Care Research Programme
46. TSP - Tribal Sub Plan
47. CARICDND - Central Ayurveda Research Institute for Cardiovascular Diseases, New Delhi
48. NARIPC - National Ayurveda Research Institute for Panchakarma, Cheruthuruthy
49. CARIHDB - Central Ayurveda Research Institute for Hepatobiliary Disorders, Bhubaneswar
50. CARIDDK - Central Ayurveda Research Institute for Drug Development, Kolkata
51. CARIRDP - Central Ayurveda Research Institute for Respiratory Disorders, Patiala
52. RARIEDL - Regional Ayurveda Research Institute for Eye Diseases, Lucknow
53. CARICM - Central Ayurveda Research Institute for Cancer, Mumbai
54. RARIECDJ - Regional Ayurveda Research Institute for Endocrine Disorders, Jaipur
55. RARIDDG - Regional Ayurveda Research Institute for Drug Development, Gwalior
56. RARISDV - Regional Ayurveda Research Institute for Skin Disorders, Vijayawada
57. RARIMCHN - Regional Ayurveda Research Institute for Mother and Child Health, Nagpur.
58. RARIMDB - Regional Ayurveda Research Institute for Metabolic Disorders, Bangalore
59. RARILSDT - Regional Ayurveda Research Institute for Life style related Disorders, Trivandrum
60. RARIIDP - Regional Ayurveda Research Institute for Infectious Diseases, Patna.
61. RARIGIDG - Regional Ayurveda Research Institute for Gastro-Intestinal Disorders, Guwahati
62. RARIG - Regional Ayurveda Research Institute, Gangtok
63. RARII - Regional Ayurveda Research Institute, Itanagar
64. RARIUDJ - Regional Ayurveda Research Institute for Urinary Disorders, Jammu
65. RARINDM - Regional Ayurveda Research Institute for Nutritional Disorders, Mandi
66. RARISDA - Regional Ayurveda Research Institute for Skin Disorders, Ahmedabad
67. RARIR - Regional Ayurveda Research Institute, Ranikhet
68. RARIJ - Regional Ayurveda Research Institute, Jhansi
69. RAIFRP - Regional Ayurveda Institute for Fundamental Research, Pune
70. NIIMHH - National Institute of Indian Medical Heritage, Hyderabad
71. CSMRADDIC - Captain Srinivasa Murthy Regional Ayurveda Drug Development Institute, Chennai
72. ACAMH&NSB - Advanced Center for Ayurveda in Mental Health & Neurosciences, Bangalore
73. ALRCAC - Dr. Achanta Lakshmiapati Research Centre for Ayurveda, Chennai
74. RRCAP - Regional Research Center of Ayurveda, Port Blair
75. NRISRL - National Research Institute for Sowa-Rigpa, Leh
76. RARCD - Regional Ayurveda Research Centre, Dimapur
77. RARCA - Regional Ayurveda Research Centre, Agartala





## I. Executive Summary

### 1 Background & Establishment details of the Council

The Central Council for Research in Ayurvedic Sciences is a Registered Society under Societies Registration Act XXI of 1860 on 29.07.2011 (Formerly Registered as Central Council for Research in Ayurveda and Siddha on 30<sup>th</sup> March, 1978). The Central Council for Research in Ayurvedic sciences (CCRAS), an autonomous body under Ministry of AYUSH, Govt. of India is apex body in India for undertaking, coordinating, formulating, developing and promoting research on scientific lines in Ayurvedic sciences. The activities are carried out through its 31 Institutes/Centres/Units located all over India and also through collaborative studies with various Universities, Hospitals and Institutes.

### 2. Objectives of the Council

The objectives for which the Central Council is established are:

1. The formulation of aims and patterns of research on scientific lines in Ayurvedic sciences.
2. To undertake any research or other programmes in Ayurvedic sciences.
3. The prosecution of and assistance in research, the propagation of knowledge and experimental measures generally in connection with the causation, mode of spread and prevention of diseases.
4. To initiate, aid, develop and co-ordinate scientific research in different aspects, fundamental and applied of Ayurvedic sciences and to promote and assist institutions of research for the study of diseases, their prevention, causation and remedy.
5. To finance enquiries and researches for the furtherance of objects of the Central Council.
6. To exchange information with other institutions, associations and societies interested in the objects similar to those of the Central Council and specially in observation and study of diseases in East and in India in particular.
7. To prepare, print, publish and exhibit any papers, posters, pamphlets, periodicals and books for furtherance of the objects of the Central Council and contribute to such literature.
8. To issue appeals and make applications for money and funds in furtherance of the objects of the Central Council and to accept for the aforesaid purpose gifts, donations and subscriptions of cash and securities and of any property whether movable or immovable.
9. To borrow or raise monies with or without security or on security mortgage charge, hypothecation or pledge of all or any of the immovable or movable properties belonging to the Central Council or in any other manner whatsoever.
10. To invest and deal with the funds and monies of the Central Council or entrusted to the Central Council not immediately required in such manner as may from time to time be determined by the Governing Body of the Central Council.
11. To permit the funds of the Central Council to be held by the Government of India.



12. To acquire and hold, whether temporarily or permanently any movable or immovable property necessary or convenient for the furtherance of the objects of the Central Council.
13. To sell, lease, mortgage and exchange, and otherwise transfer any of the properties movable or immovable of the Central Council provided prior approval of the Central Government is obtained for the transfer of immovable property.
14. To purchase, construct, maintain and alter any buildings or works necessary or convenient for the purpose of the Central Council.
15. To undertake and accept the management of any endowment or trust fund for donation, the undertaking or acceptance whereof may seem desirable.
16. To offer prizes and grant of scholarships, including travelling scholarships in furtherance of the objects of the Central Council.
17. To create administrative, technical and ministerial and other posts under the Society and to make appointments thereto in accordance with the rules and regulations of the Society.
18. To establish a provident fund and/or pension fund for the benefit of the Central Council's employees and/or their family members.
19. To do all such other lawful things either alone or in conjunction with others as the Central Council may consider necessary or as being incidental or conducive to the attainment of the above objects.
20. To undertake R & D Consultancy projects and transfer of patents on drugs and process to industry.
21. To undertake R & D projects sponsored by industries in public/private sector.
22. To undertake international and interagency collaboration.
23. Utilization of results of research conducted and payment of share of royalties/consultancy fees to those who has contributed towards pursuit of such research.
24. To enter into arrangements with scientific agencies of other countries for exchange of scientists, study tours, training in specialized areas, conducting joint projects etc.
25. To provide technical assistance to Govt./Private agencies in matters consistent with the activities of the Council.
26. To assist Medicinal Plants Board, Government of India in achieving its objectives.
27. To constitute small Management Committees consisting of eminent Scientists/Physicians of local areas to monitor the R & D activities and suggest remedial measures for the improvement of activities of all Central as well as Research Institutes of the Council.



### 3. Brief Activities and Achievements

The Council continued its activities during the reporting period in the areas of Medicinal Plant Research (Medico-ethno botanical Survey, Pharmacognosy and Cultivation), Drug Standardization, Pharmacological Research, Clinical Research and Literary Research & Documentation Programme. The Research Oriented Public Health Care Programmes (Outreach Activities) comprise of Tribal Health Care Research Programme, Ayurvedic Mobile Health Care Research Programme under Scheduled Castes Sub Plan (SCSP), Integration of AYUSH (Ayurveda) with National Programme for Prevention and control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) and Ayurvedic Health Centres under North East Plan. Besides this, Health care services through Out-Patient Department (OPD) and In-Patient Departments (IPDs) and Special clinics for Geriatric Health care. Programme wise achievements are as under:

#### Clinical Research Programme

##### Intra Mural Clinical Research (IMR)

Under IMR, 14 IMR Clinical Research projects on 12 diseases/conditions viz. Sciatica, Osteoarthritis knee, Chronic Bronchitis, Allergic Conjunctivitis, Influenza like illness, Cervical Spondylosis, Fissure, Ano-rectal Fistula, Bronchial Asthma, Allergic Rhinitis, Primary Dysmenorrhoea & Rheumatoid Arthritis have been completed and 25 IMR Projects on 16 diseases/conditions viz., Urolithiasis, Gout, Bacterial Vaginosis, Iron Deficiency Anaemia, Chronic Bronchitis, Chronic Rhinosinusitis), *Grahani*, Migraine, Bronchial Asthma, Cognitive deficit, Dysfunctional Uterine Bleeding, Dry Age related Macular Degeneration Syndrome, Hyperacidity, Eczema, Occupational stress among IT professionals & Psoriasis have been going on.

##### Collaborative Clinical Research

Under collaborative Clinical Research, one project viz. C1-Oil for wound healing with reputed organization have been completed and 7 projects viz.; Clinical study of coded drug in the management of Dengue fever & prevention its complications in collaboration with ICMR; Ayush D for pre-diabetic subjects, Ayush D for Type-II Diabetes Mellitus, Validation & Reliability Testing of Ayurveda Diagnostic Methods, Carctrol S in Ovarian Cancer subjects, Feasibility of introducing Ayurveda intervention in Reproductive and Child Health (RCH) in PHCs of selected district of Maharashtra (effectiveness of Ayurvedic intervention for Ante-Natal care (Garbhini Paricharya) at Primary Health Care Level: A Multi-Centre Operational Study) and Ayush SL in chronic Filarial Lymphoedema subjects with reputed organizations have been going on.

#### Drug Research Programme

##### Medicinal Plant Research:

The council has continued Medicinal Plant Research - Medico-ethno-botanical survey conducted one tours in selected areas of RAIFR, Pune during the survey 40 museum samples, 4.865 Kg raw



drug collected and documented 65 folk claims. 55 new medicinal plants introduced in demonstrative gardens of Institutes. Besides this, 3 Intra Mural Medicinal Plant Research projects have been completed and 12 projects are going on.

### **Drug Standardization**

Under Drug Standardization, 255 singles drugs and 37 compound formulations have been carried out. Besides this, 4 Intra Mural Drug Standardization Research project has been completed and 17 projects are going on. Besides this, 3 collaborative projects are going on.

### **Pharmacological Research**

Under this programme, 6 Intra Mural Pharmacological Research Projects has been completed and 20 projects are going on. Besides this one collaborative project is going on.

### **Literary Research Programme**

Under this programme, Medico-historical studies, lexicographic work, contemporary literature and publications related to Ayurveda and modern sciences have been continued. The Council has brought out periodicals viz. Journal of Research in Ayurvedic Sciences and Journal of Drug Research in Ayurvedic Sciences. During the reporting period, 18 books have been published. 4 Intra Mural Literary Research projects have been completed and 16 projects are going on. Besides this, one collaborative project has been completed.

**AYUSH Research Portal** - A web based portal for Research publication in AYUSH is successfully continued and the information being updated periodically. Till date 28,726 scientific publications have been uploaded.

### **Outreach Activities**

#### **Tribal Health Care Research Programme under Tribal Sub Plan (TSP)**

This programme has been executed through 15 CCRAS institutes in 15 states. During the reporting period, the Council has covered a population of 126411 out of which 121005 were tribal people belonging to 165 villages and incidental medical aid has been provided to 59744 patients out of which 52133 patients were tribal people and 206 folk claims/LHTs have been documented.

#### **Ayurveda Mobile Health Care Research Programme under Scheduled Castes Sub Plan (SCSP)**

This programme has been executed through 20 CCRAS institutes in 18 states. A total 210215 Scheduled Castes population surveyed, 135 villages/colonies covered through 4687 tours in 18 states and medical aid provided to 111775 scheduled castes patients.

#### **Reproductive and Child Health Care (RCH) Programme under Scheduled Castes Sub Plan (SCSP)**

This programme has been executed through 19 CCRAS institutes in 17 states. A total 137558 Population Surveyed , 101 villages covered through 4382 Tours and medical aid provided to 73507 women & child out of which 67748 (Women-55964, child -11784) were schedule caste. Besides this, 1666 health related awareness activities were conducted during the reporting period.





Integration of AYUSH (Ayurveda) with National Programme for Prevention and control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) in 3 districts Surendra Nagar (Gujarat), Bhilwada (Rajasthan) & Gaya (Bihar)

This programme has been executed in 3 districts i.e. Surendra Nagar (Gujarat), Bhilwada (Rajasthan) and Gaya (Bihar). A total 14773 patients were enrolled for selected non communicable diseases, 329565 patients were enrolled/ registered for Yoga Classes and 2784 camps were conducted.

### Ayurvedic Health Centres under North East Plan

The Ayurvedic Health Centres under NE Plan are functioning at 30 centres in 3 States. In Assam a total 80300 patients were attended at 15 Ayurvedic Health Centres through RARIGID, Guwahati, in Sikkim a total 29367 patients were attended at 6 Ayurvedic Health Centres through RARI, Gangtok and in Arunachal Pradesh a total 32209 patients were attended at 9 Ayurvedic Health Centres through RARI, Itanagar.

### Sowa-Rigpa System

National Research Institute for Sowa-Rigpa, Leh has been working under CCRAS with dedication for research and development of Sowa-Rigpa system of medicine. Major activities undertaken by the Institute are Clinical Research, Tribal Health Care Research Programme, Project on Trans-Himalayan Medicinal Plants Garden, Health Care Services through OPD, Tribal Sowa Rigpa Health Centre, Kargil etc.

### Research Publication

During the reporting period, 160 research papers were published by Council's Scientist in various National and International Journal's and 19 research papers were also published in various proceedings/souvenirs. Besides this, 48 Books/Booklets/Technical reports were also published.

### IEC Activities

The Council has participated in 44 Arogya Melas, fairs, exhibitions for dissemination of knowledge and awareness of Ayurveda in public and also conducted 22 Training programmes/ Seminars/Workshops/ Conferences at different locations of the Country.

### Award - President of India confers Vayoshreshtha Samman 2019 upon CCRAS

The Hon'ble President of India has conferred the **National Award Vayoshreshtha Samman-2019** upon CCRAS in the category 'Best Institution for Research in the field of Ageing' for rendering distinguished services for the cause of elderly persons as part of celebration of the International Day of Older Persons (IDOP) observed on 1<sup>st</sup> October every year, during an event held at Vigyan Bhawan on 3<sup>rd</sup> October, 2019.

New Delhi

Dated: 23/9/20

  
(Prof. Vd. K.S. Dhiman)  
Director General



## II. MANAGEMENT

### 1. Governing Body

During the period under report ending on 31<sup>st</sup> March, 2020, the members of Governing Body (reconstituted on 18<sup>th</sup> June, 2018) of the Council are as under:

- |    |                                      |  |
|----|--------------------------------------|--|
| 1. | President                            | Sh. Shripad Yesso Naik, Minister of State<br>(Independent Charge), Ministry of AYUSH |
| 2. | Vice-President                       | Vaidya Rajesh Kotecha,<br>Secretary, AYUSH   |
| 3. | Additional Secretary<br>(AYUSH)      | Sh. Pramod Kumar Pathak  |
| 4. | AS & FA<br>Ministry of Health & F.W. | Dr. Dharmendra S Gangwar   |

### Non-Official Members

#### Eminent Researcher / Teacher / Professional in Ayurveda

- |    |  |        |
|----|--|--------|
| 1. | Prof. M.S. Bhagel,<br>Former Director, IPGT&RA,<br>C-101 Unique Towers, Mahal Gaon,<br>Near Pratap Nagar, Sector 26, Jaipur. | Member |
|----|--|--------|

#### University/Professors/Researchers

- |    |   |        |
|----|---|--------|
| 2. | Prof. V.K. Joshi,<br>Former Head, Deptt. of Dravyaguna, Faculty of Ay.<br>Institute of Medical Sciences,<br>BHU, Varanasi               | Member |
| 3. | Prof. Atul Babu Vashnaye,<br>Associate Prof. Head Deptt. of Rog Nidan<br>Lalit Hari Govt. Post Graduate Ay. College,<br>Pilibhit (U.P.) | Member |
| 4. | Prof. Dr. Shriram S. Savarikar<br>Former Vice Chancellor GAU, Jamnagar<br>14/A-3, Govt. Colony, Haji Ali,<br>New Mumbai-400034          | Member |



### Experts in Ayurveda (other than University Professors/Researchers)

- |    |   |        |
|----|---|--------|
| 5. | Vd. Vinay Velankar<br>R-22, Varad, Sudarshan Nagar,<br>MIDC, Dombivali East,<br>Thane (Maharashtra) | Member |
| 6. | Dr. Yogesh Bendala,<br>Flat No.1&2, Srivijay Apptt.<br>Nilkamal Society, Karve Nagar,<br>Pune       | Member |

### Experts in Pharmacology

- |    |  |        |
|----|--|--------|
| 7. | Dr. B. Ravi Shankar<br>Former Director, SDM Centre for Res.<br>In Ayurveda and Allied Sciences | Member |
|----|--|--------|

### Experts in Chemistry

- |    |  |        |
|----|--|--------|
| 8. | Dr. Karan Vasistha,<br>Former Head University Institute of<br>Pharmaceutical Sciences (UIPS),<br>Chandigarh. | Member |
|----|--|--------|

### Experts in Botany

- |    |   |        |
|----|---|--------|
| 9. | Dr. H.B. Singh<br>Chief Scientist, Herbology,<br>AIMIL Pharmaceuticals India Ltd. New Delhi | Member |
|----|---|--------|

### Experts in Modern Medicine

- |     |   |        |
|-----|---|--------|
| 10. | Dr. Ashok L. Kukad<br>Vivekanand Hospital<br>Vidya Nagar, Latur (Maharashtra) | Member |
|-----|---|--------|

### Ex-Officio Member

- |     |   |                  |
|-----|---|------------------|
| 11. | Prof. Vd. K.S. Dhiman,<br>Director General, CCRAS | Member Secretary |
|-----|---|------------------|

No Governing Body meeting was held during the period under report.

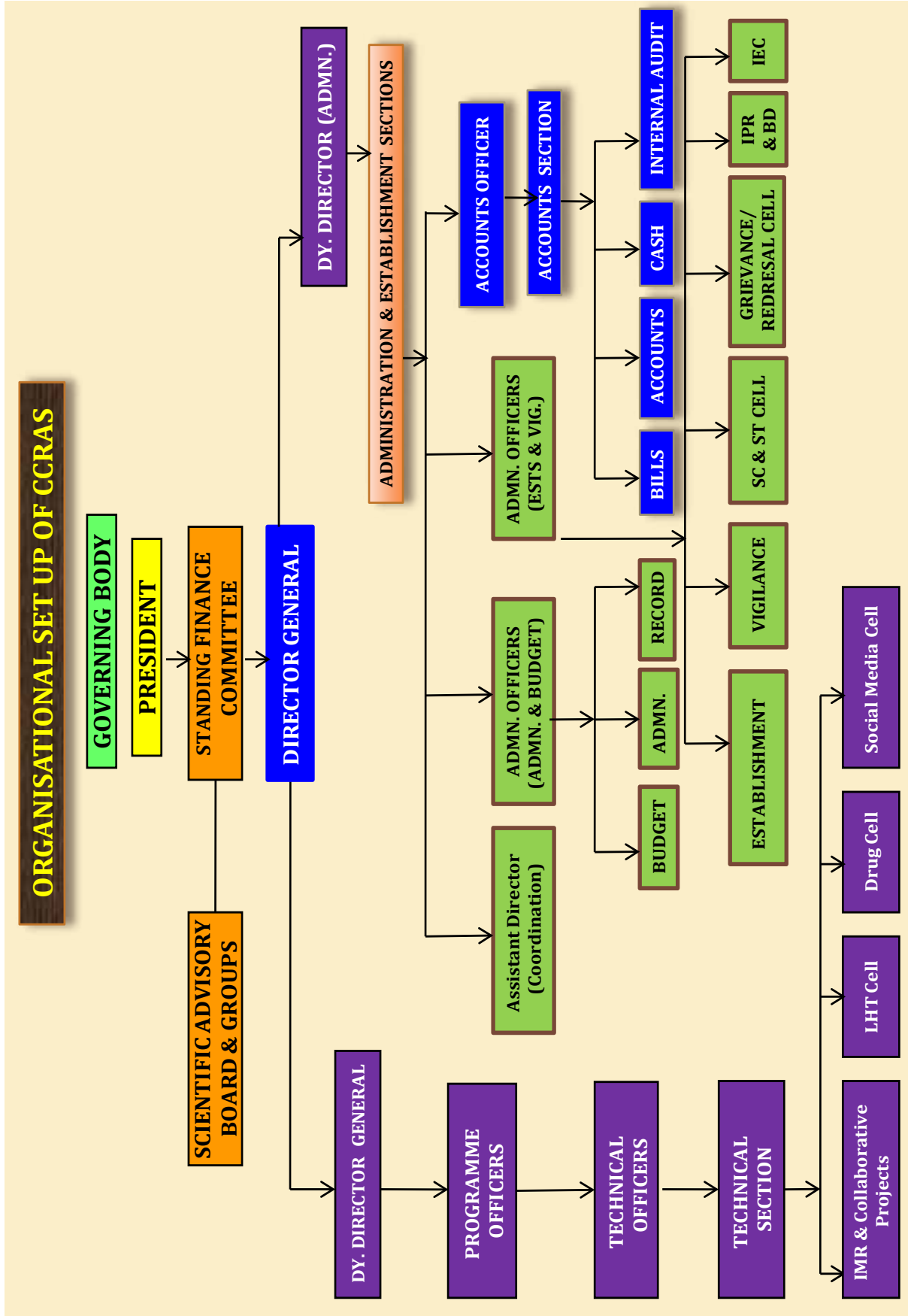


Fig.1: Organizational set up of CCRAS



## 2. Standing Finance Committee

The composition of the Standing Finance Committee was as under:

- |   |                  |
|---|------------------|
| 1. Sh. Pramod Kumar Pathak<br>Additional Secretary<br>Ministry of AYUSH<br>AYUSH Bhawan, INA, New Delhi                                     | Chairman         |
| 2. Financial Advisor or his representative<br>Ministry of Health & Family Welfare<br>New Delhi  | Member           |
| 3. Prof. Dr. M.S. Baghel<br>Former Director, IPGT & RA<br>C-101 Unique Towers, Mahal Gaon,<br>Near Pratap Nagar, Sector 26, Jaipur – 302017 | Member           |
| 4. Prof. Atul Babu Varshnaye,<br>Associate Prof. Head, Rog Nidan Deptt.<br>Lalit Hari Govt. Post Graduate Ay. College,<br>Pilibhit (U.P.)   | Member           |
| 5. Prof. Vd. K.S. Dhiman,<br>Director General, CCRAS, New Delhi   | Member Secretary |

Special invitee:

- |   |                 |
|---|-----------------|
| 1. Dr. Manoj Nesari, Adviser (Ay.)<br>Ministry of AYUSH<br>AYUSH Bhawan, INA, New Delhi | Special Invitee |
| 2. Dr. Tanuja Nesari, Director, AIIA<br>Sarita Vihar, New Delhi                         | Special Invitee |

During the period under report, the 83<sup>rd</sup> & 84<sup>th</sup> meeting of the Standing Finance Committee was held on 5<sup>th</sup> August, 2019 and 20<sup>th</sup> February, 2020 respectively.

## 3. Scientific Advisory Board and Scientific Advisory Group

The Scientific Advisory Board (SAB) and Scientific Advisory Groups (SAG) were constituted on 12.08.2018 with the following composition:



**Table – 1: Scientific Advisory Board (SAB)**

1.	Dr. G.S. Lavekar Former Director General, CCRAS C-51, Air India apartments Plot No.9, Sector-3, Dwarka, New Delhi – 110078	Chairman
2.	Prof. Dr. Shriram S. Savarikar Former Vice Chancellor GAU, Jamnagar 14/A-3, Govt. Colony, Haji Ali, New Mumbai-400034	Member
3.	Prof. Dr. M.S. Baghel Former Director, IPGT & RA C-101 Unique Towers, Mahal Gaon, Near Pratap Nagar, Sector 26, Jaipur – 302017	Member
4.	Prof. Manjari Dvivedi Former Professor, Strirog Prasuti, BHU, Varanasi Kalyanika Himalaya Devasthanam, Vill. –Kanra Dole, P.O. – Chaikhan, District – Almora, Uttarakhand – 263625	Member
5.	Dr. Sanjeev Sharma Director National Institute of Ayurveda, Madhav Vilas Palace, Jorawar Singh Gate, Amer Road, Jaipur-302002	Member
6.	Prof. Anup Thakar Director Institute of Post Graduate Teaching & Research in Ayurveda, Gujarat Ayurved University, Jamnagar, Gujarat – 361008	Member
7.	Prof. Dr. Tanuja Manoj Nesari Director All India Institute of Ayurveda (AIIA) Gautam Puri, Sarita Vihar, New Delhi-110076	Member
8.	Dr. Prasanna Rao Principal SDM College of Ayurveda & Hospital, Thanniruhalla, B M Road, Hassan, Karnataka – 573201	Member
9.	Dr. M.M. Padhi Former Deputy Director General, CCRAS, Plot No.406/951, Pokhariput AG Colony, Post-Aerodrome Area, Bhubaneswar – 751020	Member
10.	Prof. Dr. P.K. Prajapati Dean & HoD, Dept. of Rasashastra & Bhaishajya Kalpana, All India Institute of Ayurveda, Gautam Puri, Sarita Vihar, New Delhi – 110076	Member



11.	Dr. V.K. Kapoor 1473, Pushpak Complex, Sector – 49B, Chandigarh – 160047	Member
12.	Dr. V. Ravichandiran Director National Institute of Pharmaceutical Education and Research Chunilal Bhawan, 168, Maniktala Main Road P.O. Bengal Chemicals, P.S. Phoolbagan, Kolkata – 700054	Member
13.	Ms. Vandana Mody Dept. of Phyto-chemistry Vice President CADILA, E/6, Balaji Avenue, Nr. Payal Flats, Judges Bungalows Road, Vastrapur, Ahmedabad – 380015	Member
14.	Dr. Kishor Patwardhan Associate Professor & Head Department of Kriya Sharir, Faculty of Ayurveda, Institute of Medical Sciences, Banaras Hindu University (BHU) P.O. Lanka, Varanasi – 221005	Member
15.	Prof. Vd. K.S. Dhiman Director General, CCRAS, New Delhi	Member Secretary

During the period under report, the 9<sup>th</sup> & 10<sup>th</sup> meeting of the Scientific Advisory Board was held on 7<sup>th</sup> May, 2019 & 6<sup>th</sup> December, 2019 respectively.

**Table -2: Scientific Advisory Group (SAG)**

I. Literature Research		
1.	Prof. R.R. Dwivedi Ex. Dean I.P.G.T&R.A. GAU, Jamnagar Arogyadham Dhanwantari Aushadhalaya Dharmashala Road, Natveer Pulia, Near Mandir, Hardoi Uttar Pradesh - 241001	Chairman
2.	Vaidya Anant B. Dharmadhikari Ex-Director of Ayurved, Maharashtra Sun Paradise, Phase-II, Fire Brigade Lane, Sun City Road, Anandnagar, Building No.S/R/604, Punr-411051	Member
3.	Dr. Abhijeet Joshi Professor & Head Late Vd. P.G. Nanal Department of Ayurveda, Tilak Maharashtra Vidyapeeth, Vidyapeeth Bhavan, Gultekadi, Pune – 411037	Member



4.	Vd. Santosh Nevpurkar President Ayurved Vyaspeeth, 2,, Disha Arcade, Nandigram Colony, Garkheda, Aurangabad, Maharashtra – 431009	Member
5.	Prof. Mahesh Kumar Vyas Head of Department Department of Maulik Siddhant, All India Institute of Ayurveda, Gautam Puri, Sarita Vihar, New Delhi – 110076	Member
6.	Prof. Dr. Baldev Kumar Vice Chancellor Shri Krishna AYUSH University, Umri Road, Kurukshetra, Haryana	Member
7.	Dr. B. Rama Rao Former Director H. No.23-49/3, Netaji Nagar, Dilsukhnagar, Hyderabad – 500060	Member
8.	Prof. Vd. K.S. Dhiman Director General, CCRAS, New Delhi	Member Secretary
<b>II. Basic Sciences and Fundamental Research</b>		
1.	Dr. Srikrishan Khandel Retd. Professor, Dept. of Rog Nidana, NIA, Jaipur Arogya Laxmi, D-44, Siddharth Nagar, Malviya Nagar South Jaipur – 302017	Chairman
2.	Dr. Ravishankar B. Former Director, SDM Centre for Research in Ayurveda & Allied Sciences, 438, First Floor, Dattagalli, 3 <sup>rd</sup> Stage Near Jodi Bevina Mara, Mysore – 570023	Member
3.	Dr. Shriram G. Jyotishi Professor Mahatma Gandhi Ayurveda College, Hospital & Research Centre Wardha, 50-51, Gurukrupa Society, Naik Nagar, Manewada Ring Road, Nagpur, Maharashtra – 440027	Member
4.	Dr. Pankaj V. Wanjarkhedkar 1 <sup>st</sup> Floor, Chitale Hospital, Opp. Kada Halwai, Tilak Road, Pune, Maharashtra – 411030	Member





5.	Prof. Dr. V. V. Prasad Former Director, RAV Professor, Dept. of Dravyaguna, J.S. Ayurveda Mahavidyalaya and P.D. Patel Ayurveda Hospital College Road, Nadiad, Gujarat -387001 Resi: B-502, D-Squares, Kisan Samosa lane, College Road, Nadiad, Gujarat – 387001	Member
6.	Dr. S. Gopakumar Associate Professor & RMO Department of Roganidana, Government Ayurveda College, Pulimoodu, Thiruvananthapuram, Kerala – 695035	Member
7.	Dr. (Mrs.) Jai Kiran Kini Professor Dept. of Rognidana, YMT Ayu. Medical College & Hospital, Navi Mumbai, 1101, Raunak Park Tower B CHS, Pokharan Road No.2, Konkanipada, Thane (West) – 400610	Member
8.	Prof. Vd. K.S. Dhiman Director General, CCRAS, New Delhi	Member Secretary
<b>III. Drug Development</b>		
1.	Prof. Anand Choudhary Professor Dept. of Rasashastra & Bhesajya Kalpana, Faculty of Ayurveda, Institute of Medical Sciences Banaras Hindu University (BHU) P.O. Lanka, Varanasi – 221005	Chairman
2.	Dr. Subrata De Former Director, R.M.D. Research & Development Center Ved Kutir, Momai Nagar, Sheri No.1 Gandhinagar, Jamnagar – 361002	Member
3.	Prof. Mita Kotecha Professor & Head, Department of Dravyaguna National Institute of Ayurveda Madhav Vilas Palace, Jorawar Singh Gate Amer Road, Jaipur – 302002	Member
4.	Dr. Mukund Sabnis President & Head Physician Jeevanrekha Ayurved Chikitsalaya & Research Centre 87, Snehawardhini CHS, Behind Trimurti Chowk, Jawahar Colony, Aurangabad -5, Maharashtra	Member



5.	Prof. Brahmeshwar Mishra Professor of Pharmaceutics & Former Director Department of Pharmaceutical Engineering & Technology Indian Institute of Technology (BHU) Varanasi – 221005	Member
6.	Prof. R.N. Acharya Professor and Head Department of Dravyaguna Institute of Post Graduate Teaching & Research in Ayurveda, Gujarat Ayurved University, Jamnagar, Gujarat – 361008	Member
7.	Prof. Dr. D.V. Kulkarni Professor, Department of Dravyaguna, Government Ayurveda College, Osmanabad Present Address: 4/8, Government Quarters, Anandnagar, Osmanabad – 413501	Member
8.	Prof. Vd. K.S. Dhiman Director General, CCRAS, New Delhi	Member Secretary
<b>IV. Clinical Research</b>		
1.	Prof. (Dr.) B.S. Prasad Principal KLE University's Shri BMK Ayurveda Mahavidyalaya Shahapur, Belagavi – 530009	Chairman
2.	Prof. Dr. Shivenarian Narsinghlal Gupta Professor & Head Dept. of Kayachikitsa, J.S. Ayurveda College College Road, Nadiad – 387001	Member
3.	Dr. S.H. Acharya Former Professor, Gujarat Ayurved University, Jamnagar Department of Panchakarma, IPGT&RA, Gujarat Ayurved University, Jamnagar – 361008, 11, K/P. Shah Wadi, Rameshwarnagar, Jamnagar – 361008	Member
4.	Vd. Jayant Devpujari Shrinidhi Ayurved Panchakarma Chikitsalaya, 80, P&T Colony, Opp. Durga Mandir, Pratap Nagar, Nagpur – 440022	Member



5.	Dr. Manoranjan Sahu Professor Dept. of Shalya Tantra, Faculty of Ayurveda, Institute of Medical Sciences, Banaras Hindu University (BHU) P.O. Lanka, Varanasi – 221005	Member
6.	Dr. Tanmay Goswami Acharya ENT Premises, Kunjibettu, Udupi – 576102	Member
7.	Vd. Prabhakar S. Pawar Former Dean, Faculty of Ayurved & Unani System, MUHS, Nashik 780, Pushkaraj, Bhagade Mala, Balikashram Road, Ahmednagar-414003	Member
8.	Prof. Vd. K.S. Dhiman Director General, CCRAS, New Delhi	Member Secretary

During the period under report, the 2<sup>nd</sup> & 3<sup>rd</sup> meeting of the Scientific Advisory Group (SAG) was held on 20<sup>th</sup> September, 2019 & 20<sup>th</sup> December 2019 respectively.



### III. ADMINISTRATION

#### 1. Organizational set-up

##### State-wise distribution of peripheral Institutes/Centres/Units

State/UT	Name of the Institutes/Centre/Units
Andhra Pradesh	Regional Ayurveda Research Institute for Skin disorders, Payakapuram, Vijayawada-520015
Arunachal Pradesh	Regional Ayurveda Research Institute, Itanagar -791111
Andaman and Nicobar Islands	Regional Research Center of Ayurveda, Port Blair - 744101
Assam	Regional Ayurveda Research Institute for Gastro-Intestinal Disorders, Borsojai, Beltola, Guwahati-781028
Bihar	Regional Ayurveda Research Institute for Infectious Diseases, D Block, Rajindra Memorial Res., Institute Building, Agam Kuan, Patna-800007
Delhi	Central Ayurveda Research Institute for Cardiovascular Diseases, Road No.66, Punjabi Bagh, New Delhi - 110026
Gujarat	Regional Ayurveda Research Institute for Skin Disorders, Asarwa, Ahmedabad-380016
Himachal Pradesh	Regional Ayurveda Research Institute for Nutritional Disorders , Gandhi Bhawan, Mandi-175001
Jammu & Kashmir	Regional Ayurveda Research Institute for Urinary Disorders, JDA Housing Colony, Ban Talab, Rajender Nagar, Jammu-181123
Karnataka	Regional Ayurveda Research Institute for Metabolic Disorders, 12, Uttarahalli Manavarthekeval, Uttarahalli Hobli Kanakapura Main Road, Thalagattapura Post, Bangalore-560109
	Advanced Centre for Ayurveda in Mental Health & Neuro-sciences, Ayurvedic Research Unit, NIMHANS, Hosur Road, Bangalore-560029
Kerala	National Ayurveda Research Institute for Panchakarma, Cheruthuruthy- 679531
	Regional Ayurveda Research Institute for Life style related Disorders, Poojapura, Trivandrum-695012
Ladakh	National Research Institute for Sowa-Rigpa, Old Leh Road, Leh- 194101
Madhya Pradesh	Regional Ayurveda Research Institute for Drug Development, Amkho, Gwalior-474009
Maharashtra	Raja Ramdeo Anandilal Podar (RRAP) Central Ayurveda Research Institute for Cancer, RA Podar College, Worli, Mumbai-400018
	Regional Ayurveda Research Institute for Mother and Child Health, NIT Complex, Nandanwan, Nagpur-440009
	Regional Ayurveda Institute for Fundamental Research, Pune- 411038



Nagaland	Regional Ayurveda Research Centre, Dimapur, Nagaland
Orissa	Central Ayurveda Research Institute for Hepatobiliary Disorders, Bharatpur, Bhubaneswar-751003
Punjab	Central Ayurveda Research Institute for Respiratory Disorders, Moti Bagh Road, Patiala-147001
Rajasthan	M.S. Regional Ayurveda Research Institute for Endocrine Disorders, Indira Colony, Bani Park, Jhotwara Road, Jaipur-302016.
Sikkim	Regional Ayurveda Research Institute, Tadong, Gangtok -737102
Tamil Nadu	Dr. Achanta Lakshmipati Research Centre for Ayurveda, VHS Campus, TTTI Post, Chennai-600113
	Captain Srinivasa Murthy Regional Ayurveda Drug Development Institute, Chennai - 600106.
Telengana	National Institute of Indian Medical Heritage, Hyderabad - 500036
Tripura	Regional Ayurveda Research Centre, Agartala, Tripura
Uttar Pradesh	Regional Ayurveda Research Institute for Eye Diseases, Indira Nagar, Lucknow-226016
	Regional Ayurveda Research Institute , Jhansi - 284003
Uttarakhand	Regional Ayurveda Research Institute , Thapla, Ranikhet– 263645, Almora
West Bengal	Central Ayurveda Research Institute for Drug Development, 4 CN Block, Sector V, Bidhan Nagar, Kolkata-700091



Fig.2: Institutional Network of CCRAS



## 2. Centre-wise Objectives/Activities

The following table depicts the involvement of peripheral Institutes/Centres of the Council in the research activities on broad areas viz. Clinical research, Health care services, Tribal health care research Programme, Ayurveda Mobile Health Care Programme, Drug Standardization, Survey of Medicinal Plants, Cultivation, Pharmacognosy, Pharmacology, Literary research etc.

**Table -3: Centre-wise major activities (Ayurveda)\***

S.No.	Name of Institute	Major Activities/Services
1.	Central Ayurveda Research Institute for Cardiovascular Diseases, New Delhi	<p>Clinical research on lifestyle related and Non-communicable disorders focusing on Cardiovascular Diseases</p> <p><b>Other Activities:</b></p> <ul style="list-style-type: none"> <li>• Health care services through Out–Patient Department (OPD) and In-Patient Departments (IPDs)</li> <li>• Special facility for Ksharasutra &amp; Panchakarma</li> <li>• Special Clinics for Geriatric Health Care</li> <li>• Training Center for Clinical Research and Para-medical Subjects</li> <li>• Outreach Activities such as <ul style="list-style-type: none"> <li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li> </ul> </li> <li>• Other Activities assigned from time to time.</li> </ul>
2.	National Ayurveda Research Institute for Panchakarma, Cheruthuruthy	<p>Clinical research focusing on validation of Panchakarma procedures especially in Neuromuscular &amp; Musculo-Skeletal Disorders</p> <p><b>Other Activities:</b></p> <ul style="list-style-type: none"> <li>• Health care services through Out–Patient Department (OPD) and In-Patient Departments (IPDs)</li> <li>• Special facility for Panchakarma</li> <li>• Special Clinics for Geriatric Health Care</li> <li>• Panchakarma training</li> <li>• Outreach Activities such as <ul style="list-style-type: none"> <li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li> </ul> </li> <li>• Pharmacological Research &amp; Drug Standardization</li> </ul>
3.	Central Ayurveda Research Institute for Hepatobiliary Disorders, Bhubaneswar	<p>Clinical research focusing on Hepatobiliary Disorders</p> <p><b>Other Activities:</b></p> <ul style="list-style-type: none"> <li>• Health care services through Out–Patient Department (OPD) and In-Patient Departments (IPDs)</li> <li>• Special Clinics for Geriatric Health Care</li> <li>• Special facility for Panchakarma</li> <li>• Outreach Activities such as <ul style="list-style-type: none"> <li>➤ Tribal Health Care Research Programme under TSP</li> <li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li> </ul> </li> </ul>



4.	Central Ayurveda Research Institute for Drug Development, Kolkata	<b>Drug development Research covering</b> <ul style="list-style-type: none"><li>• Pharmacognosy Research</li><li>• Drug Standardization Research</li><li>• Pharmacological Research</li><li>• Clinical Research as per requirement</li></ul> <b>Other Activities:</b> <ul style="list-style-type: none"><li>• Health care services through Out–Patient Department (OPD) and In-Patient Departments (IPDs)</li><li>• Special facility for Panchakarma and Ksharasutra therapy</li><li>• Special Clinics for Geriatric Health Care</li><li>• Outreach Activities such as<ul style="list-style-type: none"><li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li></ul></li></ul>
5.	Central Ayurveda Research Institute for Respiratory Disorders, Patiala	Pharmaceutical Research and Clinical Research focusing on Respiratory disorders <b>Other Activities:</b> <ul style="list-style-type: none"><li>• Health care services through Out–Patient Department (OPD)</li><li>• Special Clinics for Geriatric Health Care</li><li>• Outreach Activities such as<ul style="list-style-type: none"><li>➤ Ayurveda Mobile Health Care Programme under SCSP</li></ul></li></ul>
6.	Regional Ayurveda Research Institute for Eye Diseases, Lucknow	Clinical research on lifestyle related and Non-communicable disorders focusing on Eye Diseases <b>Other Activities:</b> <ul style="list-style-type: none"><li>• Health care services through Out–Patient Department (OPD)</li><li>• Special Clinics for Geriatric Health Care</li><li>• Outreach Activities such as<ul style="list-style-type: none"><li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li></ul></li></ul>
7.	Central Ayurveda Research Institute for Cancer, Mumbai	Clinical research on lifestyle related and Non-communicable disorders focusing on Cancer <b>Other Activities:</b> <ul style="list-style-type: none"><li>• OPD and IPD Facility</li><li>• Special Clinics for Geriatric Health Care</li><li>• Special facility for Ksharasutra</li><li>• Special facility for Panchakarma &amp; Physiotherapy</li><li>• Outreach Activities such as<ul style="list-style-type: none"><li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li></ul></li></ul>





8.	Regional Ayurveda Research Institute for Endocrine Disorders,, Jaipur	<p>Clinical research on lifestyle related and Non-communicable disorders focusing on Endocrine Disorders</p> <p><b>Other Activities:</b></p> <ul style="list-style-type: none"> <li>• Health care services through Out Patient Department (OPD) and In Patient Departments (IPDs)</li> <li>• Special Clinics for Geriatric Health Care</li> <li>• Outreach Activities such as <ul style="list-style-type: none"> <li>➤ Tribal Health Care Research Programme under TSP</li> <li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li> <li>➤ Swasthya Rakshan Programme</li> </ul> </li> </ul>
9.	Regional Ayurveda Research Institute for Drug Development, Gwalior	<p>Center for Pre-Clinical Research &amp; Drug Standardization</p> <p><b>Other Activities:</b></p> <ul style="list-style-type: none"> <li>• Clinical Research</li> <li>• Health care services through Out–Patient Department (OPD) and In-Patient Departments (IPDs)</li> <li>• Special Clinics for Geriatric Health Care</li> <li>• Training Center for Pre-Clinical Studies</li> <li>• Outreach Activities such as <ul style="list-style-type: none"> <li>➤ Tribal Health Care Research Programme under TSP</li> <li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li> </ul> </li> </ul>
10.	Regional Ayurveda Research Institute for Skin disorders, Vijayawada	<p>Clinical Research in Skin Diseases and Vector Borne Diseases</p> <p><b>Other Activities:</b></p> <ul style="list-style-type: none"> <li>• Health care services through Out–Patient Department (OPD) and In-Patient Departments (IPDs)</li> <li>• Special Clinics for Geriatric Health Care</li> <li>• Outreach Activities such as <ul style="list-style-type: none"> <li>➤ Tribal Health Care Research Programme under TSP</li> <li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li> </ul> </li> </ul>
11.	Regional Ayurveda Research Institute for Mother and Child Health, Nagpur	<p>Clinical research focusing on Mother and Child Health</p> <p><b>Other Activities:</b></p> <ul style="list-style-type: none"> <li>• Health care services through Out Patient Department (OPD) and In-Patient Departments (IPDs)</li> <li>• Special facility for Panchakarma</li> <li>• Special Clinics for Geriatric Health Care</li> <li>• Outreach Activities such as <ul style="list-style-type: none"> <li>➤ Tribal Health Care Research Programme under TSP</li> <li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li> </ul> </li> </ul>



12.	Regional Ayurveda Research Institute for Metabolic Disorders, Bangalore	Clinical Research focusing on Metabolic disorders and Dietetics <b>Other Activities:</b> <ul style="list-style-type: none"><li>• Health care services through Out–Patient Department (OPD)</li><li>• Special Clinics for Geriatric Health Care</li><li>• Botanical survey</li><li>• Outreach Activities such as<ul style="list-style-type: none"><li>➤ Tribal Health Care Research Programme under TSP</li></ul></li></ul>
13.	Regional Ayurveda Research Institute for Life style related Disorders, Trivandrum	Clinical Research focusing on Life style related Disorders <b>Other Activities:</b> <ul style="list-style-type: none"><li>• Health care services through Out–Patient Department (OPD)</li><li>• Special Clinics for Geriatric Health Care</li><li>• Outreach Activities such as<ul style="list-style-type: none"><li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li></ul></li></ul>
14.	Regional Ayurveda Research Institute for Infectious Diseases, Patna	Clinical research focusing on infectious diseases <b>Other Activities:</b> <ul style="list-style-type: none"><li>• Health care services through Out Patient Department (OPD)</li><li>• Special Clinics for Geriatric Health Care</li><li>• Outreach Activities such as<ul style="list-style-type: none"><li>➤ Tribal Health Care Research Programme under TSP</li><li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li></ul></li></ul>
15.	Regional Ayurveda Research Institute for Gastro-Intestinal Disorders, Guwahati	Clinical Research focusing on Skin disorders, GIT disorders Medico-Ethno-Botanical Survey <b>Other Activities:</b> <ul style="list-style-type: none"><li>• Health care services through Out–Patient Department (OPD)</li><li>• Special Clinics for Geriatric Health Care</li><li>• Outreach Activities such as<ul style="list-style-type: none"><li>➤ Tribal Health Care Research Programme under TSP</li><li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li><li>➤ Ayurvedic Health Centre under NE Plan etc.</li></ul></li></ul>
16.	Regional Ayurveda Research Institute, Gangtok	Clinical research on lifestyle related and Non-communicable disorders focusing on Gout <b>Other Activities:</b> <ul style="list-style-type: none"><li>• Health care services through Out Patient Department (OPD)</li><li>• Special Clinics for Geriatric Health Care</li><li>• Outreach Activities such as<ul style="list-style-type: none"><li>➤ Tribal Health Care Research Programme under TSP</li><li>➤ Ayurveda Mobile Health Care Programme under SCSP</li><li>➤ Ayurvedic Health Centre under NE Plan etc.</li></ul></li></ul>



17.	Regional Ayurveda Research Institute, Itanagar	<p>Clinical research on lifestyle related and Non-communicable disorders focusing on Hypertension Medico-Ethno-Botanical Survey</p> <p><b>Other Activities</b></p> <ul style="list-style-type: none"> <li>• Health care services through Out Patient Department (OPD)</li> <li>• Special Clinics for Geriatric Health Care</li> <li>• Demonstrative Medicinal Plants Garden</li> <li>• Outreach Activities such as <ul style="list-style-type: none"> <li>➤ Ayurvedic Health Centre under NE Plan etc.</li> </ul> </li> </ul>
18.	Regional Ayurveda Research Institute for Urinary Disorders, Jammu	<p>Clinical Research focusing on Urinary disorders and Gout</p> <p><b>Other Activities</b></p> <ul style="list-style-type: none"> <li>• Health care services through Out Patient Department (OPD) &amp; IPD</li> <li>• Special facility for Panchakarma</li> <li>• Special Clinics for Geriatric Health Care</li> <li>• Facility of Ksharsutra</li> <li>• Outreach Activities such as <ul style="list-style-type: none"> <li>➤ Tribal Health Care Research Programme under TSP</li> <li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li> </ul> </li> </ul>
19.	Regional Ayurveda Research Institute for Nutritional Disorders, Mandi	<p>Clinical Research focusing on Nutritional Disorders Respiratory disorders, (Bronchial Asthma) and Rheumatoid Arthritis</p> <p><b>Other Activities</b></p> <ul style="list-style-type: none"> <li>• Health care services through Out–Patient Department (OPD)</li> <li>• Special Clinics for Geriatric Health Care</li> <li>• Outreach Activities such as <ul style="list-style-type: none"> <li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li> </ul> </li> </ul>
20.	Regional Ayurveda Research Institute for Skin Disorders, Ahmedabad	<p>Clinical Research focusing on Skin Disorders</p> <p><b>Other Activities:</b></p> <ul style="list-style-type: none"> <li>• Health care services through Out–Patient Department (OPD)</li> <li>• Special clinics for Geriatric Health care</li> <li>• Outreach Activities such as <ul style="list-style-type: none"> <li>➤ Tribal Health Care Research Programme under TSP</li> <li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li> </ul> </li> </ul>
21.	Regional Ayurveda Research Institute , Tarikhet, Ranikhet	<p>Medico-Ethno-Botanical Research</p> <p><b>Other Activities:</b></p> <ul style="list-style-type: none"> <li>• Health care services through Out–Patient Department (OPD)</li> <li>• Demonstrative Medicinal Plants Garden.</li> <li>• Musk Deer Breeding</li> </ul>



22.	Regional Ayurveda Research Institute Jhansi	<ul style="list-style-type: none"><li>• Central herbarium</li><li>• Medico Ethno Botanical Survey</li><li>• Production Pharmacy</li></ul> <b>Other Activities:</b> <ul style="list-style-type: none"><li>• Demonstrative Medicinal Plants Garden.</li><li>• Demonstrative crude drugs repository</li><li>• Authentication of the plant specimens</li></ul>
23.	Regional Ayurveda Institute for Fundamental Research, Pune	<ul style="list-style-type: none"><li>• Basic &amp; Fundamental Research in Ayurveda</li><li>• In-vitro Pharmacology testing.</li><li>• Proteomics and metabolomics.</li></ul> <b>Other Activities:</b> <ul style="list-style-type: none"><li>• Demonstrative Medicinal Plants Garden.</li><li>• Pharmacognosy Research</li><li>• Plant Tissue Culture</li><li>• Molecular Biology Research</li></ul>
24.	National Institute of Indian Medical Heritage, Hyderabad	<ul style="list-style-type: none"><li>• Literary Research and documentation</li><li>• Revival and retrieval of texts from ancient manuscripts and rare books</li><li>• Search and collection of information descriptive notes, editing and publication of rare medical manuscripts/ books on AYUSH</li><li>• Documentation</li><li>• Ayurveda Encyclopedia</li><li>• Museum on History of Medicine</li><li>• Referral library on AYUSH systems of medicine and modern medicine.</li><li>• AYUSH Research Portal</li></ul>
25.	Captain Srinivasa Murthy Regional Ayurveda Drug Development Institute, Chennai.	<ul style="list-style-type: none"><li>• Drug Standardization Research.</li><li>• Pharmacognosy,</li><li>• Pharmacological Research</li><li>• Center for Survey of Medicinal Plants.</li></ul>
26.	Advanced Center for Ayurveda in Mental Health & Neurosciences, Bangalore**	<ul style="list-style-type: none"><li>• Clinical Research on Mental disorders</li><li>• Health care services through Out Patient Department (OPD) and In-Patient Departments (IPDs)</li><li>• Special Clinics for Geriatric Health Care</li><li>• Outreach Activities such as<ul style="list-style-type: none"><li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li></ul></li></ul>



27.	Dr. Achanta Lakshmipati Research Centre for Ayurveda, Chennai	Clinical Research on life-style related & non communicable diseases <b>Other Activities:</b> <ul style="list-style-type: none"> <li>• Health care services through Out Patient Department (OPD)</li> <li>• Special Clinics for Geriatric Health Care</li> <li>• Outreach Activities such as <ul style="list-style-type: none"> <li>➤ Tribal Health Care Research Programme under TSP</li> <li>➤ Ayurveda Mobile Health Care Project &amp; RCH Project under SCSP</li> </ul> </li> </ul>
28.	Regional Research Center of Ayurveda, Port Blair	<ul style="list-style-type: none"> <li>• Tribal Health Care Research</li> </ul> <b>Other Activities:</b> <ul style="list-style-type: none"> <li>• Health care services through Out Patient Department (OPD)</li> <li>• Special Clinics for Geriatric Health Care.</li> </ul>
29.	National Research Institute for Sowa- Rigpa, Leh	<ul style="list-style-type: none"> <li>• Health care services through Out Patient Department (OPD)</li> <li>• Tribal Health Care Research Programme under TSP</li> <li>• Medico-Ethno-Botanical Survey</li> <li>• Cultivation of Medicinal Plants</li> <li>• Literary Research &amp; Documentation</li> </ul>
30.	Regional Ayurveda Research Centre, Dimapur, Nagaland	<ul style="list-style-type: none"> <li>• Health care services through Out Patient Department (OPD)</li> </ul>
31.	Regional Ayurveda Research Centre, Agartala, Tripura	<ul style="list-style-type: none"> <li>• Health care services through Out Patient Department (OPD)</li> <li>• Tribal Health Care Research Programme under TSP</li> </ul>

\* Some Programmes/Projects are changeable which will be reported from time to time.

\*\* ACAMH&NS, Bangalore was re-located at RARIMD, Bangalore on 1<sup>st</sup> October, 2019.



### 3. Status of Manpower

The Council is being executing its various research programmes and Research oriented public health care programmes (outreach activities) with a network of 31 peripheral Institutes/Centres and Head-quarter Office responsible for control, monitoring and supervision. The Research work is conducted by 785 numbers of Officers/Officials against the 1983 sanctioned posts. (Details are annexed at Annexure-I)

**Procedure/steps undertaken to the fill the vacant posts:** Based on the online written examination, candidates have been shortlist for interview. Interview for various disciplines are going on before final selection of 73 candidates to fill up the vacant post in Group-“A”. As regards 98 Group “B” posts and 51 Group “C” posts, based on the online written examination, required number of candidates as per rank obtained vis-a-vis number of posts available, willingness to serve anywhere in the Country and eligibility certificates have been obtained from the candidates to assess their eligibility before offer of appointment could be given. As regards, recruitment of direct quota of UDC and LDC, in response to our advertisement, 1,89,720 applications has been received by the recruiting agency i.e. National Institute of Electronics and Information Technology(NIELTT). The recruiting agency has informed that they have to make large scale arrangement at multiple locations all over Indian for conduct of physical MCQ/OMR based examination. The recruiting agency has informed that the exam may be arranged during November/December, 2020 tentatively.

### 4. Representation of Scheduled Caste/Scheduled Tribe in the Council services and Welfare measures for SC/ST

The Council has been following the orders and guidelines issued from time to time by the Government of India in respect of representation of SC/ST in the services of the Council. The recruitments/promotions are done according to the reservation roster maintained for SC/ST. The Council is having a total strength of employees in different groups as on 31<sup>st</sup> March, 2020 as under (Table 3):

**Table - 4: Number of employees of CCRAS in each category**

Group	Number of employees	SC Employees	% of total employees	ST Employees	% of total employees
A	278	53	19	27	10
B	76	3	4	2	3
C (Including erstwhile Group 'D')	431	139	32	61	14
Total	785	195	-	90	-

The Council is also running Tribal Health Care Research Projects on Ayurveda at 15 Institutes including one at Andaman & Nicobar Islands and Ayurveda Mobile Health Care Programme under Scheduled Castes Sub Plan at 20 Institutes. These projects envisage great scope not only to understand the local health problems and interdependent issues but also to identify and apply/advise the methods and suitable measures to surmount their problems. Besides, some of the Research Institutes/Centres



are also located in rural areas and through OPD/IPD of these Institutes/Centres, Tribal Health Care Research Programme, Ayurveda Mobile Health Care Programme, medical relief and health benefits have been extended to a large number of SC/ST population. The budget of the Council stipulated specific allocations for welfare of SC/ST under its plans.

**Empowerment of Divyangjan (Differently Abled Persons):** In most of Council's peripheral Institutes, the facilities of ramp with handrail are available for Divyangjans. All In-charges of CCRAS peripheral institutes are instructed to make necessary arrangements i.e. ramp, lift etc. for helping the divyangjan patients. Besides this, adequate numbers of wheel chairs are already available in CCRAS Institutes for Divyangjan. Presently, 9 Divyangjan are working in different institutes of the Council and Headquarter. Yearly Budget of Rs. 1,10,30,196/- (Approx.) are spend for Divyangjans.

### 5. Official Language Implementation Committee

The Council is having an Official Language Implementation Committee under the Chairmanship of Director General, CCRAS to review the position regarding implementation of official language policy, rules, orders, programmes etc. and to take steps for increasing the pace of use of Hindi in the Council. During the period under report, the Committee met on 27-06-2019, 27-09-2019 and 31-12-2019. The meeting which was scheduled to be held on 23-03-2020 was cancelled due to COVID-19 Pandemic.

Joint workshop of seven institutes situated in South India was organized at Regional Ayurveda Research Institute for Skin disorders, Vijayawada on 16-07-2019. Hindi fortnight was organized at CCRAS Headquarter as well as all peripheral institutes under the Council from 14<sup>th</sup> to 30<sup>th</sup> September 2019 in which various competitions such as debate, quiz, etc were organized and prizes given to the winners.

During the reported period, three institutes namely National Institute of Indian Medical Heritage, Hyderabad; Regional Ayurveda Research Institute for Skin disorders, Vijayawada and Central Ayurveda Research Institute for Hepatobiliary Disorders, Bhubaneswar were inspected on 15-07-2019, 17-07-2019 and 29-02-2020 respectively. Fourth issue of Hindi magazine namely "Spandan" was published by the Regional Ayurveda Research Institute for Life style related Disorders, Thiruvananthapuram and first issue of Hindi magazine namely "Pravah" was published by National Institute of Indian Medical Heritage, Hyderabad.

### 6. Infrastructural development

- **Establishment of new Research Centre 'Regional Ayurveda Research Centre for Mineral and Marine Medicinal Resources (RARIM&MMR), Goa:** Ministry of AYUSH has authorize CCRAS for setting up of Regional Ayurveda Research Centre for Mineral and Marine Medicinal Resources (RARIM&MMR) at Goa. The Goa State Government has allotted space in the premises of Old Goa Institute of Management (GIM) building, Ribander, Ilhas at Goa on 7/2/2020 for setting up of RARIM&MMR. After taking possession of the space on 21.2.2020, CCRAS has deputed one of its Officer to arrange electricity, water & sanitation facilities etc. for setting up of the new institute at Goa on 28.2.2020. The Centre has been established for the purpose of free general medical health care and specific research activities on Mineral and Marine Medicinal Resources and other Research in the state of Goa.



## IV. FINANCE & BUDGET

The Council is an autonomous organization fully funded by Ministry of AYUSH under Central Sector Scheme. The activities are carried out through its 31 peripheral Institutes/Centres. During the reporting period, total budget of the Council is Rs. 280.68 Crore.

### 1. Budget allocation

**Table -5: Budget Breakup**

(Rs. in Crore)

Scheme	Budget Estimate 2019-20	Revised Estimate 2019-20	Funds released 2019-20	Unspent Balance & interest earned during 2018-19	Total amount [4+5]	Expenditure 2019-20	Unspent Balance 2019-20 [6-7]
1	2	3	4	5	6	7	8
3140 Central Council for Research in Ayurvedic Sciences	292.31	288.50	<b>280.68</b>	124.51	405.19	269.05	136.14

### 2. Head wise budget allocation and expenditure 2018-19 & 2019-20

#### 2018-19

(Rs. in crore)

S. No.	Particulars: Grant in Aid	Opening balance	Grant received	Interest earned	Total	Expenditure	Unspent balance
1.	Salary	4.09	161.51	1.07	166.67	158.14	8.53
2.	General	20.33	89.89	3.63	113.85	47.31	66.54
3.	Capital	38.44	10.00	0.41	48.85	27.58	21.27
4.	SCSP	14.48	8.00	0.07	22.55	8.07	14.48
5.	TSP	0.91	3.00	0.01	3.92	3.17	0.75
6.	NER	13.33	4.00	0.03	17.36	8.04	9.32
<b>Total</b>		<b>91.58</b>	<b>276.40</b>	<b>5.22</b>	<b>373.20</b>	<b>252.31</b>	<b>120.89</b>

#### 2019-20

(Rs. in crore)

S. No.	Particulars: Grant in Aid	Opening balance	Grant received	Interest earned	Total	Expenditure	Unspent balance
1.	Salary	8.53	158.71	0.52	167.76	149.25	18.51
2.	General	66.54	93.97	2.86	163.37	86.02	77.35
3.	Capital	21.27	13.69	0.18	35.15	17.84	17.31
4.	SCSP	14.48	7.31	0.03	21.81	6.56	15.25
5.	TSP	0.75	3.00	0.01	3.75	2.65	1.10
6.	NER	9.32	4.00	0.02	13.35	6.73	6.62
<b>Total</b>		<b>120.89</b>	<b>280.68</b>	<b>3.62</b>	<b>405.19</b>	<b>269.05</b>	<b>136.14</b>





### 3. Auditing aspect of CCRAS including pending audit paras:

CCRAS Annual Account report is audited by Office of Director General of Audit Central Expenditure (DGACE), New Delhi and Ministry of Health and Family Welfare, Internal Audit wing (HQ.), Nirman Bhawan, New Delhi. There are 16 Audit paras pending at DGACE and 20 paras are pending at MoH&FW, Internal audit, New Delhi.

### 4. Institute wise budget allocation

Budget has been allocated to the Institutes/Centres as per their requirement for implementation of their activities and Rs. 149.40 Crore for CCRAS Hqrs. Details are as under:

**Table -6: Institute wise Budget allocation Breakup for 2018-19, 2019-20**

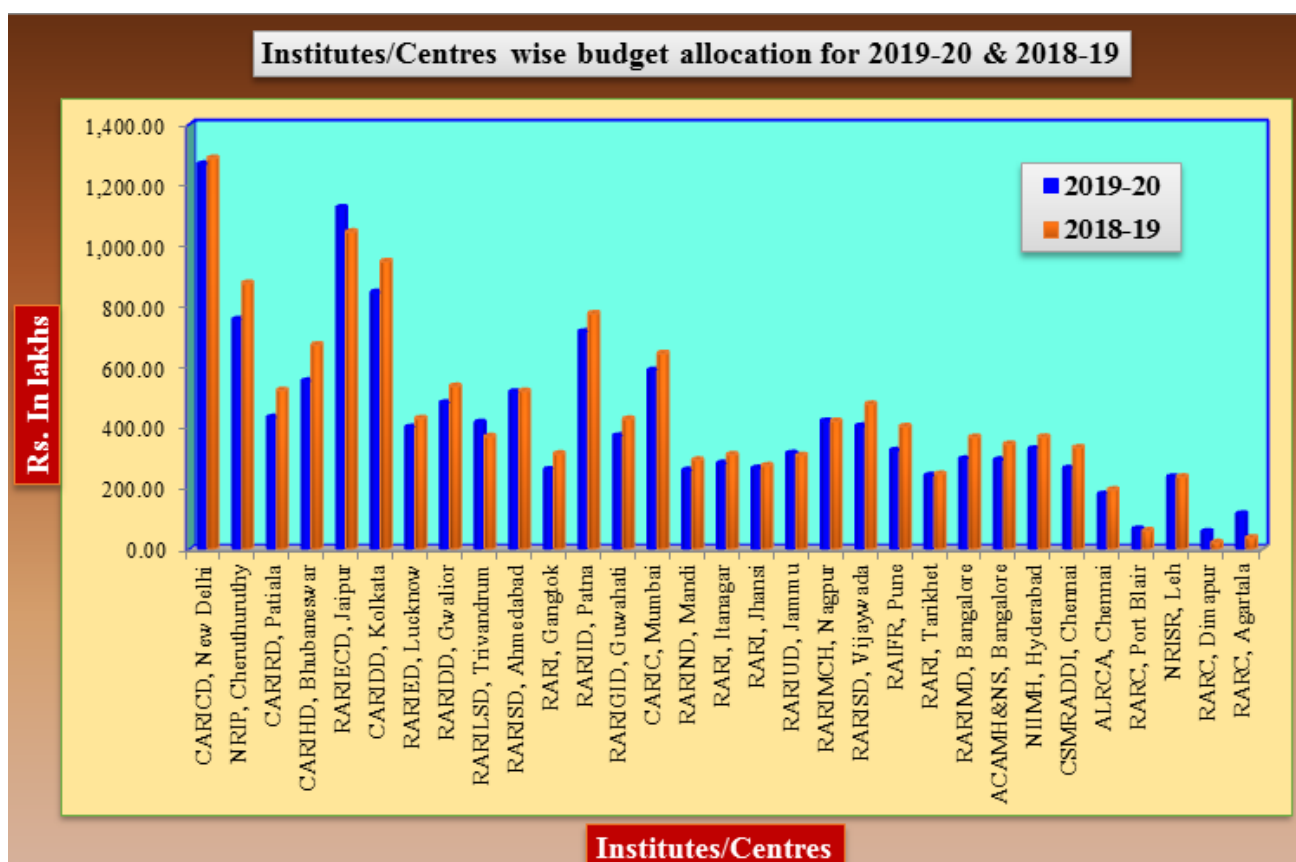
(Rs. in lakhs)

S.No.	Name of the Institute	2019-20	2018-19
1.	CARICD, New Delhi	1,269.53	1,288.83
2.	NARIP, Cheruthuruthy	756.98	877.23
3.	CARIRD, Patiala	434.45	524.05
4.	CARIHD, Bhubaneswar	554.60	674.42
5.	RARIECD, Jaipur	1,125.78	1,046.46
6.	CARIDD, Kolkata	847.31	948.39
7.	RARIED, Lucknow	402.09	431.17
8.	RARIDD, Gwalior	482.72	537.54
9.	RARILSD, Trivandrum	418.01	371.88
10.	RARISD, Ahmedabad	518.31	521.13
11.	RARI, Gangtok	262.45	315.05
12.	RARIID, Patna	716.53	776.78
13.	RARIGID, Guwahati	373.28	429.42
14.	CARIC, Mumbai	589.94	645.70
15.	RARIND, Mandi	260.55	294.55
16.	RARI, Itanagar	283.26	312.45
17.	RARI, Jhansi	267.51	275.97
18.	RARIUD, Jammu	315.98	309.77
19.	RARIMCH, Nagpur	422.12	422.39
20.	RARISD, Vijayawada	405.87	478.69
21.	RAIFR, Pune	325.75	404.88
22.	RARI, Tarikhet	243.29	247.54
23.	RARIMD, Bangalore	297.96	369.41
24.	ACAMH & NS, Bangalore	294.60	346.44
25.	NIIMH, Hyderabad	330.78	370.08
26.	CSMRADDI, Chennai	266.85	335.03



27.	ALRCA, Chennai	181.42	196.21
28.	RARC, Port Blair	66.69	61.77
29.	NRISR, Leh	238.08	238.73
30.	RARC, Dimapur	58.26	22.71
31.	RARC, Agartala	116.33	38.12
*	CCRAS, HQRS	14,940.72	13,527.21
<b>Total</b>		<b>28,068.00</b>	<b>27,640.00</b>

Institutes/Centres wise budget allocation for 2019-20 & 2018-19





## V. TECHNICAL REPORT

During the reporting period, the Council continued its activities in the areas of Medicinal Plant Research (Medico-ethno botanical Survey, Pharmacognosy and Cultivation), Drug Standardization, Pharmacological Research, Clinical Research and Literary Research & Documentation Programme. The Research Oriented Public Health Care Programmes (Outreach Activities) comprise of Tribal Health Care Research Programme, Ayurvedic Mobile Health Care Research Programme and Reproductive & Child Health Care Programme under Scheduled Castes Sub Plan (SCSP), Integration of AYUSH (Ayurveda) with National Programme for Prevention and control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) and Ayurvedic Health Centres under North East Plan. Besides this, Health care services through Out-Patient Department (OPD) and In-Patient Departments (IPDs) and Special clinics for Geriatric Health care. Programme wise achievements are as under:

### 1. MEDICINAL PLANTS RESEARCH

The Medicinal Plant Research comprises of 3 components *viz*; (A) Medico-Ethno Botanical Survey (B) Cultivation & *in-vitro* Propagation (C) Botanical and Pharmacognostical Standardization. The details are as under:

#### 1.1. MEDICO-ETHNO BOTANICAL SURVEY PROGRAMME

Central Council for Research in Ayurvedic Sciences (CCRAS) has been involved in Survey and Documentation of Medicinal plants used in Ayurveda system of medicine through its 6 peripheral Institutes. During the year of survey tours various Medicinal plants were collected and preserved as Herbarium and Museum specimens.

The survey team also collects and supply authentic raw drug samples for studies under various projects inside and outside the Council including the projects under Central Scheme of Ayurvedic Pharmacopoeia Committee (APC). Herbarium and Museum centers located in various Institutes of CCRAS are being used as reference centers for UG/PG/M.Phil/Ph. D students and Researchers for correct identification/ authentication of their plant specimens or raw drug materials. Further, the folk-claims collected during the exploration work provide lead for validation and effective development of drugs based on traditional knowledge and not from any codified system of medicine.

Herbarium centers of four peripheral institutes of CCRAS have got International recognition as these are listed in the INDEX HERBARIORUM and accredited with acronyms by the New York Botanical Garden.

**Table-7: Name of the Institutes and respective Herbarium acronyms**

Name of the Institutes	Herbarium acronym
Regional Ayurveda Research Institute (RARI), Ranikhet	RKT
Regional Ayurveda Research Institute (RARI), Jhansi	JHS
Regional Ayurveda Research Institute for Metabolic Disorders (RARIMD), Bengaluru	RRCBI
Regional Ayurveda Research Institute (RARI), Itanagar	ARRI



During the year 2019-2020, One Medico-Ethno-Botanical Survey programme has been taken under Intra Mural Research (IMR) Scheme conducted by Regional Ayurveda Institute for Fundamental Research (RARIFR) Pune in various parts of Thane forest area (Detailed in Table-8). A total number of 22 plant specimens have been collected and 43 herbarium sheets have been prepared. 40 museum samples were also collected during the tour. 4.865 Kgs (fresh wt.) of seed material were collected and supplied to various Institutes for Research and development work. During the survey tours, 100 photographs of Medicinal Plants have been taken, which will be figured in the final documentation of medicinal plant wealth of respective region. Apart from this, 65 folk-claims along with associated traditional knowledge were also collected after interaction with the local people during the survey tours.

**Table-8: Details of Area Surveyed and Specimens Collected**

Name of the Peripheral Institute	No. of survey tours conducted and survey areas	No. of Plant Species collected	Specimen Collected for Herbarium	Museum Sample collected	Seed material Collected	Seed material Supplied	Photographs collected	Folk claims collected
RAIFR Pune	1 Survey programme of Jawhar, Shahapur division of thane Forest Circle of Maharashtra state.	22	43	40	4.865 kgs	4.865 kgs	100	65

#### Short Tour conducted:

During the reporting period, short survey tours has been conducted by 6 Institutes viz; Regional Ayurveda Research Institute for Metabolic Disorders (RARIMD) Bengaluru, Regional Ayurveda Research Institute for Gastro-Intestinal Disorders (RARIGID) Guwahati, Regional Ayurveda Research Institute (RARI) Itanagar, Regional Ayurveda Institute for Fundamental Research (RARIFR) Pune, Regional Ayurveda Research Institute (RARI) Jhansi and Regional Ayurveda Research Institute (RARI) Ranikhet. 71 Short survey tours have been conducted in various parts (Detailed in Table-9). A total number of 243 plant specimens have been collected. During the survey tours, 363.575 Kgs (fresh wt.) of raw drugs were collected, and 237.18 Kg. (dry wt.) were supplied to various Institutes for Research and development work.



**Table-9: Details of Area Surveyed and Specimens Collected During Short Survey**

Name of the Peripheral Institute	No. of Short survey tours conducted	Area Surveyed	Number of specimen / drug sample collected during short tour	Raw drugs Collected (Fresh wt.in.kg)	Raw drugs supplied (dried wt.in.kg)	Purpose of conducting the short tour
1. RARIMD Bengaluru	5 survey Tour	1. Devarayanadurga forest, Tumkur district Mandya areas, Mandyadistrict 2. Mandya areas, Mandya district 3. Kanakapura, Sangam forest areas, Ramanagar district 4. Tumkur surrounding forest areas, Tumkur district 5. Chitradurga surrounding forest areas, Chitradurga district	50	71.600	28.020	To collected and supply crude drugs for: 1.IMR project at CSMRADDI, Chennai 2. IMR project at CCRAS, hqr. New Delhi. 3.IMR & Jamia Hamdard projects of CCRAS, New Delhi; IMR project at CARIDD, Kolkata, & CSMRADDI, Chennai 4. EMR project entitled "Evaluation of the heavy metals content in market samples of plant raw drug used in Ayurveda"
2. RARIGID Guwahati	21 survey Tour	1.Vill: Marngar, Block: Nongpoh, Dist: Ri-Bhoi, Meghalaya 2.Marngar village, Nongpoh, Dist: Ri-Bhoi, Meghalaya & Areas in Kamrup (G) dist. Assam 3.Market: Ganeshguri, City: Guwahati, Dist: Kamrup Metro, Assam 4.Local market of Guwahati in Kamrup (Metropolitan) district of Assam 5.Local market of Guwahati in Kamrup (Metropolitan) district of Assam 6.Market: Ganeshguri, City: Guwahati, Dist: Kamrup Metro, Assam 7.Local market of Guwahati in Kamrup (Metropolitan) district of Assam 8.Local market of Guwahati in Kamrup(Metropolitan) district of Assam 9. North Guwahati hills, Kamrupdist, Assam	46	107.725	107.725	To collected and supply crude drugs for: 1. Collection of raw drug for New drug development programme 2. Research work under IMR project 3. For OPD use 4. Intra Mural Research Project of RARIUD, Jammu 5. EMR project entitled "Evaluation of the heavy metals content in market samples of plant raw drug used in Ayurveda" 6. For Jamia Hamdard DBT funded project 7. For IMR project on "Pharmacognostical evaluation of medicinal plants in Ayurvedic".



		<p>10. North Guwahati hills, Kamrupdist, Assam</p> <p>11. Baksa and Udalguri district, Assam</p> <p>12. Goalpara and Kamrupdist, Assam and Ri-Bhoidist of Meghalaya</p> <p>13. Local market areas of Guwahati, Assam</p> <p>14. Local market areas of Guwahati, Assam</p> <p>15. West Garo hills dist, Meghalaya</p> <p>16. Manja in Karbi-Anglongdist, Assam</p> <p>17. Diphu in Karbi-Anglongdist, Assam</p> <p>18. Mayong area of Morigaon district, Assam</p> <p>19. Hajo area in Kamrup district, Assam</p> <p>20. Jagiroad area in Morigaon district, Assam</p> <p>21. Local market, Guwahati in Kamrup dist., Assam</p>				
3. Jhansi	2 short tour	<p>1. Dhatia pond and Datia(M.P)</p> <p>2. Pahuj Dam, Jhansi (U.P)</p>	2	0.500	0.500	To collected and supply crude drugs for CCRAS HQ New Delhi
4. RAIFR, PUNE	27 Short tours.	<p><b>Area Surveyed</b></p> <p>1. Shahapur, forest division area</p> <p>2. KatrajGhat area of Pune</p> <p>3. BhuleshwarSaswad area Dist.- Pune</p> <p>4. Rajgad, Tal. Velha and adjoining area</p> <p>5. Aundha Forest Nursery, Dist.- Pune</p> <p>6. Forest Research Nursery, Sopanbaugh, Near Impress Garden, Dist.- Pune</p> <p>7. Avhalwadi, Nagar Road and adjoining area, Dist.- Pune</p> <p>8. Ambanevela, Nasarapur, Dist.- Pune</p> <p>9. Solapur- Indapur and adjoining area</p> <p>10. Procured from KaluramMangalchand Kothari</p>	101	70.575	47.755	<p>To collected and supply crude drugs for:</p> <p>1. IMR- <i>In vitro</i> project.</p> <p>2. IMR- Medya project, RAIFR, Pune</p> <p>3. For NRDR, NMPB funded project at RARI, Jhansi</p> <p>4. EMR project entitled "Evaluation of the heavy metals content in market samples of plant raw drug used in Ayurveda</p> <p>5. Provided to IMR Geno toxicity</p> <p>6. For in house project</p> <p>7. Introduction in the garden</p>



		<p>11. Procured from KaluramMangalchand Kothari</p> <p>12. KondhawaDhawade river bed RAIFR, Pune</p> <p>13. Procured from KaluramMangalchand Kothari</p> <p>14. Procured from KaluramMangalchand Kothari.</p> <p>15. Short survey tours (13) conducted nearby areas of RAIFR, Pune.</p>				
5. RARI Ranikhet	9 short tours	<p>1. Binsar forest area</p> <p>2. Soni forest area</p> <p>3. Majkhaali area for survey of collection</p> <p>4. Raatighat area</p> <p>5. Kalika forest area</p> <p>6. Soni forest area</p> <p>7. Soni, Tarikhet forest area</p> <p>8. Ranikhet forest area</p> <p>9. Kaichi forest area</p>	15	33.200	5.050	To collected and supply crude drugs for: 1. IMR project of RAIFR, Pune 2. IMR project of RARIDD, Gwalior 3. IMR project of RARIMD, Bangalore 4. IMR project of RARIUD, Jammu 5. IMR project of CARIDD, Kolkata
6. RARI Itanangar	7 Short survey tours	<p>1. Haramuty, Assam</p> <p>2. Forest area nearby Arunachal Pradesh Border and Raw drug market nearby Arunachal Pradesh Border.</p> <p>3. Forest area of Yazali, Lower Subansiri district</p> <p>4. Forest area Poting and Kameng of Arunachal Pradesh</p> <p>5. Padumoni forest area of Assam.</p> <p>6. Forest areas of Arunachal border area</p> <p>7. Forests of Harmuty, Assam</p>	29	150.550	48.130	To collected and supply crude drugs for: 1. RARIUD, Jammu 2. RAIFR, Pune 3. NARIP, Kerela 4. RARI, Jhansi 5. CARIDD, Kolkatta 6. RARIDD, Gwalior
<b>Total</b>	<b>71</b>	-	<b>243</b>	<b>363. 575</b>	<b>237.180</b>	-



## 1.2 CULTIVATION & IN-VITRO PROPAGATION

For demonstrative cultivation of Medicinal plants belonging to different agro-climatic zones, the Council is maintaining four demonstrative gardens situated at RAIFR Pune, RARI Jhansi, RARI Ranikhet, and RARI Itanagar. These gardens are as ex-situ conservation sites for important germplasm and collection place of medicinal plants including several rare, endangered and threatened species. Different study programmes viz. adaptability, growth pattern, flowering, fruiting and suitable maturity time studies of drugs part etc. and supplying of authentic drug materials for various research programmes are being carried out. These studies will provide protocol in framing strategies for conservation and sustainable utilization of highly valuable medicinal plants. The live plants act as specimen for referencing and correct identification of the medicinal plants. 55 species are newly introduced in the herbal garden of the Institutes for demonstration purposes. The work done in the field of cultivation in all the gardens of CCRAS for demonstration purpose along with in vitro studies of medicinal plants is mentioned in table-10.

**Table 10: Details of Area, Species cultivated / Maintained and Raw Drug Collected / Supplied from the Gardens of CCRAS**

S. No.	Particulars	RAIFR, Pune	RARI, Jhansi	RARI, Itanagar	RARI, Ranikhet		Consolidated Reports
1	Total area of the land, Presently under Cultivation	4 Acres	10 Acres	12.5 acres	<b>Tarikhet Garden</b> 3 acre	<b>Chamma Garden</b> 1 acre	30.5 acres
2	Number of Species Maintained in the Garden	371+	238	126	173	74	982 species
4	Raw Drugs Collected from the Garden	99.667 kg of 120 plants	223.64 kg	140.35 kg	Procured for germplasm	Procured for germplasm	463.657 Kg
5	Raw Drugs Supplied from the Garden	66.43Kgs of 37 plants	223.64 Kg.	33.35 kg	For panchkarm section of institute	Nil	323.42 kg drugs were supplied for various research works to different institute of the council.





6	Agro-trials/ or <i>in vitro</i> propagation techniques	Studies on <i>in vitro</i> cultivation of Brihat panchmool (Tree species) of Dashmoola and in house <i>in vitro</i> propagation trials on Rasana, Jiwanti have been carried out. Cultures of Manjistha, Dhrumpatara and Ishwari were also maintained and plantlets were raised using the developed protocols in the Institute.	Nil	Nil	Nil	Nil	Studies on <i>in vitro</i> cultivation of Brihat panchmool (Tree species) of Dashmoola and in house <i>in vitro</i> propagation trials on Rasana, Jiwanti have been carried out. Cultures of Manjistha, Dhrumpatara and Ishwari were also maintained and plantlets were raised using the developed protocols in the Institute.
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### 1.3 BOTANICAL STANDARDIZATION

Apart from this, the Council is engaged in development of macroscopic and microscopic standards for identification of a single drugs based on detailed information depend upon habit and anatomical characters for crude drugs. For establishing the botanical identity of the drug along with their substitutes and adulterants, CCRAS have taken up the Pharmacognostical Investigations of the drugs widely used in Ayurveda in its peripheral units. The work done in the field of Botanical Standardization on 5 single crude drugs and 16 formulations along with their ingredients with special reference to Pharmacognostical studies is mentioned in table-11.

**Table 11: Details of Botanical Standardization studies carried out**

S. No.	Allocated Programme	Name of Species / formulations/ Part used	Studies carried out
<b>CARIDD, Kolkata:</b>			
1.	Pharmacognostic evaluation of crude drugs performed	<ul style="list-style-type: none"> <li>• Kusha(leaf)</li> <li>• Gokshura(whole plant)</li> <li>• Shushnishaak(whole plant)</li> <li>• Nagkesar(Stamens)</li> </ul>	Macroscopy, organoleptic studies, powder microscopy along with camera lucida drawings.
2.	Pharmacognostic evaluation of compound formulations	<ul style="list-style-type: none"> <li>• NMJ formulation (raw drugs and finished product: Batch-II)</li> <li>• Gluten health formulation (raw drugs and finished product)</li> <li>• SC-3 formulation (raw drugs and finished product - Tablets)</li> <li>• Finished product of AYUSH-AG tablet (Batch-I, II, III)</li> <li>• AYUSH-A formulation (raw drugs, intermediate and finished product)</li> <li>• The aqueous and hydro alcoholic extracts of AYUSH-82 formulation</li> <li>• AYUSH-M3 formulation</li> <li>• <i>Varunadi Kwatha Churna</i> (raw drugs and finished product)</li> <li>• <i>Gandhakadya Malahara</i> formulation (raw drugs)</li> <li>• <i>Jatiphaladi Churna</i>(raw drugs and finished product)</li> <li>• <i>Balachaturbadrika Churna</i>(raw drugs and finished product)</li> <li>• <i>Sarpagandha</i> Mishran (raw drugs)</li> <li>• <i>Triphala Kwatha Churna</i> (raw drugs and finished product)</li> </ul>	Macroscopy, organoleptic studies, powder microscopy along with camera lucida drawings.
<b>RAIFR, Pune:</b>			
3.	Pharmacognostic evaluation of crude drugs performed	<ul style="list-style-type: none"> <li>• <i>Cocos Nucifera</i> L. (fruit)</li> </ul>	Macroscopy, organoleptic studies, powder microscopy along with camera lucida drawings.
<b>RARIDD, Gwalior:</b>			
4.	Pharmacognostic evaluation of crude drugs performed	<ul style="list-style-type: none"> <li>• AYUSH-RS (3 batches)</li> <li>• AYUSH-DVR (3 batches)</li> <li>• Nirgundiadi Yoga Intermediate and finished Product (tablet)</li> </ul>	Macroscopy, powder microscopy along with camera lucida drawings



## 1.4. Intra Mural Medicinal Plant Research Projects

In order to create acceptable scientific evidence on Ayurvedic formulations, Intra Mural Research Projects (IMR) has been taken up in the field of medicinal plants research. The work done under IMR projects during the reporting period is mentioned under the heading entitled “Medicinal Plants Research Projects”. During the reporting period, 3 completed and 12 projects are going on. The details are as under:

### I. Completed projects

#### 1.4.1. Selection of salt-tolerant cell lines and Regeneration of salt tolerant plantlets of Prishniparni (*Uraria picta* (Jacq.) Desv) and Shalaparni (*Desmodium gangeticum* (L.) Dc.

**Background in brief:** The project is proposed to develop in vitro salt tolerant calli and plantlets of *Prishniparni* (*Uraria picta* (Jacq.) Desv. and *Shalaparni* (*Desmodium gangeticum* (L.) DC.) as both the important plant species are extensively used in several Ayurvedic preparations as: Dashmoolarista, Dashmool kwatha, DashmoolaTaila etc. It was evident from the available literature that there is no standard salt tolerant protocol developed for the selected medicinal plants.

#### Objectives:

- Development of a protocol for the callus culture and somatic embryogenesis.
- Selection of salt tolerant calli by repeated subculture and salt tolerant plantlets of selected plants.
- To conduct seed germination trials on different concentration of NaCl and other salts solutions.
- Hardening of plantlets by suitable method and testing of plantlets for their salt-tolerance limit and capacity, in the field.
- Comparison of the salt –tolerant plantlets with salt sensitive plantlets in-vivo grown seedlings of selected plants with respect to morphometric and few selected phytochemical parameters.

<b>Date of initiation</b>	:	21 <sup>st</sup> April, 2014
<b>Duration of Study</b>	:	Three Years
<b>Participated centre along with PI</b>	:	RAIFR, Pune
<b>PI</b>	:	Dr. A.M. Gurav
<b>Co-I</b>	:	Dr. S. N. Murthy

#### Current status:

- After internal and external vetting of the draft report, the final report has been submitted and the same is under the draft for the publication.

#### 1.4.2. Development of Pharmacopoeial Standards of Traditionally Used Ayurvedic Formulations

**Background in brief :** Under this project Institute received five polyherbal formulations to develop pharmacopoeial standards and standardization work on ChaturBhadraKwathchurna, LaghuSudarshanchurna and Vyoshadichurna, Narayan Churna and Tribhuvankirtiras.



**Objectives:**

- Developing standards of Ayurvedic formulations

**Date of initiation** : 19<sup>th</sup> September, 2014

**Duration of Study** : Two Years

**Participated centre along with PI** : CARIRD, Patiala

**PI** : Harjeet Singh

**Current status:**

- The final report has been submitted along with the publications.

**1.4.3. Pharmacognostical Evaluation of Medicinal Plants cited in Ayurvedic Formulary of India excluding the plants mentioned in Ayurvedic Pharmacopoeia of India**

**Background in brief:** The project was initiated to achieve the target of selected plants (in total of 60 medicinal plants) for carrying out the Pharmacognostical Evaluation of medicinal plants cited in Ayurvedic formulary of India excluding the plants mentioned in Ayurvedic Pharmacopoeia of India. Total five units are engaged in this programme viz; CSMRADDI Chennai; CARIDD Kolkata; RAIFR Pune; RARIMD, Bangaluru and RARIDD, Gwalior.

**Objectives:**

- The purpose is to identify/authenticate the plants, botanical description, part/s used, season of collection, stage of plant and adulteration. To study their macroscopic characters, microscopic characteristics of powdered drugs, to provide photomicrographs of microscopic characters of powdered drugs, to determine their physico-chemical identities (loss on drying at 105°C, total ash, acid-insoluble ash, alcohol-soluble extractive and water-soluble extractive).

**Duration of Project** : One (01) year

**Date of initiation** : 31<sup>st</sup> January, 2018

**Participated Centers along with PI:**

1. CSMRADDI Chennai (Dr. G. Nartunai)
2. CARIDD Kolkata (Mr. Rajesh Bolleddu)
3. RAIFR Pune (Dr. Shyam Baboo)
4. RARIMD, Bangaluru (Dr. T.R. Shantha)
5. RARIDD, Gwalior (Ms. Sapna Kondalkar)

**Current Status:**

- The study on 50 medicinal plants collected from 3 different geographical zones have been completed for the macroscopy, microscopy, camera lucida drawings, photomicrographs, and physico-chemical parameters. The final draft report has been submitted from all the 5 CCRAS Units as per the format.



## II. Ongoing Projects

### 1.4.4. Development of Data Bank on Ethno-botanical research and cross cultural study on sociology of reproductive health care of tribal societies involving medicinal plants across North east India

**Background in brief:** The folklore medicinal values of plant species so far reported by the studies have although been claimed with high reliability, but adequate attention has yet to be paid for their validation of folklore medicinal claims of such plants available to the region. Credibility of folklore claims are thus planned to analyze on the basis of Cross-cultural studies of reported medicinal plants across major tribal societies with the help of quantitative statistical methods. For the present project, eight major tribes of the region are selected as per their distributional records with high degree of cohabitation in different states of North east India. Their sociology on reproductive health care involving medicinal plants is attempted to be analyzed with quantitative approach, so that a concrete conclusion can be drawn in a step towards applied Ethnobotany.

#### Objectives:

##### Primary:

- To develop a data bank covering literatures on ethno-botanical research from NE India
- To survey sociology of reproductive health care involving medicinal plants of eight major tribes across North east India

##### Secondary:

- To compile species wise medico-ethnobotanical claims
- To conduct quantitative cross cultural studies of folk claims of reproductive health care

**Date of initiation** : 23<sup>rd</sup> May, 2016

**Duration of Study** : Three Years

**Participated centre** : RARIGID, Guwahati

**PI** : Mr. Devanjal Bora

**Co-I** : Dr. B. K. Bharali

#### Current status:

- The draft report has been submitted and vetted, the same has been revised.

### 1.4.5. IMR-CAD -Compendium of Ayurveda Dietetics with reference to Oil Seeds

**Background in brief:** The present project is aimed to prepare comprehensive documentation of Ayurveda Dietetics viz. Oil Seeds. Published information Botany, Chemistry and Ayurvedic aspects with respect to Ayurveda Dietetics will be collected from various sources. Data from all the available sources (from electronic and physical sources) will be compiled as per the model CTD format developed



### Objectives:

- Compilation of data on oil seeds used in Ayurveda dietetics from approved Ayurvedic literature listed in the Drugs and Cosmetics Act, Govt. of India with respect to its Ayurveda properties and ancient descriptions.
- Compilation of updated Agro-botanical, Taxonomical, Pharmaceutical, Pharmacognostical, Phytochemical, Nutritional and Nutraceutical data from standard available literature (electronic and physical sources).
- Segregation of collected information pertaining to each oil seed as per model CTD format.
- Publication of compendium as per the model CTD format.

**Date of initiation** : May 2018

**Duration of Study** : Three Years

**Participated centre** : RARIMD, Bangalore

**PI** : DR. V. Rama Rao

**Co-I** : Dr.M.N Shubhashree, Dr. Raghavendra Naik, Dr. Tejashwini

### Current status:

- As per the proposed project, total 15 medicinal plants were allotted for preparing compendium report (botany, chemistry and ayurvedic information). Compilation work related to botany and chemistry part pertaining to 8 medicinal plants viz. Eranda (*Ricinus communis* L.), Sarshapa [*Brassica juncea* (L.) Czern.], Atasi (*Linum usitatissimum* L.), Narikela (*Cocos nucifera* L.), Karanja [*Pongamia pinnata* (L.) Pierre], Tila (*Sesamum indicum* L.), Bhuchanaka (*Arachishypogaea* L.) and Nimba (*Azadirachta indica* A.Juss.) has been completed. Compilation of Botany, Chemistry and Ayurveda information on remaining dietetics is under progress.

#### 1.4.6. Development of pictorial database of economically important parts of selected medicinal plants of RAIFR, Pune (Tree species)

**Background in brief:** The medicinal plants are fundamental to treatment in Ayurveda. But there are certain difficulties in identification viz. many species are considered in name of Rasna, PashanabhedaMurva etc. across India. A thorough morphological understanding from the basics of NamarupaVigyan of Dravyaguna is the need of the hour. The present project will aid in enriching the existing data on medicinal plants. It also helps in redefining of controversies related to certain plants.

### Objectives:

- Identification of medicinal plants cultivated / grown in the Institute garden.
- Morphological studies of plants cultivated / grown in the Institute garden
- Field photography of whole plant and the part used at different stages.



- Preparation of herbarium/Museum of the plant part and specimen
- Photography of parts of the medicinal plant at high resolution (During different stages of drying)
- To establish distinguishing, diagnostic characteristics for differentiation among selected drugs and their substitutes/adulterants

<b>Date of initiation</b>	:	01/04/2018
<b>Duration of Study</b>	:	Two Years (and 6 months extension)
<b>Participated centre</b>	:	RAIFR, PUNE
<b>PI</b>	:	Dr. Gajendra B. Rao (Old), Dr. Shyam Baboo Prasad (New)
<b>Co-I</b>	:	Dr. Anagha Ranade, Dr. Shyam Baboo Prasad

#### Current status:

- As the PI of the project was changed and most of the previous data was repeated according to the objectives of the project and guidelines from the hqrs.; thus project has been extended for more 6 months in order to complete the project.
- Total 54 medicinal plants (tree sp.) have been covered till end of current session as per objectives. Remaining work (on 21 plants) will be achieved in the extended tenure.
- The data analysis and interpretation of 30 plants have been completed and rest is under progress.

#### 1.4.7. Development of in vitro and in vivo propagation protocol of two important medicinal plants used by the tribal

##### Background in brief:

Tissue culture is prerequisite for conservation and multiplication of any plant material through direct and indirect organogenesis. Due to having totipotency properties in plants tissue it can be grown in the organ and complete plantlets through various explants. So, these two plants have been selected for the development of *in vitro* and *in vivo* propagation protocol using various explants.

##### Objectives:

- To develop in vitro and in vivo propagation protocol on *Dahipalas-Cordia macleodii* Hook and *Rohitaka-Aphanamixis polystachya* (Wall.) Parker
- To develop in vitro plantlets by using different explants.
- To assess the effect of different phyto-hormones on different explants on shoot formation.
- To evaluate the effect of various growth regulators on root induction.
- To assess the effect different concentrations of growth regulators and planting medium on root induction from cuttings.
- To acclimatize the in vitro grown plants in the lab and field.



<b>Date of initiation</b>	:	01/04/2019
<b>Duration of Study</b>	:	Three Years
<b>Participated centre along with PI</b>	:	RAIFR, PUNE
<b>PI</b>	:	Dr. A.M. Gurav
<b>Co- I</b>	:	Dr. GoliPenchala Prasad, Dr. Rasika H. Kolhe Dr. ShyamBaboo Prasad

**Current status:**

- Tours were conducted in the nearby areas of Pune to locate and collect the plants of *Dahipalasha*. Several locations were successfully identified and GPS data is recorded.
- Explants of *Rohitaka*, were collected from the plants growing in the Institute's Garden and are used as the source of explants/stem cuttings for in vivo and in vitro studies.
- In vivo studies of *Dahipalasha* showed a peculiar callus formation at the base of the stem cuttings, which is then being used as explants for in vitro studies.
- 40 Seedlings of *Rohitaka* and 3 seedlings of *Dahipalasha* were raised from the seed germination studies.
- Callus formation was observed from the leaf explants of *Rohitaka*, whereas in case of *Dahipalasha*, the leaf explants showed severe leaching despite the fact that antioxidants like ascorbic acids were incorporated in the media.
- In vitro shoot multiplication studies are ongoing using apical/nodal explants.

**1.4.8. Exploration, acclimatization and in vitro propagation of medicinal plants being used under the name Agnimantha**

**Background in brief:** The present study is being proposed to conduct scientific evaluation on two species of *Premna* and one species of *Clerodendrum* which are generally used under the name of *Agnimatha*. There are various therapeutically important and potent formulations which are prescribed and manufactured out of the drug *Agnimatha*.

**Objectives:**

- Exploratory execution of Drugs/medicinal plants from recognized institutes/ wild sources, ascertaining Botanical identity through correct identification of the plants.
- Mass propagation and preliminary phytochemical investigations on in vitro grown product and conservation of rare and endangered medicinal plants in botanical gardens/poly houses /green houses.

<b>Date of initiation</b>	:	15 <sup>th</sup> April, 2014 – old 24 <sup>th</sup> September 2019 – new
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<b>Duration of Study</b>	:	Two years w.e.f. 24.08.2019
<b>Participated centre along with PI</b>	:	RAIFR, Pune
<b>PI Name</b>	:	Dr. Gajendra Rao- OLD Dr. A.M. Gurav - NEW
<b>Co-I</b>	:	Dr. S.N. Murthy

#### Current status:

- As the primary objectives of the project have not been achieved, PI of the project was changed and the project has been reinitiated for 2 years without any additional financial implications in order to complete the project.
- In vitro propagation trials of *Clerodendrum inerme* (L.) Gaertn., *Clerodendrum phlomidis* L.f. & *Premna obtusifolia* R. Br. have been performed.
- Vegetative propagation of *Agnimantha* – *Clerodendrum inerme* (L.) Gaertn.; *Clerodendrum phlomidis* L.f & *Premna obtusifolia* R. Br. by using stem cutting on five different substrates.
- Hardening trials of *Shudra Agnimantha* – *Clerodendrum inerme* (L.) Gaertn. successfully conducted under lab condition.
- Data collection of roots of in vivo grown plants of *Premna obtusifolia* R. Br. and *Clerodendrum phlomidis* L.f and *Clerodendrum inerme* (L.) Gaertn have been performed.

#### 1.4.9. Authentication of selected crude drugs through pharmacognostical evaluation collected from various markets of India

**Background in brief:** Medicinal plants with high trade in medicinal value are depleting due to over-exploitation and other factors which results in increase demand of genuine raw drugs. Therefore, there is a gap between demand and supply of raw drugs and the result of this leads to adulteration and substitution for genuine crude drugs. The proposed study will also serve to identify the best raw drug market in India from where the best crude drugs could be collected.

**Objectives:** To authenticate the crude drugs of different markets of India and also dwell upon their geographical origin and distribution, botanical description, part/s used, therapeutic uses, season of collection, stage of plant and adulteration by studying their macroscopic, organoleptic/sensory, microscopic characteristics (Camera Lucida drawings along with photomicrographs of microscopic characters) and physico-chemical identities of powdered drugs.

<b>Date of initiation</b>	:	01/02/2017
<b>Duration of Study</b>	:	Three Years (extension of 3 months)
<b>Participated centre</b>	:	CARIDD, Kolkata
<b>PI</b>	:	Ms. Sreya Dutta
<b>Co-I</b>	:	Mr. Kalyan Hazra, Mr. Rajesh Bolleddu



**Current status:**

- The experimental part of the project has been completed, and the same is under compilation as per the approved format of the project.

**1.4.10. Developing Pharmacognostical Standards for some Ambiguous Ayurvedic Drugs (Sandigdha Dravyas) Appearing in the Ayurvedic Formularies, Parts I to III**

**Background in brief:** The Ayurvedic Formularies give list of authentic drugs and their parts for use in the formulations. There are several drugs which have been given alternatives or substitutes in the Formularies themselves. Since there is a possibility of abuse of the drugs by adulteration which is necessary to develop standards which enables stakeholders to get the drugs intended in the formulation.

**Objectives:**

- To carry out detailed Morphological and Micro-morphological and anatomical studies of the selected drugs through microscopy
- To establish distinguishing, diagnostic characteristics for differentiation among selected drugs and their substitutes/adulterants
- To establish diagnostic characteristics of the selected drugs in their powdered form
- To carry out comparative TLC/HPTLC studies to differentiate from adulterants/substituent
- To add to the Reference Substances Museum and Herbarium of CSMRADDI

<b>Date of initiation</b>	:	26/6/2018
<b>Duration of Study</b>	:	Two Years
<b>Participated centre</b>	:	CSMRADDI, Chennai
<b>PI</b>	:	Dr.G.Nartunai
<b>Co-I</b>	:	Dr.A.K.Meena, Shri.C.Arunachalam & Dr.R.Ilavarasan

**Current status:**

- 14 plants in common vernacular name (i.e. 34 plant species) have been procured.
- Pharmacognostical evaluation (Macro-microscopic study) and chemical profiling on 9 plants in common vernacular name (24 plant species) have been completed.

**1.4.11. Qualitative authentication of selected market samples of crude drugs available in various markets of India**

**Background in brief:** To develop quality standards of the selected crude drugs available in various markets of India, based on Pharmacognostic study in terms of diagnostic Microscopic and Physico-chemical parameters of the powder characters of these selected crude drugs and compare the same



with the authentic samples. Thus, a reliable scientific data on genuinens of the crude drugs sold in the markets can be obtained for the end users. The aim of the present study is to develop quality specification of crude drug based on Identity, purity and strength.

#### Objectives:

- Procurement of authentic and market samples from various localities.
- To study the macroscopic, organoleptic/sensory characters of both the drugs (collected and market samples).
- Powder drug analysis along with Camera lucida drawing of diagnostic characters of both the samples.
- Photomicrographs of microscopic character of powdered drugs analysis and if possible of sections.
- Estimation of physic-chemical parameters.
- To carry out the TLC and preliminary phytochemical screening
- Comparison of the generated data.

**Date of initiation** : 31<sup>st</sup> March 2018

**Duration of Study** : Three years

**Participated centres** : RARIUD Jammu (for botanical section) and CSMRADDI Chennai (For chemical profiling of the samples)

#### Current status:

- During the reporting period under report Macro-microscopical and powder study of 65 authentic raw drugs and studies on 189 market samples of corresponding authentic drugs have been completed. The raw drugs studied, comprised of 10 seeds drugs and their 18 market samples; 16 fruit drugs and their 45 market samples; 2 leaf drugs and their 4 market samples; 9 root drugs and their 31 market samples; 5 stem bark and their 19 market sample; 7 whole plant and their 8 market samples; 2 stem and their 6 market samples; 1 Root bark and its 4 market samples; 2 root tuber and their 9 market samples; 3 rhizome and its 30 market samples; 1 epiphytic root and its 2 market samples; 3 flowers and their 3 market samples; 1 heart wood and its 1 market sample; 1 fruiting thallus and its 3 market samples; 1 seed kernel and its 4 market samples; 1 lavan and its 2 market samples. Phytochemistry of the same drugs is being carried out at CSMRADDI, Chennai, cooperating centre for the project.

#### 1.4.12. Development of Agro-technique for High Altitude Endangered Medicinal plants of Trans-Himalaya

**Background in brief:** Trans-Himalayan region of Ladakh exhibits a great diversity in soil vegetation, and topography. Himalayan mountains exhibits accelerated degradation of environment and natural resources, un-sustainability of current resource thus putting it in an alarming rate. This calls on focusing



on multiple goal centered strategies for in-situ and ex-situ conservation of natural resources by using a systematic cultivation technique. To study the different cultivation techniques in Ladakh condition we divided our project in three different deliverables which will be achieved in three consecutive years as mention below:

**Objectives:**

- To study the cultivation techniques of commercially viable and endangered medicinal plants of Himalayan regions.
- To develop nursery of some commercially viable medicinal plants of Himalayan regions and freely distribute to the link farmers for cultivation of field.
- To cultivate commercially viable and endangered medicinal plants of Himalayan regions in herbal garden.
- Documentation of cultivation techniques of Himalayan medicinal plants and standardization of cultivation techniques.

**Date of initiation** : 16.04.2018  
**Duration of Study** : 3 Years  
**Participated centre** : NRIS, Leh  
**PI** : Dr. Padma Gurmet  
**Co-I** : Dr. Tsewang Dolma

**Current status:**

- The preliminary and germination trials using various methods are under observation.
- The agromorphological and survivability data of 10 medicinal plants have been recorded in open, trench, and greenhouse.

**1.4.13. Development of Agro techniques of two important medicinal plants through vrikshayurveda concepts**

*Psoralea corylifolia* L. and *Desmodium gangeticum* L. found both wild and under cultivation. Although small scale cultivation of *Psoralea corylifolia* and *Desmodium gangeticum* L. is being done at a number of places in the country. Information about its cultivation according to the process described in Vrikshayurveda is not available, therefore, it was decided to carryout cultivation using methods suggested in Vrikshayurveda.

**Objectives:**

**A. Primary:**

- To observe the effect of *Sesamum indicum* L. (Til) oil cake and *Dolichos biflorus* L. (horse gram) decoction on the yield of Bakuchi and Shalparni.



- To observe the effect of Til oil cake and Kulthakwath on the active constituent and pharmacognostical changes in the Bakuchi seed and Shalparni root.
- Influence of different treatments on the post harvest soil fertility status.

#### **B. Secondary:**

- To see the effect of different treatments on the Nitrogen uptake by the plants

<b>Date of initiation</b>	:	11 September 2019
<b>Duration of Study</b>	:	Two Years
<b>Participated centre</b>	:	RARI Jhansi
<b>PI</b>	:	Dr.Usha Kiran
<b>Co-Investigators</b>	:	Dr. Gajanan B. Pawar, Dr. J.C Arya

#### **Current Status: (Ongoing)**

- The seeds of the two test plants have been collected and its germination is under observation.
- As soon as the seeds germinates (in the month of May, its natural germination season), the process for the Kunap Jal preparation will be started.
- The pre-preparation and procurement work is also under progress.

#### **1.4.14. Digitization of Herbarium Sheets and Development of Digital Herbarium at Regional Ayurveda Research Institute, Jhansi**

**Background in brief:** The Institute under CCRAS is engaged in preparing database of medicinal plants of India and also developing digital herbarium with an incorporation of all necessary information of the digital herbarium sheets. The project highlights the activities at National and International level especially for those who keen to know about herbarium, medicinal plants, their occurrence and cultivation mode etc.

#### **Objectives:**

- The target of digitizing approximate 8000 herbarium sheet from designated five survey unit namely RARI, Ranikhet, RARI, Itanagar, RARI, Jhansi, RARIGID, Guwahati, RARIMD, Bangalore
- Up gradation of the existing software will be upgraded to need the requirement.
- A digitized database will be launched and a booklet/User manual may be published for information of stakeholders as ready reference.
- The botanical nomenclature currently in vogue will be reflected in all contacts for better understand of the stakeholders
- The gaps and lacunae if any through the course will be field suitable including the information related to passport data depending upon geographical variation.



<b>Date of initiation</b>	:	01/04/2018
<b>Duration of Study</b>	:	Two Years (Extended for One year)
<b>Participated centre</b>	:	RARI, Jhansi
<b>PI</b>	:	Dr. Sanjeev Kumar Lale
<b>Co-I</b>	:	Dr. Neelima Sharma

**Current status:**

- Updating the information of Herbarium sheets to be digitized is under process. Total 2166 sheets scanned (549 from RARI, Itanagar, 572 sheets from RARI, Jhansi, 791 from RARI, Ranikhet and 254 from RARIGID, Guwahati). Total 2172 sheets edited from RARI, Jhansi (628), RARI, Ranikhet (788) and RARIMD, Bangalore (756) respectively. The botanical name has been given to all the images and if the old name were changed, the accepted new name was given along with the old name as synonyms.

**1.4.15. Experimental Development of Microforest of Medicinal Plants by using Miyawaki Method of Plantation at Gardens of CCRAS**

This is the first ever initiative made by CCRAS on the behalf of M/o AYUSH by launching of the project entitled “AUSHADH ARANAYAM” on the occasion of 3<sup>rd</sup> Ayurveda Day 2018 launched by Honourable MoS (IC) AYUSH as Intra-mural research projects entitled, “Experimental Development of Micro forest of Medicinal Plants by Using Miyawaki Method of Plantation” at different in-house gardens of CCRAS viz. RAIFR, Pune; RARI, Jhansi; RARI, Ranikhet; and RARIMD, Bengaluru.

**Brief Background:** This has been adopted after Japanese Botanist; Akira Miyawaki who had developed plantation technique to create forest using native plants species. By this method natural forest can be develop within 8 to 10 years. Based on this 30-50 native medicinal plants species are being planted in the area of 1 square meter; Plantation is being irrigated at a regular interval or upto 3 years. After experimental trials, the Miyawaki method will be adopted in agroclimatic zones of the Country.

**Objectives:**

**Primary objective:**

- To conduct experimental trials to create micro forest of medicinal plants by using Miyawaki method.
- To develop forest of medicinal plants under controlled condition without Miyawaki method for comparison.
- Study of growth pattern of medicinal plant species grown under experimental trial and controlled condition as per standard protocol.
- Comparative Analysis of growth pattern with control group.
- Live photographs of medicinal plant species at different stages of growth.
- To develop standard agro technique protocol using Miyawaki method for different medicinal plants forest.



### Secondary objective:

- To conserve ecological status of medicinal plants of respective phytogeographical region.
- To study the feasibility of Miyawaki method for medicinal plants.
- To maintain biodiversity of the selected region.
- To restore the land of Institute garden.

**Training on Miyawaki Forest Development has been given to all associated PI's and co-PI's of the Institutes at RARIMD, Bengaluru from 6-16 Dec.2018.**

#### A. RAIFR, PUNE:

<b>Date of initiation</b>	:	05/11/2018
<b>Duration of Study</b>	:	Three Years
<b>Participated centre</b>	:	RAIFR, Pune
<b>PI</b>	:	Dr. Arun M. Gurav
<b>Co-I</b>	:	Dr. Rasika H. Kolhe, Dr. ShyamBaboo Prasad

#### Current status:

- Preparation of planting material by raising the plants by seeds, cuttings and 08 species were procured from forest department.
- Plantation of 1250 plants in experimental and 125 plants in control area have been completed.
- Irrigation system for experimental and control plantations have been established.
- Regular irrigation to experimental plantation and control plantation have been carried out.
- Spraying of Jivamrut to the experimental plantation have been given at an interval of 15 days.
- Measurements of plant growth of plants of experimental and control along with photo documentation have been recorded after every three months.
- Data analysis of measurements like height, girth and canopy of plants have been completed for three quarters.
- Weeding in experimental and control plantation have been carried out as and when required.

#### B. RARI, JHANSI:

<b>Date of initiation</b>	:	01/11/2018
<b>Duration of Study</b>	:	Three Years
<b>Participated centre</b>	:	RARI, Jhansi
<b>PI</b>	:	Dr. Neelima Sharma
<b>Co-I</b>	:	Dr. Anil Mangal, Dr. Jagdish Arya



**Current status:**

- The controlled and experimental plantation was done as per the protocol.
- Measurements of growth and growth patterns of all planted species of medicinal plants along with their live photographs is under progress at different stages of growth. (10 months)

**C. RARI, RANIKHET:**

<b>Date of initiation</b>	:	31/10/2019
<b>Duration of Study</b>	:	Three Years
<b>Participated centre</b>	:	RARI, Ranikhet
<b>PI</b>	:	Dr. Deepshikha Arya
<b>Co-I</b>	:	Dr. Sanjiv Kumar, Dr. M.S.Rawat, Dr. Harit Kumari

**Current status:**

- The controlled and experimental plantation was done as per the protocol.
- Measurement of growth and its growth patterns is under progress for the planted species with the regular spray of jivamrit. (9 months)

**D. RARIMD, BENGALURU:**

<b>Date of initiation</b>	:	April 2019
<b>Duration of Study</b>	:	Three Years
<b>Participated centre</b>	:	RARIMD, Bengaluru
<b>PI</b>	:	Dr. V. Rama Rao
<b>Co-I</b>	:	Dr. Raghavendra Naik, Dr. Bhavya

**Current status:**

- Collected total 1745 saplings belonging to 31 species at nominal rate from forest nurseries located in and around Bengaluru city to plant under Miyawaki Project.
- Out of these, about 1560 saplings belonging to 31 species are planted under experimental conditions whereas 90 saplings belonging to 22 species are planted under control condition.
- Measurement of growth and its growth patterns is under progress for the planted species with the regular spray of jivamrit. (9 months)





## 1.5. Others Projects (Projects Sanctioned by National Medicinal Plants Board (NMPB), Ministry of AYUSH, Govt. of India, New Delhi)

### 1.5.1. Establishment of National Raw Drug Repository (NRDR) at RARI, Jhansi.

#### Background in brief:

A project entitled “Establishment of National Raw Drug Repository” has been sanctioned by the NMPB, Ministry of AYUSH, Govt. of India, New Delhi to CCRAS and the project has to be established/initiated at its peripheral Institute i.e. Regional Ayurveda Research Institute, Jhansi. The objectives of the project are as follows:

#### Objectives:

- To act as collection centre for raw drugs supplied by RDR situated at different agro climatic zones of the country.
- To act as an accredited reference library cum institution for authentication of raw drugs
- To act as storage and preservation of Botanical Reference Substance (BRS)
- To establish standard protocols and keys for identification and authentication of raw drugs used in the herbal industries.
- To Provide Botanical Reference Substance (BRS) on payment basis.
- To Provide Herbarium specimen on payment basis.
- To Provide Certificate of Analysis (CoA) of the raw drugs supplied by Industry/Researchers on payment basis.
- To act as an educational centre for training and disseminating general awareness about the importance of authenticated raw drugs material.

**Total Sanctioned Budget** : Rs. 9,93,86,000/-

**Date of initiation** : March, 2019

**Duration of Study** : Five years

**Participated centre** : RARI Jhansi

#### Current status:

- The civil work under the project has been completed.
- The data of availability of the BRS materials have been explored from survey units of CCRAS.
- The botanical and chemical standardization parameters have been developed for 20 BRS drugs.
- The procurement of the Instruments is under process.



### 1.5.2. Establishment of Herbal Garden and Nursery centre at CCRAS institutes funded by NMPB

**Background in brief:** National Medicinal Plants Board (NMPB) sanctioned a project entitled “Establishment of Herbal Garden and Nursery centre at CCRAS institutes” to enhance the awareness regarding the cultivation of medicinal plants among the local farmers. These saplings will be distributed to the farmers in their respective regions. They will be sensitized about utilization of plants and their good agricultural and cultivation practices so that they can grow these plants properly.

#### **Objectives:**

- Collection of mother stock medicinal plants of from different parts of India as per seasonality during EMB survey and Institute medicinal plant garden
- Rising of saplings and hardening of medicinal plants
- Medicinal plants saplings for distribution for planting

**Participated centres:** RARI Itanagar, RARI Jhansi, CARIDD Kolkata, CARIRD Patiala (in the extension center at GADVASU Ludhiana), CARIHD Bhubaneswar, RARILSD Trivendrum, NARIP Cheruthuruthy, RARIMD Bengaluru, MSRARIED Jaipur, RARIGID Guwahati, and RARIUD Jammu.

#### **Current status:**

- Netshade house preparation is going-on.
- Collection of mother stock medicinal plants of from different sources is under progress.
- Rising of saplings of medicinal plants is also initiated.



## 2. DRUG STANDARDIZATION RESEARCH

### 2.1. Drug Standardization

Standardization is an essential step to ensure the quality of Ayurvedic drugs. Confirmation of identity, quality, purity, and detection of adulterants are the major objectives of standardization. One of the prime activity of the Council is Quality assessment of the single drugs and compound formulations and their method of preparation (standard operating procedures) through its Drug Standardization units, viz. Captain Srinivasa Murthy Regional Ayurveda Drug Development Institute, Chennai (CSMRADDI) (NABL accredited lab), Central Ayurveda Research Institute for Drug Development, Kolkata (CARIDD), Central Ayurveda Research Institute for Respiratory Disorders, Patiala (CARIRD), Regional Ayurveda Research Institute for Drug Development, Gwalior (RARIDD) National Ayurveda Research Institute For Panchakarma, Cheruthuruthy (NARIP) and Regional Ayurveda Research Institute, Jhansi (RARI). The drugs and formulations required under different projects (Coded drugs, IMR, EMR, Claim etc.) for clinical trials, pharmacological studies etc. have been analyzed for confirmation of identity and quality of drugs as per Pharmacopoeial standards/development of standards.

During the reporting period, 37 compound formulations (Churna/Kwatha-Churna/Taila/ Avleha/ Arista/Asava/Coded/Claim drugs etc.) along with 255 (batches/samples) single drugs have been standardized/ analyzed for quality parameters and other activities. 17 IMR projects are going on and 04 projects (IMR) has been completed.

The shelf life studies of six formulations (samples/batches) have been continued / initiated during the current year. Furthermore, selected analytical parameters were carried out for intra and inter laboratory comparison for continuation of NABL accreditation. Some samples have also been analysed through DTL certifications. The details of the work are given below.

#### A. Single Drugs

**Summary-** Studies on 255 (batches/samples) single drugs have been analyzed at RARIDD, Gwalior, CARIRD, Patiala, CSMRADDI, Chennai and CARIDD, Kolkata and NARIP, Cheruthuruthy for Quality assessment (Physico-chemical parameters/HPTLC).

**Table- 12: Details of Standardization of Single Drugs**

S.No.	Name of the Drug	Institute
1.	Arjuna ( <i>Terminalia arjuna</i> ), Amalaki ( <i>Emblica officinalis</i> ) (2 samples), Guduchi ( <i>Tinospora cordifolia</i> ), Haritaki ( <i>Terminalia chebula</i> ), Bibhitaka ( <i>Terminalia bellirica</i> ), Pippali ( <i>Piper longum</i> ), Kutaki ( <i>Picrorhiza kurroa</i> ), Shatavari ( <i>Asparagus racemosus</i> ), Yashtimadhu ( <i>Glycyrrhiza glabra</i> ), <i>Andrographis paniculata</i> L. Leaf, <i>Andrographis paniculata</i> L. Stem bark, <i>Andrographis paniculata</i> L. Flower, <i>Andrographis paniculata</i> Root, <i>Alstonia scholaris</i> L. Flower, <i>Alstonia scholaris</i> L. Leaf.	RARIDD Gwalior (15 single drugs)



2.	Pippali ( <i>Piper longum</i> ), Sunthi ( <i>Zingiber officinale</i> ), Haritaki ( <i>Terminalia chebula</i> ), Varuna ( <i>Crataeva nurvula</i> ), Pashanabheda ( <i>Bergenia ciliata</i> ), Apamarga ( <i>Achyranthes aspera</i> ), Tila taila (Sesame oil), Guda (Jaggery), Siktha, Shigru, Gandhaka, Tankan, Karpura, Bhunimba ( <i>Kiratatikta</i> ), Haridra ( <i>Curcuma longa</i> ), Nimba ( <i>Azadirachta indica</i> ), Guduchi ( <i>Tinospora cordifolia</i> ), Amrabeeja, Karvellaka beeja, Gudamara patra, Jambu beeja, Mandura Bhasma (Calcined iron slag), Mukta shukti Bhasma (Calcined pearl oyster), Priyangu ( <i>Callicarpa macrophylla</i> ), <i>Aristolochia bracteolata</i> , <i>Bambusa arundinacea</i> , <i>Bergenia lingulata</i> , <i>Borago officinalis</i> , <i>Buchanania lanzan</i> , <i>Calamus rotang</i> , <i>Canarium resiniferum</i> , <i>Cassia occidentalis</i> , <i>Cardiospermum halicacabum</i> , <i>Catunaregum spinosa</i> , <i>Centratherum anthelmenticum</i> , <i>Cinnamomum cyminum</i> , <i>Cinnamomum verum</i> , <i>Cinnamomum zeylanicum</i> , <i>Cissus quadrangularis</i> , <i>Coleus forskholii</i> , <i>Convolvulus pluricaulis</i> , <i>Crataeva nurvala</i> , <i>Croton tiglium</i> , <i>Elaeocarpus sphaericus</i> , <i>Eclipta prostrata</i> , <i>Enicostemma axillare</i> , <i>Ephedra gerardiana</i> , <i>Euphorbia neriifolia</i> , <i>Evolvulus alsinoides</i> , <i>Ficus carica</i> , <i>Ficus glomerata</i> , <i>Ficus racemosa</i> , <i>Ficus religiosa</i> , <i>Fritillaria roylei</i> , <i>Fumaria praviflora</i> , <i>Helicteres isora</i> , <i>Habenaria intermedia</i> , <i>Holoptelea integrifolia</i> , <i>Hyoscyamus niger</i> , <i>Hydnocarpus petandrus</i> , <i>Hygrophylla schulli</i> , <i>Ichnocarpus frutescens</i> , <i>Illicium griffithii</i> , <i>Jatropha curcas</i> , Koakatika.	CARIDD, Kolkata (72 single drugs)
3.	Haritaki ( <i>Terminalia chebula</i> Retz.), Rudraksha ( <i>Elaeocarpus ganitrus</i> ), Punarnava ( <i>Boerhavia diffusa</i> ), Sarpagandha ( <i>Rauwolfia serpentina</i> ), APK coded, Iron Sulphate (Batch-2&3), Sodium Carbonate (Batch-2 &3), Shodhita Hingula (I, S & N), Shodhita Tankana (I, S & N), Shodhita Vatsanabha (I, S & N), Raw Vatsanabha.	CSMRADDI. Chennai (11 single drugs)
4.	Amalaki (7 samples), Haritaki (7 samples), Bibhitaka (4 samples), Yashtimadhu (2 samples), Ashvagandha, Gokshura (2 samples), Shunthi (10 samples), Pippali (Fr.) (8 samples), Maricha (4 samples), Haldi (3 samples), Dhanvayasa (W.P), Guduchi (3 samples), Musta (Rz), Chirayata (W.P), Vasa (Lf.), Nagarmotha (2 samples), Karkatshringi (Gall), Atees (Rt.), Devadaru, Kushtha (Rt.) (2 samples), Neem (St. Bk.) (2 samples), Vacha (3 samples), Chakwad (Sd.) (3 samples), Shweta Jira (4 samples), Bakuchi (2 samples), Vidanga (6 samples), Ajwain (2 samples), Kutaki (Rz.) (4 samples), Daruharidra (2 samples), Soya (2 samples), Chitrak, saunf, Sonai Patra, Khadira (Bark) (2 samples), Dalchini (3 samples), Chhoti elaichi (3 samples), Nishoth, Nagakeshar, Tejapatra (Lf.) (2 samples), Shatavari, Guggulu (Shuddh), Talispatra, Kalaunji, Bakuchi, Bhang (Lf.), Jaiphala (Sd.), Tagar, Parpat (W.P), Rai (Sd.), Shati (Rz), Yavani, Lashun (Bulb), Cane Sugar, Chopchini, Suranjan, Kala Jiraka (2 samples), Musta (Rz) (3 samples), Lavang (2 samples), Hingu, Chitraka, Chandan (Shwet), Tila (Sd.), Guggulu (Exudate).	CARIRD, Patiala (71 single drugs)
5.	Agaru ( <i>Aquillaria agalocha</i> , Heart wood) (2 samples), Ajamoda ( <i>Trachyspermum ammi</i> , Seed) (3 samples), Amalaki ( <i>Emblica officinalis</i> , Pericarp)(10 samples), Aragwadha( <i>Cassia fistula</i> , Stem bark)(6 samples), Arjuna ( <i>Terminalia arjuna</i> , Stem bark)(1 samples), Ashwagandha ( <i>Withania somnifera</i> , Root) (4 samples), Ashwattha	NARIP, Cheruthuruthy (86 single drugs)



(*Ficus religiosa*, Stem bark) (1 samples), Bakuchi (*Psoralea coryfolia*, Fruit) (2 samples), Bala (*Sida cordifolia*, Root) (3 samples), Bharangi (*Cleodendrum serratum*, Root) (1 samples), Bilwa (*Aegle marmelose*, Bark) (2 samples), Brihati (*Solanum indicum*, Root) (4 samples), Candana (*Santalum album*, Heartwood) (3 samples), Chavya (*Piper retrofactum*, Root) (2 samples), Chitraka (*Plumbago zeylanica*, Root) (1 samples), Daru haridra (*Berebris aristata*, Rhizome) (1 samples), Devadaru (*Cedrus deodara*, Heartwood) (7 samples), Dineshavalli (*Ventilago leiocarpa*, Root) (2 samples), Draksha (*Vitis vinifera*, Dried fruit) (2 samples), Ela (*Elettaria cardamomum*, Fruit) (2 samples), Eranda (*Ricinus communis*, Root) (6 samples), Gambhari (*Gmelina arborea*, Root) (2 samples), Gokshura (*Tribulus terrestris*, Dried fruit) (10 samples), Guduchi (*Tinospora cordifolia*, Stem) (5 samples), Haridra (*Curcuma longa*, Rhizome) (9 samples); Haritaki (*Teriminalia chebula*, Fruit rind) (11 samples), Hrivera (*Coleus vettiveroides*, Stem) (2 samples), Jatamansi (*Nardostachys jatamansi*, Rhizome) (1 samples), Kangu (*Panicum sumatrense*, Fruit) (2 samples), Kantakari (*Solanum surattense*, Root) (1 samples), Karchura (*Curcuma zedoaria*, Rhizome) (1 samples), Karthotti veru (*Capparis zeylanica*, Root) (1 samples), Katuki (*Picrorhiza kurroa*, Root) (3 samples), Ketaki (*Pandanus odorifer*, Root) (1 samples), Kiratatikta bheda (*Andrographis paniculata*, Whole plant) (2 samples), Kodrava (*Paspalum scrobiculatum*, Grain) (3 samples), Kulattha (*Macrotyloma uniflorum*, Seed) (2 samples), Kushtha (*Saussurea lappa*, Stem) (3 samples), Kola (*Zizyphus mauritiana*, Fruit) (1 samples), Laja (*Oryza sativa*, Seed) (3 samples), Lajjalu (*Mimosa pudica*, Whole plant) (1 samples), Latakaranja (*Caesalpinia bonduc*, Seed) (1 samples), Lashuna (*Allivum sativum*, Bulb) (3 samples), Manjishtha (*Rubia cordifolia*, Stem) (6 samples), Maricha (*Piper nigrum*, Fruit) (9 samples), Masha (*Vigna mungo*, Seed) (2 samples), Methila (*Trigonella foenum-graecum*, Seed) (3 samples), Agnimanth (*Premna serratifolia*, Root) (1 samples), Musta (*Cyperus rotundus*, Rhizome) (5 samples), Nagakeshara (*Mesua ferrea*, Flower) (1 samples), Nimba (*Azadirachta indica*, Root bark) (5 samples), Nyagrodha (*Ficus bengalensis*, Stem bark) (1 samples), Parpataka (*Fumaria parviflora*, Whole plant) (3 samples), Patala (*Stereospermum suaveolens*, Root) (2 samples), Patola (*Trichosanthes dioica*, Root) (1 samples), Pippali (*Piper longum*, Fruit) (9 samples), Pippalimoola (*Piper longum*, Root) (2 samples), Prasariini (*Paederia foetida*, Whole plant) (2 samples), Prishniparni (*Desmodium gangeticum*, Whole plant) (1 samples), Prithuka (*Oryza sativa*, Seed) (3 samples), Punarnava (*Boerhavia diffusa*, Root) (5 samples), Raktachandana (*Pterocarpus santalinus*, Heartwood) (2 samples), Rasna (*Alpinia galanga*, Root) (8 samples), Shalaparni (*Desmodium gangeticum*, Whole plant) (3 samples), Sarshapa (*Brassica campestris*, Seed) (1 samples), Shatahva (*Anethum sowa*, Seed) (2 samples), Shashthika rice (*Oryza sativa*, Seed) (2 samples), Shigru (*Moringa oleifera*, Stem bark) (1 samples), Shunthi (*Zingiber officinale*, Rhizome) (1 samples), Shweta sariva (*Hemidesmus indicus*, Root) (1 samples), Shyonaka (*Oroxylum indicum*, Root) (4 samples), Taleesapatra (*Taxus baccata*, Leaf) (2 samples), Trivrit (*Operculina turpethum*, Root) (3 samples), Tvak



( <i>Cinnamomum zeylanicum</i> , Stem bark) (2 samples), Tvakpatra ( <i>Cinnamomum tamala</i> , Leaf) (2 samples), Udumbara ( <i>Ficus racemosa</i> , Stem bark) (1 samples), Ushira ( <i>Vetiveria zizanioides</i> , Root) (2 samples), Vacha ( <i>Acorus calamus</i> , Rhizome) (3 samples), Vamshalochana ( <i>Bambusa arundinacea</i> , Crystals)(1 samples), Varuna ( <i>Crataeva nurvala</i> , Stem bark) (4 samples), Vatankura ( <i>Ficus benghalensis</i> , Leaf primordial) (1 samples), Bibhitaka ( <i>Terminalia bellirica</i> , Fruit ) ( 6 samples), Vidanga ( <i>Embelia ribes</i> , Fruit) (3 samples), Yashti ( <i>Glycyrrhiza glabra</i> , Stem) (1 samples).
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## B. Compound formulations

Studies on 37 (batches/samples) of classical Ayurvedic formulations & claimed/coded formulations have been analyzed/continued at CSMRADDI, Chennai, CARIDD, Kolkata, CARIRD, Patiala, RARIDD, Gwalior and NARIP, Cheruthuruthy for Quality assessment/ some specific parameters.

**Table-13: Details of Standardization of Compound formulations**

S. No.	Classical Ayurvedic Formulations along with ingredients	Institute
1.	Sameerpannaga Rasa	RARIDD, Gwalior
2.	Ashwagandhadi Churna,	
3.	Sitopaladi Churna,	
1.	Anu Taila	
5.	Nirgundiadhiyoga	
6.	Arjuna churna	
7.	Amalaki churna	
8.	Guduchi Kand	
9.	Shanka Bhasma (Batch-2 & 3)	CSMRADDI, Chennai
10.	Loha Bhasma	
11.	Tribhuvana Kirti Rasa	
12.	Gomutra Haritaki	
13.	Balachaturbhadraka churna	CARIRD, Patiala
14.	Jatiphaladi churna	
15.	Gandhaka malhara	CARIDD, Kolkata
16.	Apamarga Kshara,	
17.	Gluten Health	
18.	SC-3	
19.	Avipattikara churna	NARIP, Cheruthuruthy
20.	Nisamlaki churna	
21.	Talisapatradi churna	
22.	Trikadu churna	
23.	Triphala churna	
24.	Ashwagandha churna	
25.	Jwarahara kwatha churna	



26.	Panchathiktha churna	
27.	Rasnasaptaka kwatha churna	
28.	Nimba kwatha churna	
<b>Claimed/Coded Formulations</b>		
29.	AYUSH-D	CSMRADDI, Chennai
30.	AYUSH 82	CARIDD, Kolkata
31.	AYUSH-M3	
32.	AYUSH-A	
33.	AYUSH-AG	
34.	AYUSH RS (PCB Coded earlier) Batch (I,II,III)	RARIDD, Gwalior
35.	AYUSH DBR (Earlier coded as BDP (Batch (I,II,III)	
36.	VPR	

### C. Shelf life of formulations / finished products

Batches/Samples of the following six drugs (sample/batch) have been studied for shelf life studies.

**Table- 14: Details of Shelf life formulations/finished products**

S.No.	Formulations / Finished products	Institute
1.	Ayush-D	CSMRADDI, Chennai
2.	Ayush PE Eye drops	
3.	Carctol S Capsule	
4.	Ayush SL Tablet	
5.	Kshar sutra	
6.	Nuna Kaduku (CCRS)	

## 2.2 Intra Mural Drug Standardization Research Projects

### Completed Projects

#### 2.2.1. Shelf life study of Vati

- Objectives:** To determine the shelf life of various Vati prepared as per Ayurvedic Classics, various Vati by adding excipient & Vati prepared as per classics and conventional method.
- Duration of Study:** 4 years.
- Participating centre :** Project transferred from NIAPR, Patiala to RARI, Jhansi.
- PI:** Dr. Biresh Kumar Sarkar
- Date of initiation :** April 2015
- Current status:** Final report submitted.





**7. Summary of Project:** Shelf life study of Ark vati and Ark vati with excipients; Lavangadivati and, Lavangadivati with excipients; Eladivati and Eladivati with excipients has been completed. Formulations were kept in stability chamber for stability studies at temperature  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$  and humidity  $60\% \pm 5\%$  (real time study). The reference sample of all finished formulation is also kept in deep freezer at  $10^{\circ}\text{C} \pm 1^{\circ}\text{C}$  temperature. Technical and Compilation Report Submitted to Head Quarter New Delhi in January 2020.

#### 2.2.2. Development of quality standards and SOP's for Triphala kwath churna (AFI, Part-II 4:9)

- 1. Objective:** Evaluation of Quality control parameter of raw ingredients and formulation according to API, manufacturing of Formulation according to AFI & preparation of SOP based on entire work done.
- 2. Participating centre :** CARIDD, Kolkata
- 3. Duration of Study:** 01 Year
- 4. PI :** Mrs. Manosi Das
- 5. Date of initiation:** 27.12.18
- 6. Current status:** completed.
- 7. Summary of Project:** chemical standardization, HPTLC, Heavy metals, Pesticide residues, Microbial load and Aflatoxins work of *Phyllanthus emblica*; *Terminalia bellirica*; *Terminalia chebula* have been completed. Compilation of the data obtained from total study for the preparation of SoP and complete report submitted to HQ. New Delhi.

#### 2.2.3. Development of quality standards and SOP's for Sarpagandha Mishran (AFI, Part III 6:62)

- 1. Objective:** Evaluation of Quality control parameter of raw ingredients and Formulation, manufacturing of Formulation (dosage form) & preparation of SOP.
- 2. Participating centre :** CARIDD, Kolkata
- 3. PI:** Mr. Kalyan Hazra
- 4. Duration of Study:** 6 Months
- 5. Date of initiation:** 07.03.2019
- 6. Current status:** Completed ( Final report submitted )
- 7. Summary of Project:** Plant materials were authenticated as per the API standard through macroscopical and microscopical studies. Authenticated plant materials were subjected to different chemical testing to get it done as per API standards. Samples were found to be free from heavy metals, aflatoxins, specific pathogens and pesticidal residues. Physicochemical parameters along with pH of aq. suspension have been done. Manufacturing of the formulation has been initiated.





#### 2.2.4. Shelf life study of Ghrita

1. **Objectives:** To determine the shelf life of various Ghrita prepared as per Ayurvedic Classics and as per different methods mentioned in classics.
2. **Duration of Study:** 3 years
3. **Participating centre :** Project transferred from NIAPR, Patiala to RARI Jhansi.
4. **PI:** Dr. Biresk Kumar Sarkar
5. **Date of initiation :** April 2015
6. **Current status:** Completed.
7. **Summary of Project:** Final report submitted.

#### Ongoing Projects

#### 2.2.5. Comparative Evaluation of Market Formulations of Some Ayurvedic Guggulu for Quality assessment.

1. **Objectives:** Quality assessment of market formulations of some Ayurvedic Guggulu
2. **Duration of Study:** 2 years
3. **Participating centre :** RARIDD, Gwalior
4. **PI:** Dr. Bhavana Srivastava
5. **Date of initiation :** 01.07.2018
6. **Current status:** Going on.
7. **Summary of Project:** Analysis for Pharmacognostic parameters, physico-chemical parameters and safety parameters, Total phenolic content and total flavonoid content of 60 formulations out of 75 formulations of GoksuradiGuggulu, Kancanara Guggulu, Laksa Guggulu, Triphala Guggulu and Trayodasanga Guggulu selected for project study have been carried out to check, compare and evaluate the quality standards of commercially available Guggulu formulations from various pharmaceutical brand.

#### 2.2.6. QC Analysis, Estimation of Markers/PRS & Shelf-life Studies of Nimbatiktam Capsules and Lajjalukeram Gel (prepared trial drugs).

1. **Objectives:** QC Analysis, Estimation of marker compound and shelf life study of Nimbatiktam capsule and Lajjalukeram gel.
2. **Duration of Study:** 3.5 years
3. **Participating centre:** RARIDD, Gwalior
4. **PI:** Dr. Vijay Kumar.



5. **Date of initiation** : 01.03.2020

6. **Current status**: Going on.

7. **Summary of Project**: Nimbatiktam Capsules and Lajjalukeram Gel alongwith the ingredients have been procured and analysis for shelf life study has been initiated.

### 2.2.7. Chemical Profiling of Seven Ayurvedic Plant Drugs (Stem bark/ Root and Small branches/ Aerial parts) by HPLC/GC-MS/LC-MS and other related techniques.

1. **Objectives**: Comparison of physico-chemical analysis and Comparative phyto-chemical screening of official parts vs renewable proposed parts. Extraction of the all official parts and renewable proposed parts of seven plants (stem bark/root and small branches/aerial parts) will be carried out by soxhlet extraction with different solvents of increasing polarity (n-hexane, chloroform, ethyl acetate and alcohol). Its comparative finger print development/ profile development of above extracts using any of the sophisticated analytical instruments such as HPTLC/ HPLC/ GC-MS/ LC-MS etc on the basis of feasibility.

2. **Duration of Study** : 2 years

3. **Participating centre** : CSMRADDI, Chennai

4. **PI**: Dr. Ajay Kumar Meena

5. **Date of initiation**: 26.06. 2018.

6. **Current status**: Going on.

7. **Summary of Project**: Samples procurement of official parts vs renewable proposed parts of is completed. Physico chemical parameter ssuch as ash value, acid insoluble ash, extractive values of water and alcohol, LOD and pH of official parts vs renewable proposed parts for *Streblus asper*, *Stereospermum chelonoides* and *Bombax ceiba* are completed. Phyto-chemical analysis of official parts vs renewable proposed partsfor *Desmodium gangeticum*, *Aegle marmelose*, *Cassia fistula*, *Streblus asper*, *Stereospermum chelonoidesa* and *Bombax ceiba* is completed. Extraction of the all official parts and renewable proposed parts of seven plants (stem bark/root and small branches/ aerial parts) by soxhlet extraction with different solvents of increasing polarity (n-hexane, chloroform, ethyl acetate and alcohol) is completed. HPTLC fingerprint profile development of the official parts and renewable proposed parts for identification of bio marker compounds Rhein in *Cassia fistula*, Marmelosine in *Aegle marmelos* and Lupeol in *Bombax ceiba* is completed. HPLC fingerprint profile development of the offi cial parts and renewable proposed parts for *Desmodium gangeticum*, *Aegle marmelos*, *Cassia fistula*, *Streblus asper* and *Bombax ceibasa* sample extracts is completed. Quantification of Marmelosine in *Aegle marmelos*, Lupeol in *Bombax ceiba*, Rhein in *Cassia fistula*, Caffeic acid in *Desmodium gangeticum*, Lapachol in *Stereospermum chelonoides*, Negundoside in *Vitex negundo* and Stigmasterol in *Streblus asper* of the official parts and renewable proposed parts is completed. GC-MS analysis of Volatile content of official parts and renewable proposed parts of seven plants (stem bark/root and small branches/aerial parts)



is completed. GC-MS analysis of Hexane and Chloroform extract of *Vitex negundo*, *Desmodium gangeticum* and *Aegle marmelos* was finished. LC-MS analysis of the official parts and renewable proposed parts of *Bombax ceiba*, *Cassia fistula*, *Vitex negundo* and *Aegle marmelos* is completed.

### 2.2.8. Effect of Shodhan procedures on Chemical profiling of Ayurvedic drugs of plant origin (Visa Drvya) mentioned under Schedule E-1 of D&C Act 1940.

- 1. Objectives:** Standardization of after Shodhan drugs and process.
- 2. Duration of Study :** 2 years
- 3. Participating centre :** CSMRADDI, Chennai
- 4. PI :** Dr. Ajay Kumar Meena
- 5. Date of initiation:** 10.09.2018
- 6. Current status:** Going on
- 7. Summary of Project:** Identification of Vatsanabha (*Aconitum ferox* Wall.) was completed. Shodhan process for Gunja (*Abrus precatorius* L.) and Vatsanabha (*Aconitum ferox* wall.) were completed. Comparative analysis of physico-chemical parameters for Gunja (*Abrus precatorius* L.), Dhatura (*Datura metel* L.) and Vatsanabha (*Aconitum ferox* Wall.) before and after shodhan process were completed. Preparation of successive extracts of Hexane, Ethyl Acetate, Chloroform and Ethanol and individual extracts of Ethanol and Chloroform for Gunja (*Abrus precatorius* L.), Dhatura (*Datura metel* L.) and Vatsanabha (*Aconitum ferox* Wall.) before and after shodhan Process were completed. Quantification of L-Abrine in *Abrus precatorius*, Scopolamine Hydrobromide in *Datura metel*, Crotonoside in *Croton tiglium* and Aconitine in Vatsanabha (*Aconitum ferox* wall.) by HPLC before and after shodhan process were completed. Development of Chromatographic profiles of Dhatura (*Datura metel* L.), Gunja (*Abrus precatorius* L.), Jayapala (*Croton tiglium* L.) and Vatsanabha (*Aconitum ferox* wall.) by HPLC for before and after shodhan process were completed. HPTLC finger print profiles for Langali (*Gloriosa superba* L.), Visamusti (*Strychnos nux-vomica* L.), Jayapala (*Croton tiglium* L.), Gunja (*Abrus precatorius* L.), Dhatura (*Datura metel* L.) and Vatsanabha (*Aconitum ferox* wall.) seeds before and after shodhan process were completed. LCMS Chemical profiling of Langali (*Gloriosa superba* L.), Visamusti (*Strychnos nux-vomica* L.), Jayapala (*Croton tiglium* L.), Gunja (*Abrus precatorius* L.), Dhatura (*Datura metel* L.) and Vatsanabha (*Aconitum ferox* Wall.) seeds before and after shodhan process were completed. Preliminary phytochemical screening and their comparison were done for Langali (*Gloriosa superba* L.), Visamusti (*Strychnos nux-vomica* L.), Jayapala (*Croton tiglium* L.), Gunja (*Abrus precatorius* L.), Dhatura (*Datura metel* L.) and Vatsanabha (*Aconitum ferox* Wall.) seeds before and after shodhan process.

### 2.2.9. Qualitative and Quantitative analysis of markers/PRS & Shelf life study of Ayush -D Tablet and Ayush PE eye drop formulations (prepared trial drugs)

- 1. Objectives:** Standardization of formulations namely AYUSH-D Tablet and Ayush PE eye drop. Identification and Development of Comparative Chromatographic profiles of formulations and



its ingredients with respective Marker /PRS. Quantitative estimation of concerned PRS/Markers in formulations and its ingredients. Shelf life study of Ayush-D Tablet and Ayush PE eye drop formulations.

2. **Duration of Study:** 2 years
3. **Participating centre :** CSMRADDI, Chennai
4. **PI :** Dr. Ajay Kumar Meena
5. **Date of initiation:** 10.09.2018
6. **Current status:** Going on
7. **Summary of Project:**

**Ayush-D Tablet:** Shelf life study of Ayush-D Tablet 5<sup>th</sup> quarter to 8<sup>th</sup> quarters is completed. Soxhlet extraction for *Momordica charantia* L., *Swertia chirayita* (Roxb.ex Flem.), *Caesalpinia bonducella* L., *Catharanthus roseus* L., *Chlorophytum tuberosum* (Roxb) is completed. HPLC Quantification of marker compounds in respective plants such as Diosgenin in *Trigonella foenum-graecum* L., Billidifolin in *Swertia chirayita* (Roxb.ex Flem.), Gymnemagenin in *Gymnema sylvestre*, Vinblastin in *Catharanthus roseus* L., Lupeol and Gallic acid in *Caesalpinia bonducella* L., Stigmasterol in *Chlorophytum tuberosum* (Roxb.) and Ayush-D Tablet formulation is completed. Identification and Comparative HPTLC Chromatographic finger print profiling of Ayush-D formulation and *Withania coagulans* with respective Marker Withaferin A, *Swertia chirayita* with respective Marker Billidifolin, *Gymnema sylvestre* with respective Marker Gymnemagenin, *Trigonella foenum-graecum* L with respective Marker Diosgenin and *Caesalpinia bonducella* L. with respective Markers Lupeol and Gallic acid is completed.

**Ayush PE Eye Drops:** Shelf life study of Ayush PE eye drops 4<sup>th</sup> quarter to 7<sup>th</sup> quarter is completed. Soxhlet extraction of *Boerhavia diffusa* (Root) is completed. Identification and Comparative HPTLC Chromatographic finger print profiling of Ayush-PE Eye drop and *Boerhavia diffusa* (Root) with respective Marker Boerwinone-B is completed. HPLC Quantification of Boerwinone-B in *Boerhavia diffusa* (Root) and Ayush PE eye drops is completed. LC-MS analysis of Ayush-PE Eye drop and *Boerhavia diffusa* (Root) is completed.

#### 2.2.10. Qualitative and Quantitative analysis of Markers/PRS & Shelf life studies of Carctol - S Capsules, Ayush-SL Tablets and Ksharasutra formulations (prepared trial drugs)

1. **Objectives:** Standardization of formulations namely Carctol - S Capsules, Ayush - SL Tablets and Ksharasutra. Identification and Quantitative estimation of concerned PRS/Markers in formulations and their ingredients. Shelf life studies of Carctol- S Capsules, Ayush- SL Tablets and Ksharasutra formulations.
2. **Duration of Study:** 2 years
3. **Participating centre :** CSMRADDI, Chennai



4. **PI:** Dr. Ajay Kumar Meena
5. **Date of initiation:** 01/07/2019
6. **Current status:** going on
7. **Summary of Project:**

**Carctol-S Formulation:** Literature survey and procurement of markers/PRS is under progress. Standardization of Carctol-S formulation was completed. Shelf life study for Carctol-S Capsule Zero day to 4<sup>th</sup> quarter is completed. Extraction of Carctol-S capsule, *Rheum emodi*, *Lipidium sativum*, *Piper cubeba* and *Tribulus terrestris* was completed. Quantification of Rhein & Emodinin *Rheum emodi* and Carctol-S formulation by HPLC was completed. HPTLC finger print profile and Identification of Emodin & Rhein marker compound in *Rheum emodin* plant and Carctol-S capsules extract was completed. HPLC Method development for Diosgenin marker compound in *Tribulus terrestris* L. plant extract and Carctol-S extract is under progress.

**Ayush-SL Formulation:** Literature survey and procurement of markers/PRS is under progress. Standardization of Ayush-SL formulation is completed. Shelf life study for Ayush-SL tablets Zero day to 4<sup>th</sup> quarter is completed. HPTLC finger print profile and Identification of  $\beta$ -Asarone in *Acorcus calamus*, Piperine in *Piper longum* L., Gallic acid and Chebulinic acid in *Terminalia chebula* Retz. & *Terminalia bellerica* Roxb., Guggulusterone-Z in *Commiphora mukul*, Embelin in *Embelia ribes* Burm. and Ayush-SL are completed. Quantification of  $\beta$ -Asarone in *Acorcus calamus*, Gallic acid & Chebulinic acid in *Terminalia chebula* Retz. & *Terminalia bellerica* Retz., Boerwinone-B in *Boerhavia diffusa* and Ayush-SL tablet extracts by HPLC are completed.

**Ksharasutra:** Standardization of Ksharasutra formulation was completed. Shelf life study for Ksharasutra formulation Zero day to 3<sup>rd</sup> quarter is completed.

#### 2.2.11. Development of Quality standards and SOP's for Lekhaniya Gana Kashaya.

1. **Objective:** Evaluation of Quality control parameter of raw ingredients and Formulation, manufacturing of Formulation (dosage form) & preparation of SOP.
2. **Participating centre :** CARIDD, Kolkata
3. **PI:** Mr. Kalyan Hazra
4. **Duration of Study:** 6 Months
5. **Date of initiation:** 23.11.2019
6. **Current status:** going on.
7. **Summary of Project:** Procurement is not completed due to non availability of single drug Plant materials were to be authenticated as per the API standard through macroscopical and microscopical studies. Authenticated plant materials subjected to be different chemical testing to be get it done as per API standards. Samples found to be free from heavy metals; aflatoxins, specific pathogens and pesticidal residues will be taken for manufacturing of the formulation.



### 2.2.12. Development of Quality standards and SOP's for Formulation Nimbadi churna.

1. **Objectives:** Evaluation of Quality control parameter of raw ingredients and Formulation, Manufacturing of Formulation and preparation of SOP& TLC profile of formulation.
2. **Duration of Study:** 1 year
3. **Participating centre:** CARIDD, Kolkata.
4. **PI:** Dr. Ch. V. Narasimhaji
5. **Date of initiation:** 22.10.2019.
6. **Current status:** Going on.
7. **Summary of Project:** Plant materials were authenticated as per the API standard through macroscopical and microscopical studies. Authenticated plant materials were subjected to different chemical testing to get it done as per API standards. Samples were found to be free from heavy metals, aflatoxins, specific pathogens and pesticidal residues. In this line the quality parameters of raw ingredients for three batches are under progress for further development of SOP for the formulation and its evaluation.

### 2.2.13. Development of Quality standards and SOP's for Formulation Bharngyadi Kwtah churna

1. **Objectives:** Evaluation of Quality control parameter of raw ingredients and formulation, Manufacturing of Formulation and preparation of SOP& TLC profile of formulation.
2. **Duration of Study:** 1 year.
3. **Participating centre:** CARIDD, Kolkata.
4. **PI:** Dr. Ch. V. Narasimhaji
5. **Date of initiation:** 05.10.2019.
6. **Current status:** Going on.
7. **Summary of Project:** Plant materials were authenticated as per the API standard through macroscopical and microscopical studies. Authenticated plant materials were subjected to different chemical testing to get it done as per API standards. Samples were found to be free from heavy metals, aflatoxins, specific pathogens and pesticidal residues. In this line the quality parameters of raw ingredients for three batches are under progress for further development of SOP for the formulation and its evaluation.

### 2.2.14. Development of Quality standards and SOP's for Formulation Panchavalkal Kwtah churna

1. **Objectives:** Evaluation of Quality control parameter of raw ingredients and formulation manufacturing of Formulation and preparation of SOP& TLC profile of formulation.
2. **Duration of Study:** 1 year



3. **Participating centre:** CARIDD, Kolkata.
4. **PI:** Dr. Ch. V. Narasimhaji
5. **Date of initiation:** 05.10.2019.
6. **Current status:** Going on.
7. **Summary of Project:** Plant materials were authenticated as per the API standard through macroscopical and microscopical studies. Authenticated plant materials were subjected to different chemical testing to get it done as per API standards. Samples were found to be free from heavy metals, aflatoxins, specific pathogens and pesticidal residues. In this line the quality parameters of raw ingredients for three batches are under progress for further development of SOP for the formulation and its evaluation.

#### 2.2.15. Development of Quality standards and SOP's for Formulation Sthanyashodhana Kashaya Ghanvati

1. **Objectives:** Evaluation of Quality control parameter of raw ingredients and Formulation. Manufacturing of Formulation and preparation of SOP & TLC profile of formulation.
2. **Duration of Study:** 1 year
3. **Participating centre:** CARIDD, Kolkata.
4. **PI:** Dr. Ch. V. Narasimhaji
5. **Date of initiation:** 01.01.2020.
6. **Current status:** Going on.
7. **Summary of Project:** Procurement of the raw drugs is under progress some of them are procured. Plant materials were authenticated as per the API standard through macroscopical and microscopical studies. Authenticated plant materials were subjected to different chemical testing to get it done as per API standards. Samples were found to be free from heavy metals, aflatoxins, specific pathogens and pesticidal residues. In this line the quality parameters of raw ingredients for three batches are under progress for further development of SOP for the formulation and its evaluation.

#### 2.2.16. Development of Quality standards and SOP's for Formulation Udumbardi Taila

1. **Objectives:** Evaluation of Quality control parameter of raw ingredients and Formulation, manufacturing of Formulation and preparation of SOP & TLC profile of formulation.
2. **Duration of Study:** 1 years
3. **Participating centre:** CARIDD, Kolkata.
4. **PI:** Dr. Ch. V. Narasimhaji
5. **Date of initiation:** 01.01.2020.





6. **Current status:** Going on.

7. **Summary of Project:** Plant materials were authenticated as per the API standard through macroscopical and microscopical studies. Authenticated plant materials were subjected to different chemical testing to get it done as per API standards. Samples were found to be free from heavy metals, aflatoxins, specific pathogens and pesticidal residues. In this line the quality parameters of raw ingredients for three batches are under progress for further development of SOP for the formulation and its evaluation.

#### 2.2.17. Development of Quality standards and SOP's for Apamarga Pratisaraniya (Teekshna) kshara (Sushrata, Samhita sutrasthana, Adhayaya 11:11)

1. **Objectives:** Evaluation of Quality control parameter of raw ingredients and Formulation, manufacturing of Formulation (dosage form) & preparation of SOP.

2. **Duration of Study 1 years**

3. **Participating centre:** CARIDD, Kolkata.

4. **PI:** Dr. Ch. V. Narasimhaji

5. **Date of initiation :** 22.11.2019

6. **Current status:** Going on

7. **Summary of Project** Procurement of raw drug materials for Batch- I, II & III of Apamarga (w.p) was completed except one ingredient used for Teekshana not available at the market. Botanical standardization of Apamarga (w.p), Batch-I was completed. Work for other 07 ingredients (for Teekshna) are under progress. Physico-chemical parameter of Apamarga (w.p), Batch-I along with other 05 ingredients (for Teekshna) are completed.

#### 2.2.18. Feasibility of bulk preparation and quality control of selected classical Ayurvedic vatis preparations for research purpose

1. **Objectives:** To determine the shelf life of various Vati prepared as per Ayurvedic Classics, various Vati by adding excipient & Vati prepared as per classics and conventional method.

2. **Duration of Study:** 1 year.

3. **Participating centre:** RARI, Jhansi.

4. **PI:** Dr. Vaibhav Charde

5. **Date of initiation :** 05.02.2020

6. **Current status:** Going on.

7. **Summary of Project:** UV Vis spectrophotometer has been procured during this month, list of drugs had been prepared and procurements of other instruments and equipments are in under process.





### 2.2.19. Feasibility of bulk preparation and quality control of selected classical Ayurvedic churna preparations for research purpose

- Objectives:** To determine the shelf life of various Vati prepared as per Ayurvedic Classics, various Vati by adding excipient & Vati prepared as per classics and conventional method.
- Duration of Study:** 1 year.
- Participating centre:** RARI, Jhansi.
- PI:** Dr. Anil Mangal
- Date of initiation :** 20.01.2020
- Current status:** Going on.
- Summary of Project:** Amount of the project has released. Major Equipment for development of SoP like HPTLC has procured and installed successfully in the section. Procurement and collection of Raw drug is in process.

### 2.2.20. Shelf life study of Taila

- Objectives:** To determine the shelf life of various Taila prepared as per Ayurvedic Classics, various Taila by adding excipient and to compare the shelf life of various Taila prepared as per classics (Murchita and non-murcchita) and by adding excipient.
- Participated centre:** Project transferred from NIAPR, Patiala to RARI Jhansi.
- PI:** Dr. Biresk Kumar Sarkar
- Duration of Study:** 4 years.
- Date of initiation:** April 2015.
- Current status:** Going on.
- Summary of Project:** The formulations which are kept in stability chamber for stability studies- Til Taila (Non-murcchita), Til Tail (Murcchita), Kshirbala Tail (Non-murcchita), Kshirbala Taila (Non-murcchita with excipient), Kshirbala Taila (Murcchita) Kshirbala Taila (Murcchita with excipient), Balaguduchyadi Taila (Non-murcchita), Balaguduchyadi Tail (Non-murcchita with excipient), Balaguduchyadi Taila (Murcchita) & Balaguduchyadi Taila (Murcchita with excipient).

The Formulation (a), and (b) has been complete thirty three months in stability chamber at temperature  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$  and humidity  $60\% \pm 5\%$  (real time study). The Formulation (c), (d), (e) and (f) has been complete thirty months in stability chamber at temperature  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$  and humidity  $60\% \pm 5\%$  (real time study). The Formulation (g), (h), (i) and (j) has been complete twenty seven months in stability chamber at temperature  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$  and humidity  $60\% \pm 5\%$  (real time study).

The reference sample of all finished formulation is also kept in deep freezer at  $10^{\circ}\text{C} \pm 1^{\circ}\text{C}$  temperature.



### 2.2.21. Development of Standards for Musk-Raw Drug of Animal Origin used in ASU Drugs

- 1. Objectives:** Evaluation of physico-chemical parameters such as ash value, acid insoluble ash, extractive values of aqueous and alcohol, LOD, pH and solubility. Profiling of the raw drug material through the TLC/HPTLC, HPLC and GC-MS analysis Assay of muscone, the major compound of musk based on the availability and feasibility of the marker compound. Compilation of the generated data.
- 2. Participating centre:** CSMRADDI, Chennai
- 3. PI:** Dr. Ajay Kumar Meena.
- 4. Duration of Study:** 4 years.
- 5. Date of initiation:** 05.07.2019
- 6. Current status:** Going on.
- 7. Summary of Project:** Literature survey of Musk-Raw drug sample and procurement of marker is completed. Evaluation of physic-chemical parameters (ash value, acid insoluble ash, LOD and Extractive values of different solvents were completed. Extraction of the raw drugs in n-hexane, chloroform, ethyl acetate and alcohol is completed. Identification and assay of muscone, the major compound of musk is completed. Preliminary Phyto - chemical screening for musk sample is completed. HPTLC profiling and identification of Musk Extracts (Hexane, Chloroform, Ethyl Acetate and Ethanol) were completed. GC-MS Analysis of Musk Extracts (Hexane, Diethyl ether & Ethanol) and Muscone marker Samples were completed. Estimation of Volatile content and Fat content of musk sample is completed. HPTLC profiling & muscone identification of volatile content of musk sample were completed. Microbial load of musk sample was completed. Estimation of sodium and potassium are under progress. Data compilation and report preparation is under progress.

### 2.3. Collaborative Projects

#### 2.3.1. Preparation and standardization of identified Herbo-mineral (Rasauhadhi) formulations for safety/toxicity studies at GLP Labs

- 1. Objective:** Preparation and standardization of identified Herbo-mineral (Rasauhadhi) formulations for safety/toxicity studies at GLP Labs
- 1. Participating centre:** RRAP-CARIC, Mumbai
- 2. Date of initiation:** September, 2017
- 3. Current status:** Going on
- 4. Summary of the project:** In the first phase, pharmaceutical standardization and quality control of 2 Rasaushadhies viz. *Rasa Manikya* and *Tribhuvan Kirti Rasa* involving 3 centres viz. IPGT&RA Jamnagar, NIA Jaipur and Sri Dhootpapeshwar Limited Mumbai has been completed. In the next phase, *Mrityunjaya Rasa* and *Shvasakuthara Rasa* have been allocated for preparation at 3 institutes viz. IPGTRA Jamnagar, NIA Jaipur and Sri Dhootpapeshwar Limited Mumbai.



### 2.3.2. Development of Metal Based Ayurvedic Formulation (MBAF) for the treatment of Acute Pro-myelocytic Leukaemia (APML)

1. **Objectives:** To develop SoPs for each step of preparation right from quality of raw ingredient, shodhana/marana procedures, intermediary products and preparation of finished products. To develop the standards and characterization of intermediate and finished products at each stage of preparation. Preparation of comprehensive dossier.
2. **Name of PI:** Vaidya Balendu Prakash
3. **Name of the Participating Centre:** Shashi Chadra Rasa Shala Nawabgunj Road Village Sikrora Tehsil Bilaspur Dist. Rampur (UP) in collaboration with RARI Ranikhet
4. **Duration of Study:** 2.5 years
5. **Date of Initiation:** 11<sup>th</sup> Oct. 2019
6. **Current Status:** Going on
7. **Summary of the project:** Hingula Shodhana and the procedure of Hingullotha Parada were completed.

### 2.3.3. Development of SoPs and Standardization of Different Preparation Techniques of the Netra Putapaka Formulation Use for Ophthalmic Use

1. **Objectives:**
  - ✓ **Primary Objective** - Formulation of SOPs and development of quality standards (ingredients and finished products) of putapaka prepared through different methods for ophthalmic use.
  - ✓ Development of novel/alternate methods for extracting the putapaka swarasa for ophthalmic use.
  - ✓ To assess and compare the ocular safety of the finished products of four methods.
  - ✓ Feasibility assessment and identification of the best method based on quality assessment of finished products.
2. **Duration of Study:** 2 years
3. **Participated centre along with PI:**

S.No.	Name of the participating centre	Name of PI
1.	Lovely Professional University, Phagwara, Punjab - 144411	Dr. Manish Vyas

4. **Date of IAEC approval:** 19.04.2019
5. **Date of initiation:** 6<sup>th</sup> November, 2019
6. **Current status:**



- Review of literature was initiated and pen down the chemical & consumable requirement. After that to generate the demand. Quotations were taken from different vendors. Comparison sheet was prepared then demand of chemical & consumables were prepared and submitted online.
- Fresh samples of plant materials including Nimba, Haridra, and Guduchi were collected from Ayusha Vatika, Lovely Professional University for the authentication & standardization.
- Organoleptic characteristics were recorded for every sample of plant materials.
- Morphological studies were conducted for the leaves of Nimba (*Azadirachta indica*) and its shape, arrangement, margin, and venation were recorded.
- Morphological studies were conducted for the rhizome of Haridra (*Curcuma longa*) Rhizome and its shape, size, surface, and texture were recorded.
- Morphological studies were conducted for the stem of Guduchi (*Tinospora cordifolia*) and its shape, size, surface & texture, and fracture was recorded.
- Microscopical studies were conducted for the Nimba (*Azadirachta indica*) Leaf midrib TS
- Microscopical studies were conducted for the Haridra (*Curcuma longa*) Rhizome TS
- Microscopical studies were conducted for the Guduchi (*Tinospora cordifolia*) Stem TS.
- We have started receiving chemicals & consumables from January onwards and received all chemicals.
- Physicochemical Studies of the plant materials are in the process for standardization of the ingredients. Foreign matter, moisture content, ash value, acid insoluble ash, alcohol soluble extractive value, and water-soluble extractive for the Nimba (*Azadirachta indica*), Haridra (*Curcuma longa*) & Guduchi (*Tinospora cordifolia*). Each parameter is repeated for 6 times for the development of standards because no reference standard is available for the fresh samples aforesaid plants.
- Chemical Parameters is in process.
- Preparation of SMPs for the different methods is under process.

**7. Summary of Project:** Study is ongoing.

#### **2.4. Other IMR Projects**

##### **2.4.1. Qualitative Authentication of selected market samples crude drugs available in various markets of India.**

- 1. Objectives:** Physico-chemical parameters, phytochemical screening & TLC studies.
- 2. Name of PI:** Dr. Talat Anjum.
- 3. Participated centre:** CSMRADDI, Chennai



4. **Date of initiation:** 25.06. 2018

5. **Summary of Project:** Going on Literature review of proposed plants for chemical constituents, methods of analysis with various analytical instruments are under progress. HPTLC fingerprint profile and Physico-chemical parameters of 70 samples of batch-I , 24 samples of Batch-II and 11 samples of Batch-III have been completed .

## 2.5. Other Laboratory Activities

### 1. NABL Related Activities :

- **Inter/Intra Laboratory Comparison (ILC):** Inter/Intra laboratory comparison of LOD and Total ash, Acid insoluble ash, Assay of Iron, TLC & HPTLC for the sample coded APT-012-PM, B.No-14-DL , NFK19001-GS, AYII-170-TKR has been completed.
- **Internal Audit:** Intermediate checks for AAS, HPTLC, Flame photo meter, pH, Refractive index, Conductivity meter, Hot air oven etc. were carried out as on scheduled timings. All required documents updated for NABL Internal audit and undergone for Internal Audit on 9<sup>th</sup> -10<sup>th</sup> July, 2019 and 7<sup>th</sup>-8<sup>th</sup> January, 2020. All required documents updated and submitted for NABL Desktop audit purpose.
- **Quality Control Check:** Quality control check of Sodium and Potassium was done every month from April 2019 to March 2020.
- **Internal Calibration:** Calibration of instruments, critical consumables, reference standards, SOP's and intermediate checks were done regularly to meet the ISO/IEC 17025:2005 requirements. In-house glassware calibration and calculation of measurement uncertainty [MU] were carried out.
- **Method Validation:** Copper and Iron Method validation by AAS has been completed. Modification of Quality Manual, Executive procedure, Forms and Lists and other NABL related documents as per new version ISO/IEC 17025:2017 is under progress.

2. **DTL (Drug Testing Laboratory):** 20 numbers of samples were analyzed for various parameters under NABL scope.



### 3. PRE-CLINICAL STUDIES

Pharmacological and Toxicological studies constitute a very vital part in Drug Research Programme. The Ayurvedic medicines are studied on experimental models in different animal species to establish safety and efficacy profile. The studies are being carried out at Council's various institutions viz. CSMRADDI, Chennai; NARIP, Cheruthuruthy; RARIDD, Gwalior; CARIDD, Kolkata and RAIFR, Pune. During the reporting period, 6 Intra Mural Research projects have been completed and 20 IMR projects & 1 Collaborative project are in progress.

#### Biological activity and safety studies

#### COMPLETED PROJECTS

##### 3.1 Anti-atherosclerotic activity of *Hridayarnava Rasa* against atherosclerosis in animal model

#### 1. Objectives

- Acute oral toxicity study in rats as per OECD guideline 423.
- Efficacy study of *Hridayarnava Rasa* for its anti-atherosclerotic activity in rabbits.

#### 2. Duration of project: 1 year

#### 3. Participating centre: CSMRADDI, Chennai

#### 4. Name of the PI: Dr. Chitra Subramani

#### 5. Date of initiation/enrolment: 11/07/2018

#### 6. IAEC approval no: IAEC/CSMRADDI/17/2017

#### 7. Current Status: Project completed.

**8. Project Outcome:** Analyzing various *in vitro* free radicals scavenging parameters of *H. Rasa* showed better antioxidant activity nearer to the activity of standards. In acute oral toxicity as per OECD 423, there was no mortality observed at the dose level of 2000 mg/kg b.wt/p.o in rats. The biochemical investigation revealed that high fat diet provoked a controlled increase in body weight in rabbits. Rabbits fed with high fat diet along with simultaneous administration of *H. Rasa* showed controlled decrease in body weight when compared to day 1 of the respective groups after 12 weeks of treatment. A significant alterations were noticed in general biochemical markers and biochemical marker enzymes in high fat fed rabbits whereas these levels was decreased significantly after treatment of *H. Rasa*. lipid profile and oxidants like malondialdehyde, conjugated dienes were decrease and antioxidant enzymes such as superoxide dismutase, catalase, reduced glutathione and glutathione-dependent enzymes like GPx, GR, GST and G6PD were increased after treatment with *H. Rasa*. Membrane-bound enzymes were decreased, trace elements were significantly decrease and potassium and magnesium was significantly increase. Heavy metals such as copper and mercury were analysed in plasma and various tissues like heart, liver, kidney and spleen of rabbits by ICP-OES. No mercury was found in plasma and tissues of the present study. The significant alteration were found in HMG-CoA reductase estimated in terms of HMG



CoA/ mevalonate ratio, collagen and elastin, a marker of atherosclerosis in liver. Histopathological examination showed atherosclerosis like changes and accumulation of cholesterol in the aorta of high fat diet fed rabbits were observed in the present study, which was confirmed by immunohistochemistry by analyzing CD68. The treatment efficacy was studied by analyzing CD34 and smooth muscle actin in aorta of control and various drug treated groups of rabbits.

### 3.2 *In-vivo* and *in-vitro* nephroprotective evaluation of AYUSH K1 extract

#### 1. Objectives

- To study efficacy profile of K1 extract in animal models (CSMRADDI)
  - a) Cisplatin induced kidney damage
  - b) Diclofenac induced kidney damage
- Exploratory evaluation of the efficacy of K1 extract in the models of chronic nephropathy- Collaborate with the Department of Veterinary Biochemistry, Madras Veterinary College, Chennai.
  - a) Experimental study of the nephro-protective effect of Ayurvedic formulation K1 extract in chronic renal failure in rats induced with antiglomerular basement membrane.
  - b) To study the efficacy of Ayurvedic formulation K1 extract using proteomic and genomic approaches.

2. **Duration of project :** 1year

3. **Participating centre:** CSMRADDI, Chennai

4. **Name of the PI:** Dr. R. Ilavarasan

5. **Date of initiation/enrolment:** 29/06/2018

6. **IAEC approval no:**

- IAEC approval No.: IAEC/CSMRADDI/07/2017 dated 31/12/2018 for neuroprotective evaluation of AYUSH K1 extract on diclofenac induced renal injury in experimental mice.
- IAEC approval No.: IAEC/CSMRADDI/08/2017 dated 14/12/2017 for neuroprotective evaluation of AYUSH K1 extract on cisplatin induced renal injury in experimental rats.

7. **Current Status:** Project completed.

8. **Project Outcome:** The test drug AYUSH K1 extract was found to possess anti-oxidant properties at specific concentrations. The *in-vivo* nephroprotective activity was studied by cisplatin induced kidney damage model in rats and diclofenac induced kidney damage model in mice. In both the models the AYUSH K1 extract exhibited significant activity. In both the experimental models the DNA samples were isolated from the kidney tissues of experimental animals for evaluation and the qualitative (gel electrophoresis) and quantitative (nanodrop) DNA damages were studied. The



AYUSH K1 extract exhibited significantly decreased DNA damage and also exhibited significantly decreased cellular level DNA damage in TUNEL assay. The nephro-protective effect was also studied by direct injury to GBM by injecting Rat monoclonal antibodies to non-collagenous domain 1 (NC1) of  $\alpha 4$  chain of type IV collagen of rat glomerular basement membrane (GBM). The results shown that the CKD induced proteinuria is detected after 2 weeks CKD induction. The administration of AYUSH K-1 extract, in all the three doses caused a reduction in proteinuria between 3 to six weeks after induction of CKD and immunoblotting with anti-podocalyxin antibodies have showed a reduction in the expression of podocalyxin in urine, indicating the repair process in the glomerular basement membrane. The group of rats treated with AYUSH K-1 extract at 100 and 200 mg/kg showed increase in the expression levels of collagen mRNA, suggesting that the healing process in these two groups might be occurring much earlier. The histopathological results confirm that there is no damage to the tubules of the kidney in the CKD induced rats treated with AYUSH K-1 extract.

### 3.3 Ocular toxicity of coded Ayurvedic eye drop PE Drops for conjunctivitis

#### 1. Objectives

- Acute dermal irritation/corrosion (OECD-404) test for PE eye drops on rabbit skin
- Isolated chicken eye test method for PE eye drops (OECD TG-438) for identifying
  - i) Chemicals inducing serious eye damage
  - ii) Chemicals not requiring classification for eye irritation or serious eye damage
- *In-vivo* rabbit eye test for PE eye drops for acute eye irritation/corrosion (OECD-405)

2. **Duration of project:** 1 year

3. **Participating centre:** CSMRADDI, Chennai

4. **Name of the PI:** Dr. R. Ilavarasan

5. **Date of initiation/enrolment:** 2018

6. **IAEC approval no:** IAEC/CSMRADDI/03/2017, dated 31/12/18

7. **Current Status:** Project completed.

8. **Project Outcome:** The coded drug PE eye drops was tested for ocular toxicity in a sequential strategy for eye irritation and corrosion as per OECD-405. Part of sequential strategy, pH was tested and found to be within the range ( $\text{pH} \geq 2$  or  $\leq 11.5$ ). Fern pattern was observed when the PE eye drops was dried on glass slide and observed under polarized light which is similar to that of tears of normal eyes. So that the eye drops will not irritate the eyes. As a part of sequential strategy of OECD-405, PE eye drops was tested for skin corrosion and severe irritation potential based on OECD guidelines 404 on rabbit skin. It was found to be not categorized under skin corrosive/ severe irritant and found to be not causing systemic toxicity upon topical application. Then the PE eye drops was tested on *in-vitro/ex-vivo* test on isolated chicken eyes. In this model





also *PE* eye drops was found to be not categorized as chemicals inducing serious eye damage. Finally the *PE* eye drops was tested on *in-vivo* test in rabbits (OECD-405). There was no clinical lesion observed in all three rabbits except in one rabbit where the iris reactive to light was a bit sluggish. In eye lids and nictitating membrane some swelling above normal was observed. These conditions were reverted by 48<sup>th</sup> hour of observation. Same reactions were not observed in other rabbits. It was concluded that the *PE* eye drops is not possessing acute eye irritation / corrosion effect.

### 3.4 Evaluation of Gomutra Haritki in fatty liver degeneration

#### 1. Objectives

- To evaluate Safety/Toxicity of Gomutra Haritki
- Evaluation of pharmacological activity of Gomutra Haritki

2. **Duration of project** : 1 year

3. **Participating centre**: CSMRDDI, Chennai

4. **Name of the PI**: Dr. R. Ilavarsan

5. **Date of initiation/enrolment**: 22/02/2018

6. **IAEC approval no**: Acute toxicity (Oral) study- IAEC/CSMRADDI/15/2017

28 days Sub-acute toxicity (Oral) study- IAEC/CSMRADDI/16/2017

7. **Current Status**: Project completed.

8. **Project Outcome**: The test drugs were screened for acute toxicity study in rats and found safe upto 2000 mg/kg body weight. AYUSH-GH at the dose of 250 mg/kg, 500 mg/kg and 1000 mg/kg were considered to be safe as they did not cause any adverse changes in the general behaviors in 28 days repeated dose oral toxicity studies in experimental rats. No alterations were observed in hematological, biochemical parameters in repeated dose 28-days oral toxicity studies of AYUSH-GH treated experimental rats. This shows the nontoxic nature of the AYUSH-GH at the dose level of 250 mg/kg, 500 mg/kg and 1000 mg/kg and thus the drug can be used for long-term administration.

### 3.5 Preclinical safety/toxicity and hepatoprotective activity of Ayush Phalatrikadi Kwath

#### 1. Objectives

- To evaluate Safety/Toxicity of Coded drugs PKT
- Evaluation of safety profiles of the test drug to assure the safety in oral consumption

2. **Duration of project** : 1 year

3. **Participating centre**: CARIDD, Kolkata



4. **Name of the PI:** Dr. S. Upadhyay
5. **Date of initiation/enrolment:** 02/05/2017
6. **IAEC approval no:**
  - Proposal No. 03/P/S/IAEC/2017, dated 27th April, 2017 IAEC/2016/02 for “Acute toxicity (Oral) study of Coded drug PKT in Wistar rats”.
  - Proposal No. No. 04/P/S/IAEC/2017, dated 27th April, 2017 for “28 days Sub-acute toxicity (Oral) study of Coded drug PKT in Wistar rats”.
  - Proposal No. No. 19/P/S/IAEC/2018, dated 18th December, 2018 for “Evaluation of hepatoprotective activity of Coded drug PKT against Carbon tetrachloride (CCL4) induced liver toxicity in Wistar rats
7. **Current Status:** Project completed.
8. **Project Outcome:** In acute toxicity study, there was no mortality and no abnormal clinical sign of the experimental animals was observed. In sub acute (28 days) toxicity study, all rats were apparently normal and no abnormal clinical sign was observed in any animal throughout the study period after treated with PKT (250, 500 & 1000mg/kg bw). The dose level 1000mg/kg of Coded drug PKT was found as NOAEL (No Observed Adverse Effect Level) in rats. Ayush-PKT was evaluated for its Hepatoprotective activity in experimental animals. Hepatotoxicity was induced by CCl<sub>4</sub> and Silymarin was used as positive control to compare the efficacy of Coded drug Ayush-PKT. Administration of Coded drug PKT @200 & 400mg/kg and Standard drug Silymarin @50mg/kg orally daily for 28 days produced non-significant decrease in serum hepato specific marker enzymes viz., SGOT, SGPT and Alkaline Phosphatase levels in both male and female rats when compared to negative/disease control group. Female animals receiving Coded drug PKT @ 400mg/kg showed non-significant treatment-related reduction in the severity of the hepatic lesion induced by CCl<sub>4</sub> as compared to male animals.

### 3.6 Development of Coded drug AYUSH M-3 for the management of Migraine patients

#### 1. Objectives

- Acute oral toxicity study and Repeated Dose 28-day and 90-Day Oral Toxicity Study (OECD 407) of AYUSH M-3 in mice & rats.
- Effect of AYUSH M-3 on morphine withdrawal hyperalgesia in the hot-plate test.
- Effect of AYUSH M-3 on acetic acid-induced abdominal constrictions.

2. **Duration of project:** 1 year

3. **Participating centre:** CSMRADDI, Chennai

4. **Name of the PI:** Dr. R. Ilavarsan

5. **Date of initiation/enrolment:** July 2016



## 6. IAEC approval no:

- Proposal No. IAEC/CSMRADDI/01/2016 dated 18/07/16 for acute oral toxicity study in mice.
- Proposal No. IAEC/CSMRADDI/01/2016 dated 18/07/16 for acute oral toxicity study in rats.
- Proposal No. IAEC/CSMRADDI/03/2016 for 28-Days repeated dose oral toxicity study in mice.
- Proposal No. IAEC/CSMRADDI/02/2016 for 28-days repeated dose oral toxicity study in rats.
- Proposal No. IAEC/CSMRADDI/05/2016 dated 18/07/2016 for 90 days oral toxicity in mice.
- Proposal No. IAEC/CSMRADDI/02/2016 for 90 days oral toxicity in rats.
- Proposal No. IAEC/CSMRADDI/01/2017 dated 05/07/2017 for evaluation of anti-migraine activity of AYUSH M3 in acetic acid induced abdominal writhing model in mice.

## 7. Current Status: Project completed.

**8. Project Outcome:** The test drug AYUSH-M3 found safe upto 2000mg/kg body weight in acute oral toxicity studies in rats and mice. The repeated toxicity (28 days and 90 days) studies also found safe at the dose of 250 mg/kg, 500 mg/kg and 1000 mg/kg in both mice and rats. Acetic acid induced writhing model is used to screen anti-migraine drugs using sumatriptan as a standard drug used for migraine clinically. In the present study AYUSH-M3 at 400 mg/kg bw significantly reduced the writhing count. In prophylactic dosing though not significant AYUSH M3 at 400 mg/kg bw produced 22% inhibition.

## ONGOING PROJECTS

### 3.7 Evaluation of *Kanchanar Guggulu* against chemically induced hypothyroidism in rats

#### 1. Objectives

- To evaluate acute and 90 days repeated dose oral toxicity of Kanchanar Guggulu.
- To assess the efficacy of Kanchanar Guggulu in chemically induced hypothyroidism in rats.

#### 2. Duration of project: 2 years

#### 3. Participating centre: CARIDD, Kolkata

#### 4. Name of the PI: Dr. Amit Kumar Dixit

#### 5. Date of initiation/enrolment: 01/12/2018

#### 6. IAEC approval no:

- Proposal No. 20/P/S/IAEC/2018 dated 18.12.2018 for "Acute oral toxicity study of Kanchanar Guggulu in Wistar rats as per OECD guidelines 423".
- Proposal No. 21/P/S/IAEC/2018 dated 18.12.2018 for "Repeated dose 90 day oral study of Kanchanar Guggulu in Wistar rats as per OECD guideline 408".



- Proposal No. 31/P/S/CARIDD/IAEC/2018 for “Evaluation of anti-hypothyroid potentials of Kanchanara guggulu in propylthiouracil (PTU) induced hypothyroidism in Wistar rats.

7. **Current Status:** Project is in progress.

8. **Project Outcome:** Physicochemical analysis of the drug has been completed. The acute and 90 days oral toxicity study of *Kanchanar guggulu* on Wistar rats has been also completed. All the animals of three groups (Group I, II & III) were apparently normal. No mortality, no abnormal clinical signs and no pathophysiological symptoms were observed in any animal throughout the study period. Efficacy study is in progress.

### 3.8 Evaluation of *Vatari guggulu* for anti-arthritic activity through different arthritis models in experimental animals

#### 1. Objectives

- Primary: To evaluate anti-arthritic activity of *Vatari guggulu* through different arthritis models in experimental animals.
- Secondary: To evaluate the toxicity of *Vatari guggulu* in experimental rats through acute & chronic toxicity studies (OECD Guidelines).

2. **Duration of project:** 2 years

3. **Participating centre:** NARIP, Cheruthuruthy

4. **Name of the PI:** Dr. Sanjaya Kumar. Y. R.

5. **Date of initiation/enrolment:** 21/09/2018

6. **IAEC approval no:**

- For Toxicity studies: IAEC/NARIP/2017-18/03 dated 08-06-2017

7. **Current Status:** Project is in progress.

8. **Project Outcome:** The acute toxicity study has been completed. During acute toxicity study, test drug was administered to 3 female SD rats once and observed the signs of clinical toxicity for a period of 14 days. The test drug was found to be safe up to dose of 2000 mg/kg body weight in female Sprague Dawley rats upon single exposure. In 90 days repeated dose oral toxicity study, the test drug did not showed any abnormalities in physical examination, hematological, biochemical parameters and also in organs histopathology. The test drug found safe in 90 days oral toxicity study. Anti-arthritic activity of *Vatari guggulu* is in progress.

### 3.9 Evaluation of Anti-arthritic activity of Trayodashang guggulu in Complete Freund's Adjuvant induced Arthritic Rat Model

#### 1. Objectives

- **Primary:** Evaluation of Anti-arthritic activity of Trayodashang guggulu in Wistar rats.



- **Secondary:** Evaluation of acute and 90 days safety toxicity of Trayodashang guggulu in Wistar rats.
- 2. **Duration of project:** 2 years
- 3. **Participating centre:** CARIDD, Kolkata
- 4. **Name of the PI:** Dr. Manajit Bora
- 5. **Date of initiation/enrolment:** 23/06/2018
- 6. **IAEC approval no:**
  - IAEC Approval no. 14/P/S/IAEC/2018 dated 23.06.2018: Acute (Oral) toxicity study of Trayodashang guggulu in Wistar rats as per OECD Guideline 423.
  - IAEC Approval no. 15/P/S/IAEC/2018 dated 23.06.2018: Dose Range Finding study and 90 days repeated dose toxicity (Oral) study of Trayodashang guggulu in Wistar rats as per OECD guideline 408.
  - IAEC Approval no. 22/P/S/CARIDD/IAEC/2018, dated 22.06.2019: "Evaluation of Anti-arthritic activity of Trayodashang guggulu in Complete Freund's Adjuvant induced Arthritic Rat Model."
- 7. **Current status:** Project is in progress.
- 8. **Project Outcome:** In acute toxicity study, following single oral administration of *Trayodashang guggulu* at the dose of 2000mg/kg body weight to Wistar rats produced neither deaths nor treatment-related signs of toxicity. No Observed Adverse Effect Level (NOAEL) of *Trayodashang guggulu* in Wistar rats was found as 1000mg/kg from 90 Days repeated dose toxicity study. Efficacy study of *Trayodashang guggulu* on Complete Freund's Adjuvant induced arthritis in rats is in progress.

### 3.10 Evaluation of in-vitro safety study of some Ayurvedic drugs/plant extracts with special reference to Genotoxicity

1. **Objectives**
  - To evaluate mutagenicity/ genotoxicity of the Ayurvedic drugs components/ materials/ plant extracts in-vitro.
2. **Duration of project:** 2 years
3. **Participating centre:** RAIFR, Pune
4. **Name of the PI:** Dr. Pallavi Jamadagni
5. **Date of initiation/enrolment:** 10/10/2018
6. **IAEC approval no:** NA
7. **Current Status:** Project is in progress.



**8. Project Outcome:** Maximum solubility of each aqueous and hydroalcoholic plant extracts (*Datura metal* Linn., *Semecarpus anacardium* Linn., *Strychnox nuxvomica* Linn., *Cannabis sativa*, *Aconitum ferox*, *Croton tiglium*) has been evaluated. TA 98 and TA 100 strains of *Salmonella typhi* were tested for genetic analysis. Ames test procedure for *Croton tiglium* aqueous extract with TA 98 has been completed. Ames test with metabolic activation for all test drugs with TA100 & revival of CHO (Chinese Hamster Ovary) cell line and Ames test of drugs on *Salmonella typhi* TA 102 on all drugs are in progress.

### 3.11 Effect of Haritkadi yoga on middle cerebral artery occlusion ischemic-reperfusion injury and its safety in rats

#### 1. Objectives

- Standardization of procured drug with raw drugs and markers
- Toxicological evaluation of *Haritkadi yoga* in animal models
  - a) Acute toxicity study (OECD 425)
  - b) 90 days repeated oral toxicity study (OECD 408)
- Pharmacological evaluation of *Haritkadi yoga* in animal models
  - a) In-vitro antioxidant and anti-inflammatory evaluation of test drug
  - b) To study the neuroprotective effect of *Haritkadi yoga* in neuroblastoma Neuronal cells
  - c) Plasma concentration of any of the ingredients of *Prabhakar vati*
  - d) Effect of *Haritkadi yoga* on middle cerebral artery occlusion ischemic-reperfusion injury in rats
- Documentation

**2. Duration of project:** 3 years

**3. Participating centre:** CSMRADDI, Chennai

**4. Name of the PI:** Dr. R. Arunadevi

**5. Date of initiation/enrolment:** 25/06/2018

**6. IAEC approval no:**

- For acute oral toxicity: IAEC/CSMRADDI/10/2017 dated 31-12-2018
- For 90 days oral toxicity: IAEC/CSMRADDI/11/2017 dated 31-12-2018
- For efficacy study: IAEC/CSMRADDI/12/2017 dated 31-12-2018

**7. Current status:** Project is in progress.

**8. Project Outcome:** Standardization of each raw drug and *Haritkadi Yoga* formulation has been



completed. In-vitro antioxidant activity i.e. DPPH, radical scavenging activity, iron chelating activity, reducing power assay, NO scavenging activity, H<sub>2</sub>O<sub>2</sub> radical scavenging activity and superoxide anion radical scavenging activity showed good antioxidant potential. The test drug showed in-vitro anti-inflammatory activity by COX enzyme inhibition assay. Acute oral toxicity study of *Haritkadi yoga* in rats at the dose of 2000mg/kg found safe as they did not cause any adverse changes during the treatment period. The chronic 90 days repeated oral toxicity study is in progress. Processing for in-vitro neuroprotective effect of *Haritkadi yoga* in Neuroblastoma (Neuro2a cells) cell culture studies at RAIFR, Pune is in progress.

### 3.12 Effect of *Gokshuradi Guggulu* on Experimental Diabetic Nephropathy: *In-vitro* and *In-vivo* Studies

#### 1. Objectives

- To study effect of *Gokshuradi guggulu* on in-vitro antioxidant parameters and aldose reductase inhibition.
- To study effect of *Gokshuradi guggulu* on oxidative stress and functional parameters of kidney in diabetic animals and mechanism involved there in.

#### 2. Duration of project: 2 Year

#### 3. Participating centre: RARIDD, Gwalior

#### 4. Name of the PI: Dr. Manish M. Wanjari

#### 5. Date of initiation/enrolment: 01/09/2018

#### 6. IAEC approval no:

- Proposal Number (sought on 12/10/2017): RARIDD-GWL/IAEC/2017/04
- Proposal Number (sought on 10/05/2018): RARIDD-GWL/IAEC/2017/04/R

#### 7. Current Status: Project is in progress.

#### 8. Project Outcome: Standardization of *Gokshuradi guggulu* has been completed and All the standardization parameters of *gokshuradi guggulu* were found within pharmacopoeial limits. In-vitro antioxidants activity i.e. DPPH, hydrogen peroxide scavenging activity, lipid peroxidation assay has been completed and these activities showed that the test drug having good anti-oxidant potential. *Gokshuradi guggulu* was found to inhibit aldose reductase activity in the concentration range till the maximum inhibition was observed. In 90 days repeated dose oral toxicity study, there were no toxic reactions observed in all the three dose levels of *Gokshuradi guggulu* compared to vehicle control group and no gross pathological changes were noted in organs during necropsy. Efficacy study is in progress.



### 3.13 Biochemical and Pharmacological Evaluation of *Kaishore Guggulu* in Experimental Models of Gout (Vatarakta)

#### 1. Objectives

- To evaluate of acute and repeated dose oral toxicity of Kaishor guggulu.
- To study effect of Kaishore guggulu on xanthin oxidase activity and enzyme kinetics.
- To study effect of Kaishore guggulu on experimental hyperuricemia and gouty arthritis.

#### 2. Duration of project : 2 Year

#### 3. Participating centre: RARIDD, Gwalior

#### 4. Name of the PI: Dr. Manish M. Wanjari

#### 5. Date of initiation/enrolment: 07/08/2018

#### 6. IAEC approval no: Proposal Number: RARIDD-GWL/IAEC/2017/06/R (sought on 10/05/2018)

#### 7. Current Status: Project is in progress.

**8. Project Outcome:** Physicochemical, phytochemical analysis and standardization of *kaishore guggulu* has been completed. In-vitro antioxidants activity i.e. DPPH, reducing potential activity, hydrogen peroxide scavenging activity and lipid peroxidation assay has been completed and test drug showed good anti-oxidant potentials. *Kaishore guggulu* elicited a dose dependent inhibition of Xanthine Oxidase enzyme activity. *Kaishore guggulu* (250-5000 µg/ml) and Diclofenac sodium (100-350µg/ml) showed significant protection of the erythrocyte membrane against hypotonicity-induced lysis. In sub-acute (28 days) repeated dose oral toxicity study, no abnormality was detected and found safe. Histopathology of important organ is in progress.

### 3.14 Pharmacological Evaluation of *Kutajghan Vati* in Experimentally-induced Colitis in Rats

#### 1. Objectives

- Evaluation of acute and 28 days repeated dose oral toxicity of Kutajghan vati.
- Pharmacological evaluation of Kutajghan vati for anticolitic activity.

#### 2. Duration of project : 2 Year

#### 3. Participating centre: RARIDD, Gwalior

#### 4. Name of the PI: Dr. Manish M. Wanjari

#### 5. Date of initiation/enrolment: 20/08/2019

#### 6. IAEC approval no: Proposal Number: RARIDD-GWL/IAEC/2019/04 for Toxicity Studies (sought on 18/09/2019)

#### 7. Current Status: Project is in progress.





8. **Project Outcome:** *Kutajghan vati* were studied to find out various physicochemical parameters like pH, loss on drying, ash values, extractive values and thin layer chromatography as per standard methods and also tested for heavy metals, microbial load and test for specific pathogens, aflotoxins (B1, B2, G1, G2) and pesticide residue. Physicochemical analysis and standardization of *kutajghan vati* has been completed. Safety/toxicity study of *kutajghan vati* is in progress.

### 3.15 In-vitro evaluation of anti-diabetic activity of AYUSH-82 using proteomic and metabolomic tools

#### 1. Objectives

- Characterization of individual ingredients of AYUSH 82.
- To evaluate the in-vitro anti-diabetic activity of AYUSH 82.
- To explore the partial/full mechanism of action of AYUSH 82 on Proteome of selected cell lines.
- To explore the partial/full mechanism of action of AYUSH 82 on Metabolome of selected cell lines.

2. **Duration of project:** 2 years

3. **Participating centre:** RAIFR, Pune

4. **Name of the PI:** Dr. S. D. Pawar

5. **Date of initiation/enrolment:** 05/10/2018

6. **IAEC approval no:** NA

7. **Current Status:** Project is in progress.

8. **Project Outcome:** Standardization of alpha-Amylase Inhibition assay and alpha-Glucosidase Inhibition assay using acarbose has been completed. Aqueous and hydro-alcoholic extracts of all five individual components and complete formulation of AYUSH-82 were prepared and were applied to LCMS (Agilent Q-TOF) data acquisition using Infinity Lab Poroshell 120 Hilic column (3.0 x 100 mm 2.7-Micron) with Acetonitrile: Water as mobile phase in gradient mode. Standardization of MTT (3-(4, 5-dimethylthiazol-2-yl)-2, 5-diphenyltetrazolium bromide) assay using increasing cell number for INS cell lines has been completed. Protein identification and comparison of proteome samples is in progress.

### 3.16 In-vivo anti-diabetic activity of AYUSH-82

#### 1. Objectives

- Evaluation of anti-diabetic activity of AYUSH-82 in Wistar rats.

2. **Duration of project:** 1 year 6 months

3. **Participating centre:** CARIDD, Kolkata



4. **Name of the PI:** Dr. S. Upadhyay
5. **Date of initiation/enrolment:** 12/09/2018
6. **IAEC approval no:**
  - Proposal No.: 16/P/S/IAEC/2018, dated 23.06.2018 for Acute oral toxicity study of AYUSH 82 as per OECD guideline 423.
  - Proposal No.:24/P/S/CARIDD/IAEC/2018: Evaluation of antidiabetic activity of aqueous extract of AYUSH-82 in Streptozotocin induced Type- I diabetes in Wistar rats.
  - Proposal No.: 25/P/S/CARDD/IAEC/2018: Evaluation of antidiabetic activity of hydro-alcoholic extract of AYUSH-82 in Streptozotocin induced Type-I diabetes in Wistar rats.
  - Proposal No.: 26/P/S/CARIDD/IAEC/2018: Evaluation of antidiabetic activity of aqueous extract of AYUSH-82 Churna in Streptozotocin-Nicotinamide induced Type-II diabetes in rats.
  - Proposal No.: 27/P/S/CARIDD/IAEC/2018: Evaluation of antidiabetic activity of hydro-alcoholic extract of AYUSH-82 Churna in Streptozotocin-Nicotinamide induced Type-II diabetes in Wistar rats.
  - Proposal No.: 28/P/S/CARIDD/IAEC/2018: Evaluation of the effect of Aqueous and Hydro-alcoholic extract of AYUSH-82 Churna on oral glucose tolerance test (OGTT) and plasma glucose in normoglycemic rats.
7. **Current Status:** Project is in progress.
8. **Project Outcome:** Acute toxicity study of AYUSH-82 has been completed. No mortality, no clinical and no gross pathological changes were seen after 14 days. The dose level 2000mg/kg of AYUSH-82 churna was found to be safe when given at single dose in rats. In Oral glucose tolerance test (OGTT), different doses of AYUSH 82 churna were found to decrease the peak value of plasma glucose. AYUSH 82 churna at the different doses for a period of 28 days was found to be more effective in decreasing the plasma glucose level in Streptozotocin induced diabetic Wistar rats. Efficacy study of AYUSH 82 extracts is in progress.

### 3.17 Anti-inflammatory activity of Shunthi Guggulu

#### 1. Objectives

- Analgesic, anti-inflammatory and anti arthritic activities of *Shunthi Guggulu* (*Triphalashodhit* and *Gomutrashodhit*).

#### 2. Duration of project: 1 year

#### 3. Participating centre: CARINMD, Cheruthuruthy

#### 4. Name of the PI: Dr. Sanjaya Kumar .Y.R.

#### 5. Date of initiation/enrolment: October 2016



6. **IAEC approval no:** IAEC/NARIP/2017-18/02

7. **Current Status:** Study is in progress.

8. **Project Outcome:** As a preliminary study, the test drugs were screened for safety and anti-inflammatory activities. The test drugs were safe up to 2000 mg / Kg in female rats. During preliminary studies, the test drugs were found to possess significant anti-inflammatory activity at doses 250 and 500 mg per kg body weight in rats. Analgesic activity is in process.

### 3.18 Analgesic activity of SG 1, SG 2, SG 3, SG 4 and SG 5

#### 1. Objectives

- To evaluate analgesic activity of SG 1, SG 2, SG 3, SG 4 and SG 5
- To evaluate safety of coded drug SG 1, SG 2, SG 3, SG 4 and SG 5 in SD rats through acute toxicity study.
- To evaluate efficacy of coded drug SG 1, SG 2, SG 3, SG 4 and SG 5 for analgesic and anti-inflammatory activities.

2. **Duration of project :** 1 year

3. **Participating centre:** CARINMD, Cheruthuruthy

4. **Name of the PI:** Dr. Sanjaya Kumar .Y.R

5. **Date of initiation/enrolment:** November 2016

6. **IAEC approval no:**

- Proposal No. IAEC/NARIP/2017-18/01 for SG1 & SG2
- Proposal No. IAEC/NARIP/2018-19 / 01 dated 21/03/2019 for SG3
- Proposal No. IAEC/NARIP/2018-19 /01 dated 13/01/2020 for SG4
- Proposal No. IAEC/NARIP/2018-19 /01 dated 13/01/2020 for SG5

7. **Current Status:** Study is in progress.

8. **Project Outcome:** The test drugs were screened for analgesic activity by radiant heat method in SD rats. Analgesic activity in Swiss mice was screened through Eddy's hot plate method and Acetic acid induced writhing method. No signs of toxicity and mortality were observed in the animals which received the SG1, SG2 and SG3 at dose of 2000 mg/kg body weight. The test drugs *Sunthi Guggulu (Triphala shoditha and Gomutra shodhita)* showed significant analgesic and anti-inflammatory activities at doses 250 and 500 mg/kg body weight. *Sunthi guggulu (Gomutra shodhita)* was found to be more effective. The efficacy study for SG4 and SG5 is in progress.



### 3.19 Study of *Carica papaya* Leaf, *Adhatoda vasaca* Leaf and *Tinospora cordifolia* Stem in Experimental Thrombocytopenia as model of Dengue

#### 1. Objectives

- To evaluate safety of aqueous extract of *Carica papaya* leaf, *Adhatoda vasaca* leaf, and *Tinospora cordifolia* stem and Goat and Cow milk in rats.
- To study effect of aqueous extract of *Carica papaya* leaf, *Adhatoda vasaca* leaf and *Tinospora cordifolia* stem and Goat and Cow milk either alone or in combination on biochemical and hematological parameters in experimental thrombocytopenic rats with reference to Dengue.

2. **Duration of project** : 1 year

3. **Participating centre**: RARIDD, Gwalior

4. **Name of the PI**: Dr. Manish M. Wanjari

5. **Date of initiation/enrolment**: December 2019

6. **IAEC approval no**: Proposal No. RARIDD-GWL/IAEC/2019/01

7. **Current Status**: Project is in progress.

8. **Project Outcome**: In acute toxicity study of *Carica papaya* leaf, *Adhatoda vasaca* leaf, and *Tinospora cordifolia* stem and Goat and Cow milk has been completed. It can be inferred that no abnormality was detected (NAD) due to single oral dose administration of an aqueous extract of *Carica papaya* leaf, *Adhatoda vasaca* leaf, and *Tinospora cordifolia* stem and Goat and Cow milk at the dose of 2000 mg/kg (limit test).

### 3.20 Exploration of Medhya properties (neuroprotective effect) of *Yastimadhu* (*Glycyrrhiza glabra* Linn.), *Guduchi* (*Tinospora cardifolia*) and *Vacha* (*Acorus calamus*) in animal model of neurotoxicity.

#### 1. Objectives

- **Primary**: To explore the efficacy of the *Guduchi*, *Yashtimalhu* and *Vacha* plant extract on the Aluminium induced model of neurodegeneration and cognition disorders.
- **Secondary**: To explore the efficacy of the marker compounds of the above-said plants on the same disease model and to explore the changes induced by the Aluminium treatment in the brain.

2. **Duration of project** : 1 year

3. **Participating centre**: RAIFR, Pune

4. **Name of the PI**: Dr. Shrirang Jamadagni

5. **Date of initiation/enrolment**: 07-01-2020



6. **IAEC approval no:** Proposal No.: IISER Pune/IAEC/2019\_3/05
7. **Current Status:** Project is in progress.
8. **Project Outcome:** Phytochemical analysis by LC-MS of the *Glycyrrhiza glabra* Linn., *Tinospora cardifolia* and *Acorus calamus* extracts has been completed. Neurotoxicity of the extract in experimental animals is in progress.

### 3.21 Exploration of safety and reproductive toxicity profile of AYUSH-AG tablets.

#### 1. Objectives

- **Primary:** Generate male and female fertility toxicity and teratology profile of Ayush AG in rats.
- **Secondary:** Generate Single/ repeated dose toxicity profile of Ayush AG in rats.

2. **Duration of project :** 18 months

3. **Participating centre:** RAIFR, Pune

4. **Name of the PI:** Dr. Shrirang Jamadagni

5. **Date of initiation/enrolment:** 07.01.2020

6. **IAEC approval no:** Proposal No.: IISER Pune/IAEC/2019\_3/03

7. **Current Status:** Project is in progress.

8. **Project Outcome:** Acute toxicity study for AYUSH-AG tablets has been completed and found safe. Dose Range Finding (DRF) study for AYUSH-AG tablets is in progress with three doses viz. 1000, 500 and 250 mg/kg/day.

### 3.22 Exploration of safety and reproductive toxicity profile of AYUSH-GG tablets.

#### 1. Objectives

- **Primary:** Generate male and female fertility toxicity and teratology profile of Ayush GG in rats.
- **Secondary:** Generate Single/ repeated dose toxicity profile of Ayush GG in rats.

2. **Duration of project :** 18 months

3. **Participating centre:** RAIFR, Pune

4. **Name of the PI:** Dr. Srinivasan M.

5. **Date of initiation/enrolment:** 14.01.2020

6. **IAEC approval no:** Proposal No.: IISER Pune/IAEC/2019\_3/04

7. **Current Status:** Project is in progress.

8. **Project Outcome:** Acute toxicity study for AYUSH-GG tablets has been completed and found safe. Dose Range Finding (DRF) study for AYUSH-GG tablets is in progress.



### 3.23 Evaluation of acute toxicity of some Ayurvedic Drugs/Plants extracts in-vivo model of Zebrafish.

#### 1. Objectives

- Establishment of in-vivo zebrafish model of acute toxicity in our laboratory.
- Assessment of acute toxicity of selected Ayurvedic drugs / plant extracts against the model.

2. **Duration of project :** 2 years

3. **Participating centre:** RARIDD, Gwalior

4. **Name of the PI:** Dr. Brijesh S. Sisodia

5. **Date of initiation/enrolment:** 30.09.2019

6. **IAEC approval no:** NA

7. **Current Status:** Project is in progress.

8. **Project Outcome:** Adult Zebrafish are being maintained in 12 liters aquarium tanks in the laboratory conditions, males and females in separate tanks as per the standard guidelines described by OECD. Breeding experiment was performed to get fertilized embryos and allowed them to grow in the patri-plates for up to 11 days. Total phenolic content (TPC) and total flavinoids contents (TFC) were estimated under quantitative phytochemical analysis of hydroalcoholic extract of Jayanti (*Sesbania sesban*) leaf, Dhatura (*Datura metal* Linn.) seeds and Punarnava (*Boerhavia diffusa*) roots.

### 3.24 Development of Medicinal Plant garden for Veterinary Ayurveda Research at GADVASU, Ludhiana, Punjab

#### 1. Objectives

##### ➤ Primary

- To develop the Agro technique protocols for 10 selected medicinal plants used in veterinary medical practices by organic farming technique.
- Development of Medicinal Plants Garden for demonstration purpose.
- Plantation of Medicinal Plant trees along the boundary of the garden.
- To educate students, farmers and common man about use, benefits and importance of medicinal plants in their day to day veterinary practices
- To create awareness about our ancient indigenous system of vet. Medicine
- Utilization of the cultivated plants in preparation of the medicine



### ➤ Secondary

- To develop cultivation methods & conservation strategies for rare, endangered and threatened species
- To document an inventories of the medicinal plants
- Sensitization of farmers/Pashu Palak by awareness programme
- To establish seed bank for all the accession collected & transplanted from various agro-climatic zones.
- Organic & eco-friendly approached towards cultivation & propagation

2. **Duration of project** : 3 year

3. **Participating centre**: CRCVA (CCRAS), Ludhiana

4. **Name of the PI**: Dr. Santosh S. Mane

5. **Date of initiation/enrolment**: May 2018

6. **IAEC approval no**: NA

7. **Current Status**: Project is in progress.

8. **Project Outcome**: Total 78 medicinal plants species having utility and importance in Veterinary practice were selected for plantation. Near around 90 medicinal plants species means around 4245 plants have been planted till date, out of which around 3741 plants have sustainably existed in the garden. The medicinal plant garden have been utilized for live demonstration of medicinal plants to farmers under various farmer's training programmes & Pashu Palan Mela organized by the University. Around 12 plant species seeds were collected for plantation in agro-technique methods as well as the seed bank. As a part of agro-technique, about 700 plants samples were raised in polybags for plantation. The installation of RCC fencing poles, net house, hydrant connected pipelines, underwater tank, shade and cement benches in the garden were completed given by University. The Quick Response Code (QR Code) software for plant identification and information with the help of GADVASU Library is in progress.

### 3.25 Clinical evaluation of efficacy of Ayurvedic formulation for augmentation of Milk production in ruminants.

#### 1. Objectives

- **Primary**: Clinical evaluation of efficacy of Ayurvedic formulation for augmentation of milk production in goats and cattle.
- **Secondary**:
  - A drug safety appraisal of "Ayurvedic formulation" in goats and cattle
  - A critical study of "Ayurvedic formulation" in line with Ayurvedic Principle



2. **Duration of project :** 3 year
3. **Participating centre:** CRCVA, GADVASU, Ludhiana
4. **Name of the PI:** Dr. Saloni Singla
5. **Date of initiation/enrolment:** 10/12/2019
6. **IAEC approval no:** letter No. 25)/23/2019-CPCSEA-DADF dated 09/12/2019
7. **Current Status:** Project is in progress.
8. **Project Outcome:** Clinical trials screening of trial animals has been completed at GADVASU goat farm. The trial of the test dug on the goat has been observed for 45days. Milk quality and immunomodulatory parameters have been recorded along with milk sensory attributes. Body weight, feed intake and physiological parameters have been also recorded in the trial animals. The antioxidant, biochemical and hematological parameters in blood sample are in progress.

### 3.26 Clinical evaluation of efficacy of AYUSH V-24 (a coded Ayurvedic formulation) in the management of selected Gastro Intestinal Illness in ruminants.

#### 1. Objectives

- **Primary:** To evaluate the clinical efficacy of AYUSH-V-24 in the Management of selected Gastro Intestinal illness in Ruminant.
- **Secondary**
  - A comprehensive study of AYUSH -V-24 in line with Ayurvedic principle.
  - A drug safety evaluation of “AYUSH-V-24” formulation in ruminants

2. **Duration of project :** 3 year
3. **Participating centre:** CRCVA, GADVASU, Ludhiana
4. **Name of the PI:** Dr. Santosh S. Mane
5. **Date of initiation/enrolment:** 11/02/2020
6. **IAEC approval no:** letter No.V-11011 (13)/2/2020-CPCSEA-DADF dated 10/02/2020
7. **Current Status:** Project is in progress.
8. **Project Outcome:** Trial drug ‘Ayush V-24’ has been prepared and the screening of trial animals has been completed. 6 buffalo calves (male, 4-8 month of age) was selected for the safety study of the formulation Ayush V-24 and also the same clinical study was under trial in the fistulated large animals. The test drug was given to intra-ruminal twice in a day on day 1 and followed up to 7 days. The analysis of the blood sample of the animals is in progress.





## Collaborative Projects

### 3.27 Evaluation of hepatoprotective efficacy and underlying molecular mechanism of Ayurvedic formulations, AYUSH-PKT & AYUSH-GMH in experimental animal models of alcoholic and non-alcoholic fatty liver diseases: A pre-clinical study.

#### 1. Objectives

- To investigate the efficacy of Ayurvedic drugs (PKT & GMH) on hepatic and systemic hemodynamic in experimental models of NAFLD and ALD.
- To evaluate the efficacy of Ayurvedic drugs (PKT & GMH) on hepatic endothelial (micro-vascular) functionality in experimental models of NAFLD and ALD.
- To explore the beneficial effects of Ayurvedic drugs (PKT & GMH) on hepatic fibrosis and inflammation in experimental models of NAFLD and ALD.
- To investigate the underlying molecular and cellular mechanisms of Ayurvedic drugs (PKT & GMH) in the in vitro (hepatic cell culture systems) and in vivo (in experimental models of NAFLD and ALD).

2. **Duration of project :** 2 years

3. **Participating centre:** RARIDD, Gwalior & ILBS, New Delhi

4. **Name of the PI:** Dr. Brijesh S. Sisodia & Dr. Dinesh Mani Tripathi

5. **Date of initiation/enrolment:** 01.01.2020

6. **IAEC approval no:** In process

7. **Current Status:** Project is in progress.

8. **Project Outcome:** Preparation of AYUSH-PKT & AYUSH-GMH has been completed. Standardization of the test drug has been completed. One arm of study design has been initiated, animal model development on progress (Fatty liver disease model). High fat-high fructose diet has been procured, animal has been randomized. Process for IAEC approval and experimental design is in progress.



## 4. CLINICAL RESEARCH

### 4.1 Intra Mural Clinical Research (IMR) Projects

Under IMR, 14 IMR Clinical Research projects on 12 diseases/conditions viz. Sciatica, Osteoarthritis knee, Chronic Bronchitis, Allergic Conjunctivitis, Influenza like illness, Cervical Spondylosis, Fissure, Ano-rectal Fistula, Bronchial Asthma, Allergic Rhinitis, Primary Dysmenorrhoea & Rheumatoid Arthritis have been completed and 25 IMR Projects on 16 diseases/conditions viz., Urolithiasis, Gout, Bacterial Vaginosis, Iron Deficiency Anaemia, Chronic Bronchitis, Chronic Rhinosinusitis, *Grahani*, Migraine, Bronchial Asthma, Cognitive deficit, Dysfunctional Uterine Bleeding, Dry Age related Macular Degeneration Syndrome, Hyperacidity, Eczema, Occupational stress among IT professionals & Psoriasis have been going on. Besides this one projects on Systematic Review, Meta analysis and review etc is also going on.

The list of projects is as follows: -

**Table –15: List of IMR Projects**

Completed IMR Projects	
1.	Clinical evaluation of the efficacy of Trayodashanga Guggulu, Maharasnadi Kwatha and Prasarani Taila in the management of Gridhrasi (Sciatica)
2.	Clinical Evaluation of Rasnadi Kwatha churna (Maha), Trayodashanga Guggulu and Brihatsaindhavadya Taila in the Management of Osteoarthritis of Knee (Janugata Sandhivata)
3.	Assessment of therapeutic efficacy and safety of Sitopaladi Churna with Madhu in the management of Kasa (Stable Chronic Bronchitis)
4.	Clinical efficacy of Talisadi Churna in the management of Kasa (Stable Chronic Bronchitis)
5.	Clinical evaluation of Haridrakhanda and Triphala Kwath in the management of chronic Allergic Conjunctivitis (Kaphaja Abhishyanda)
6.	A Pilot Evaluation of Safety and Efficacy of an Ayurvedic Formulation (AYUSH-64) for accelerating the recovery in cases of Influenza like illness.
7.	Clinical evaluation of Panchamrit Lauha Guggulu and Panchgunataila in the management of Cervical Spondylosis (Greevagraha)
8.	Clinical Evaluation of Ayurvedic formulations in the management of Parikartika (Fissure in Ano)
9.	Observation on Fistula cutting Time with Ksharsutra used in routine patients of Anorectal Fistula (Bhagandara)
10.	Clinical Evaluation of Kantakaryavaleha and Eladi Gutika in the Management of Mild Stable Bronchial Asthma (Tamaka Shwasa)
11.	Clinical evaluation of AYUSH-PE eye drops in the management of Acute Allergic Conjunctivitis.
12.	Clinical evaluation of an Ayurvedic formulation in the management of Allergic Rhinitis-a pilot study
13.	Clinical evaluation of Sapthasaram Kashayam & Saraswatharishtam in the management of Primary Dysmenorrhoea- An Exploratory study
14.	Clinical Evaluation of Efficacy of Indukanta Ghrita and Trayodashang Guggulu in the Management of Rheumatoid Arthritis vis –a–vis Amavata

**Ongoing IMR Projects**

15. Clinical evaluation of the Efficacy of Varunadi Kwatha and Chandraprabha Vati in the management of Mutrashmari (Urolithiasis)
16. Clinical evaluation of Svadamshtardi Kashaya and Hajarulayahuda Bhasma in the Management of Mutrashmari (Urolithiasis)
17. Clinical efficacy of Kaishore Guggulu and Balaguduchyadi Taila in the management of Gout (Vatarakta)
18. Clinical evaluation of the efficacy of Pushyanug Churna in the management of Sweta Pradara w.r.t. Bacterial Vaginosis (Leucorrhoea)
19. Clinical evaluation of Drakshavaleha in the management of Pandu (Iron Deficiency Anaemia)
20. Clinical evaluation of Drakshasava in the management of Pandu (Iron Deficiency Anaemia)
21. Clinical Evaluation of Eladi Churna and Draksharishta in the management of Kasa (Stable Chronic Bronchitis)
22. Clinical Evaluation of Varunadi Kwath Churna and Apamarga Kshara in the management of Mutrashmari (urolithiasis)
23. Clinical evaluation of Shadbindu Taila Nasya and Chitraka Haritaki in the management of Pinasa (Chronic Rhinosinusitis)
24. Clinical Study on Efficacy and Safety of an Ayurvedic Formulation Kutajavleha in the management of Grahani
25. Clinical evaluation of Pathyadi Kwatha and Anu Taila Nasya in the management of Ardhavabhedaka (Migraine)
26. Clinical Evaluation of Chitraka Haritaki and Lavangadi Vati in the management of Kaphaj Kasa (Stable Chronic Bronchitis)
27. Clinical evaluation of Agastya Haritaki Rasayana and Apamarga Kshara in the management of Mild Stable Bronchial Asthma (Tamaka Shwasa)
28. Clinical evaluation of Jirakadyarishta in the management of Grahani
29. Clinical evaluation of Mustakarishtha in the management of Grahani
30. Randomized Placebo Controlled Double Blind Clinical Trial on the Efficacy of AYUSH MANAS in the management of Smriti Daurbalya (Cognitive Deficit)
31. Clinical evaluation of Satavari Guda and Ashokarishta in the management of Abnormal Uterine Bleeding (Asrigdara)
32. Clinical evaluation of the efficacy of Pushyanuga Churna and Usheerasava in the Management of Abnormal uterine bleeding (Asrigdara)



33. Clinical Safety and efficacy of Triphala Ghrita and Anu Taila in the management of Dry Age Related Macular Degeneration(Jarajanya Drishtigata Roga)
34. Clinical Evaluation of Narikela Lavana and Amalakyadi Churna in the management of Amlapitta (Functional Dyspepsia)
35. Clinical evaluation of Panchatikta Ghrita and Nalpamaradi Taila in the management of Vicharchika (Eczema)
36. Evaluation of Ayush-SR Tablet in Occupational Stress among IT professionals –A Randomized double blind placebo controlled clinical study
37. Clinical evaluation of Panchatikta Ghrita & Nalpamardi Taila in the management of Psoriasis
38. Clinical evaluation of Jatiphaladya Churna & Chitrakadi Gutika in the management of Grahani
39. Clinical evaluation of Panchatikta ghrita and Gandhakadya Malahara in the management of Vicharchika (Eczema)
40. Ayurveda Interventions for Cancer: Systematic Review, Meta-analysis; and Revival, Documentation, Validation and analysis of data from practitioners, institutes.

## BRIEF REPORT OF COMPLETED PROJECTS

### 4.1.1 Clinical evaluation of the efficacy of Trayodashanga Guggulu, Maharasnadi Kwatha and Prasarani Taila in the management of Gridhrasi (Sciatica)

#### 1. Objectives:

- **Primary objectives** -To assess the clinical efficacy of Trayodashanga Guggulu, Maharasanadi Kwatha and Prasarani Taila in the management of Gridhrasi.
- **Secondary objectives** - To assess the clinical safety of Trayodashanga Guggulu, Maharasanadi Kwatha and Prasarani Taila in the management of Gridhrasi.

2. **Study Design** : Open label

3. **Sample Size** : 180 (60 at each centre)

4. **Duration of Study** : 2 years

5. **Interventions** : Trayodashanga Guggulu, Maharasanadi Kwatha and Prasarani Taila

#### 6. Participating centre along with PI:

S. No.	Name of the Participating Centre	Name of PI
1.	RARIMD, Bengaluru	Dr. Shashidhar Doddamani
2.	ACAMH&NS, Bengaluru	Dr. G. Venkateshwarlu
3.	RARISD, Vijayawada	Dr. G. Babu



## 7. Date of IEC approval:

S. No.	Name of the Participating Centre	Date of IEC approval
1.	RARIMD, Bengaluru	15 <sup>th</sup> September, 2017
2.	ACAMH&NS, Bengaluru	18 <sup>th</sup> March, 2017
3.	RARISD, Vijayawada	11 <sup>th</sup> January, 2017

## 8. CTRI Registration (for clinical trials) : CTRI/2017/11/015925

## 9. Date of initiation:

S. No.	Name of the Participating Centre	Date of initiation
1.	RARIMD, Bengaluru	11 <sup>th</sup> April 2018
2.	ACAMH&NS, Bengaluru	27 <sup>th</sup> April 2018
3.	RARISD, Vijayawada	14 <sup>th</sup> May 2018

## 10. Current status :

**Table – 16: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs
1.	RARIMD, Bengaluru	53	50	03
2.	ACAMH&NS, Bengaluru	46	43	03
3.	RARISD, Vijayawada	60	57	03
4.	Total	159	150	09

**11. Summary of Project:** The study has been considered as completed in July 2019, due to lower drop out than the expected drop out (25%)

### 4.1.2 Clinical Evaluation of Rasnadi Kvatha churna (Maha), Trayodashanga Guggulu and Brihatsaindhavadya Taila in the Management of Osteoarthritis of Knee (Janugata Sandhivata)

#### 1. Objectives :

##### Primary

- To assess the clinical efficacy of Ayurvedic formulations *Rasnadi Kvatha churna (Maha)*, *Trayodashanga Guggulu* and *Brihatsaindhavadya Taila* in the management of osteoarthritis of knee (*Janugata Sandhivata*).
- To assess the clinical safety of the of Ayurvedic formulations *Rasnadi Kvatha churna (Maha)*, *Trayodashanga Guggulu* and *Brihatsaindhavadya Taila* in the management of osteoarthritis of knee (*Janugata Sandhivata*).

2. **Study Design** : Interventional

3. **Sample size** : 60



4. **Duration of Study** : 2 years
5. **Intervention** : Rasnadi kvath churna (Maha), Trayodashanga Guggulu & Brihatsaindhavadya Taila

6. **Participated centre along with PI** :

S.No.	Name of the participating centre	Name of PI
1.	RARIECD, Jaipur	Dr. Bhuvnesh Kumar Sharma

7. **Date of IEC approval:**

S.No	Name of the participating centre	Date of IEC approval:
1.	RARIECD Jaipur	20 <sup>th</sup> July, 2017

8. **CTRI Registration/Reference (for clinical trials):** CTRI/2018/03/012292

9. **Date of initiation :**

S.No.	Name of the participating centre	Date of initiation
1.	RARIECD Jaipur	15 <sup>th</sup> December, 2017

10. **Current Status :**

**Table - 17: Status of projects along with participating centres**

S.No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs
1.	RARIECD Jaipur	60	58	02

11. **Summary of Project:** Study completed in June, 2019.

**4.1.3 Assessment of therapeutic efficacy and safety of Sitopaladi Churna with Madhu in the management of Kasa (Stable Chronic Bronchitis)**

1. **Objective:**

- **Primary Objectives** –To evaluate the clinical efficacy of *Sitopladi Churna* in the case of Kasa (Stable Chronic Bronchitis).
- **Secondary Objectives** –
  - To validate the clinical efficacy of Ayurvedic drug *Sitopladi Churna* on the specific parameters in the patients of Kasa (Stable Chronic Bronchitis).
  - To evaluate the safety of *Sitopladi Churna* in the patients of Kasa (Stable Chronic Bronchitis).

2. **Study Design:** Interventional

3. **Sample Size :** 75 patients



4. **Duration of Study** : 1 Year

5. **Interventions** : Sitopladi Churna

6. **Participated centre along with PI** :

S. No.	Name of the Participating Centre	Name of PI
1.	CARICD, New Delhi	Dr. Seema Jain

7. **Date of IEC approval:**

S. No.	Name of the Participating Centre	Date of IEC approval
1.	CARICD, New Delhi	21 <sup>st</sup> September, 2017

8. **CTRI Registration (for clinical trials)** : CTRI/2017/10/010253

9. **Date of Initiation:**

S. No.	Name of the Participating Centre	Date of Initiation
1.	CARICD, New Delhi	7 <sup>th</sup> February, 2018

10. **Current status** :

**Table -18: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs
1.	CARICD, New Delhi	67	64	03

11. **Summary of Project:** Study completed in July 2019. The data has been analyzed. Drafting of article is under process

**\*Note:** Enrolment of patients has been stopped in, because trial drug is expired in June 2019. 01 month after treatment follow up completed in July 2019\*

#### 4.1.4 Clinical efficacy of Talisadi Churna in the management of Kasa (Stable Chronic Bronchitis)

1. **Objectives** :

- **Primary objective-** To evaluate the clinical efficacy of Talisadi Churna in the cases of Kasa (Stable Chronic Bronchitis)
- **Secondary objective-** To validate the clinical efficacy of Ayurvedic drug Talisadi Churna on the specific parameters in the patients of Kasa (Stable Chronic Bronchitis)

2. **Study Design** : Interventional

3. **Sample Size:** 75

4. **Duration of Study** : 1 Year

5. **Interventions** : Talisadi Churna

**6. Participated centre along with PI :**

S.No.	Name of the Participating Centre	Name of PI
1.	CARIRD, Patiala	Dr. Rinku Tomar

**7. Date of IEC approval:**

S.No.	Name of the Participating Centre	Date of IEC approval
1.	CARIRD, Patiala	5 <sup>th</sup> January, 2018

**8. CTRI Registration (for clinical trials) : CTRI/2018/01/011549****9. Date of initiation :**

S.No.	Name of the Participating Centre	Date of initiation
1.	CARIRD, Patiala	18 <sup>th</sup> June, 2018

**10. Current status :****Table- 19: Status of project along with participating Centers**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs
1.	CARIRD, Patiala	75	68	7

11. **Summary of the Project:** Study completed in July, 2019 and the data has been analyzed. Drafting of article is under process.

#### 4.1.5 Clinical evaluation of *Haridrakhand* and *Triphala Kwath* in the management of Chronic Allergic Conjunctivitis (*Kaphaja Abhishyanda*)

**1. Objective**

- To assess the clinical efficacy and safety of *Haridrakhand* and *Triphaladi Kwath* in the management of chronic Allergic Conjunctivitis (*Kaphaja Abhishayand*).

2. **Study Design:** Prospective interventional single arm trial.

3. **Sample Size:** 55

4. **Duration of Study :** 2 Year

5. **Interventions :** *Haridrakhand* and *Triphaladi Kwath*

**6. Participating centre along with PI :**

S.No.	Name of the Participating Centre	Name of PI
1.	RARIED, Lucknow	Dr. Alok Srivastava





## 7. Date of IEC approval:

S.No.	Name of the Participating Centre	Date of IEC approval
1.	RARIED, Lucknow	23 <sup>rd</sup> May, 2017

## 8. CTRI Registration (for clinical trials) : CTRI/2018/02/0117829

## 9. Date of initiation :

S.No.	Name of the Participating Centre	Date of initiation
1.	RARIED, Lucknow	20 <sup>th</sup> September, 2017

## 10. Status of the project during reporting period:

**Table - 20: Status of project along with participating Centre**

S.No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs
1.	RARIED, Lucknow	55	52	03

11. **Summary of Project:** Study completed in September, 2019 and data has been analyzed. The research article & monograph is under draft.

### 4.1.6 A Pilot Evaluation of Safety and Efficacy of an Ayurvedic Formulation (AYUSH-64) for accelerating the recovery in cases of Influenza Like Illness."

#### 1. Objectives

A Pilot Evaluation of Safety and Efficacy of an Ayurvedic Formulation (AYUSH 64) for accelerating the recovery in cases of Influenza Like Illness

2. **Study Design** : Interventional

3. **Sample size** : 38

4. **Duration of Study** : 1 year

5. **Intervention** : AYUSH-64

#### 6. Participated centre along with PI:

Sl.No.	Name of the participating centre	Name of PI
1.	CARIC, Mumbai	Dr. Manohar Gundeti

## 7. Date of IEC approval:

Sl.No.	Name of the participating centre	Date of IEC approval
1.	CARIC, Mumbai	9 <sup>th</sup> January, 2017

## 8. CTRI Registration/Reference (for clinical trials): CTRI/2017/10/010145

**9. Date of initiation :**

Sl. No.	Name of the participating centre	Date of initiation
1.	CARIC, Mumbai	26 <sup>th</sup> June, 2018

**10. Current Status :****Table - 21: Status of projects along with participating centres**

S.No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs
1.	CARIC, Mumbai	38	31	07

**11. Summary of Project:** Study Completed in August, 2019.**4.1.7 Clinical evaluation of Panchamrit Lauha Guggulu and Panchgunataila in the management of Cervical Spondylosis (Greevagraha)****1. Objectives :**

- **Primary Objectives:** To evaluate the clinical efficacy of Panchamrit Lauha Guggulu and Panchguna Taila in the management of Greeva graha (Cervical Spondylosis)
- **Secondary Objectives:** To assess the clinical safety of Panchamrit Lauha Guggulu and Panchguna Taila in the management of Greeva graha (Cervical Spondylosis)

**2. Study Design :** Interventional, open label, OPD Level**3. Sample Size :** 70**4. Duration of Study:** 2 Years**5. Interventions:** Panchamrit Lauha Guggulu and Panchguna Taila**6. Participating centre along with PI :**

S.No.	Name of the Participating Centre	Name of PI
1.	RARIND, Mandi	Dr. Vineeta Negi

**7. Date of IEC approval:**

S.No.	Name of the Participating Centre	Date of IEC approval
1.	RARIND, Mandi	16 <sup>th</sup> February, 2017

**8. CTRI Registration (for clinical trials) :** CTRI/2017/11/010410**9. Date of initiation :**

S.No.	Name of the Participating Centre	Date of initiation
1.	RARIND, Mandi	20 <sup>th</sup> March, 2017



## 10. Current status :

**Table – 22: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs
1.	RARIND, Mandi	63	59	04

11. **Summary of Project:** Study completed in November, 2019.

### 4.1.8 Clinical Evaluation of Ayurvedic formulations in the management of Parikartika (Fissure in Ano)

#### 1. Objectives :

- **Primary objective-** To evaluate the clinical efficacy of Jatyadi Ghrita and Jatyadi Taila in the management of Parikartika (Fissure in Ano)
- **Secondary objective-** To evaluate the clinical safety of Jatyadi Ghrita and Jatyadi Taila in the management of Parikartika (Fissure in Ano)

2. **Study Design :** Interventional

3. **Sample Size:** 60 (30 at each Group)

4. **Duration of Study :** 2 Years

5. **Interventions :** Jatyadi Ghrita, Jatyadi Taila & Haritaki Churna

6. **Participated centre along with PI :**

S.No.	Name of the Participating Centre	Name of PI
1.	CARIDD, Kolkata	Dr. L.D. Barik

7. **Date of IEC approval:**

S.No.	Name of the Participating Centre	Date of IEC approval
1.	CARIDD, Kolkata	13 <sup>th</sup> October, 2015

8. **CTRI Registration (for clinical trials) :** CTRI/2017/06/008773

9. **Date of initiation :**

S.No.	Name of the Participating Centre	Date of initiation
1.	CARIDD, Kolkata	19 <sup>th</sup> December, 2017

## 10. Current status :

**Table - 23: Status of project along with participating Centers**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs
1.	CARIDD, Kolkata	60	54	06

11. **Summary of the Project:** Completed in December 2019. Verification of data is under process.

#### 4.1.9 Observation on Fistula cutting Time with Ksharsutra used in routine patients of Anorectal Fistula (Bhagandara)

##### 1. Objectives:

- **Primary objectives** – To evaluate Fistula cutting time with Ksharsutra used in routine patients of Anorectal fistula (Bhagandara)

##### 2. Study Design : Pilot study

##### 3. Sample Size : 60 (30 patients at each centre)

##### 4. Duration of Study : 1 Year

##### 5. Interventions : Ksharsutra, Thripala Guggulu and Haritaki churna

##### 6. Participated centre along with PI :

S. No.	Name of the Participating Centre	Name of PI
1.	CARICD, New Delhi	Dr. Shashi Ghosh
2.	*CARIDD, Kolkata	Dr. L.D. Barik

##### 7. Date of IEC approval:

S. No.	Name of the Participating Centre	Date of IEC approval
1.	CARICD, New Delhi	27 <sup>th</sup> March, 2015
2.	*CARIDD, Kolkata	27 <sup>th</sup> November, 2015

##### 8. CTRI Registration (for clinical trials) : CTRI/2017/11/010562

##### 9. Date of Initiation :

S. No.	Name of the Participating Centre	Date of Initiation
1.	CARICD, New Delhi	28 <sup>th</sup> March, 2018
2.	*CARIDD, Kolkata	20 <sup>th</sup> February, 2019

##### 10. Current status :

**Table - 24: Status of project along with participating Centres**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs
1.	CARICD, New Delhi	30	26	04
2.	*CARIDD, Kolkata	30	28	02
	<b>Total</b>	<b>60</b>	<b>54</b>	<b>06</b>

##### 11. Summary of Project: Study completed in December, 2019. The data has been analyzed. Drafting of article is under process

**\*Note:** This study was initially allotted to the CARIC, Mumbai but due to some technical reasons it has been shifted to CARIDD, Kolkata\*



#### 4.1.10 Clinical Evaluation of Kantakaryavaleha and Eladi Gutika in the Management of Mild Stable Bronchial Asthma (Tamaka Shwasa)

##### 1. Objectives:

- **Primary Objective** - To evaluate the efficacy of Kantakaryavaleha and Eladi Gutika in the Mild Stable bronchial asthma.
- **Secondary Objectives** - To evaluate the safety of Kantakaryavaleha and Eladi Gutika in the patients of Mild Stable bronchial asthma.

##### 2. Study Design: Interventional

##### 3. Sample Size: 90 (45 at each Centre)

##### 4. Duration of Study: 2 years

##### 5. Interventions: Kantakaryavaleha and Eladi Gutika

##### 6. Participated centre along with PI:

S.No.	Name of the Participating Centre	Name of PI
1.	CARIRD, Patiala	Dr. Harbans
2.	RARISD, Vijaywada	Dr. G.Babu

##### 7. Date of IEC approval:

S.No.	Name of the Participating Centre	Date of IEC approval
1.	CARIRD, Patiala	23 <sup>rd</sup> March, 2018
2.	RARISD, Vijayawada	8 <sup>th</sup> May, 2018

##### 8. CTRI Registration (for clinical trials): CTRI/2018/06/14425

##### 9. Date of initiation:

S.No.	Name of the Participating Centre	Date of initiation*
1.	CARIRD, Patiala	11 <sup>th</sup> August, 2018
2.	RARISD, Vijayawada	25 <sup>th</sup> October, 2018

##### 10. Current status:

**Table - 25: Status of project along with participating Centres**

S.No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs
1.	CARIRD, Patiala	45	44	01
2.	RARISD, Vijayawada	45	39	06
3.	Total	90	83	07

##### 11. Summary of Project: Study completed in December, 2019.



#### 4.1.11 Clinical evaluation of AYUSH-PE eye drops in the management of Acute Allergic Conjunctivitis.

##### 1. Objectives:

- **Primary objectives** -To assess the clinical efficacy of AYUSH PE Eye Drops in the management of Acute Allergic Conjunctivitis.
- **Secondary objectives** - To assess the clinical safety of AYUSH PE Eye Drops in the management of Acute Allergic Conjunctivitis.

2. **Study Design** : Interventional

3. **Sample Size** : 220 (55 at each centre)

4. **Duration of Study** : 1 year

5. **Interventions** : AYUSH PE Eye Drops

##### 6. Participating centre along with PI:

S. No.	Name of the Participating Centre	Name of PI
1.	CARICD, New Delhi	Dr. Nandini Jadhav
2.	RARIMD, Bengaluru	Dr. Bhavya
3.	RARIED, Lucknow	Dr. Alok Srivastav
4.	RARILSD, Trivendrum	Dr. P. Balkrishnan

##### 7. Date of IEC approval:

S. No.	Name of the Participating Centre	Date of IEC approval
1.	CARICD, New Delhi	23 <sup>rd</sup> April, 2018
2.	RARIMD, Bengaluru	3 <sup>rd</sup> July, 2018
3.	RARIED, Lucknow	9 <sup>th</sup> April, 2018
4.	RARILSD, Trivendrum	24 <sup>th</sup> January, 2019

8. **CTRI Registration (for clinical trials):** CTRI/2018/07/014801

##### 9. Date of initiation:

S. No.	Name of the Participating Centre	Date of initiation
1.	CARICD, New Delhi	17 <sup>th</sup> August 2018
2.	RARIMD, Bengaluru	13 <sup>th</sup> August 2018
3.	RARIED, Lucknow	19 <sup>th</sup> July 2018
4.	RARILSD, Trivendrum	15 <sup>th</sup> May 2019



## 10. Current status:

**Table – 26: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs
1.	CARICD, New Delhi	56	55	01
2.	RARIMD, Bengaluru	55	55	00
3.	RARIED, Lucknow	55	54	01
4.	RARILSD, Trivendrum	55	53	02
	<b>Total</b>	<b>221</b>	<b>217</b>	<b>04</b>

## 11. Summary of Project: Study completed in December, 2019.

## 4.1.12 Clinical evaluation of an Ayurvedic formulation in the management of Allergic Rhinitis-a pilot study

## 1. Objectives :

- **Primary objective-** To assess the clinical efficacy of Ayurvedic formulation in the management of Vataja Pratishyaya (Allergic Rhinitis)
- **Secondary objective-** To assess the clinical safety of Ayurvedic formulation in the management of Vataja Pratishyaya (Allergic Rhinitis)

## 2. Study Design : Interventional

## 3. Sample Size: 60 (30 at each centre)

## 4. Duration of Study : 1 Year

## 5. Interventions :Anutaila, Ashawagandhadi compound (Ayush VPR), Shirishadi Kashaya

## 6. Participated centre along with PI :

S.No.	Name of the Participating Centre	Name of PI
1.	CARICD, New Delhi	Dr. Shweta Mata
2.	CARIC, Mumbai	Dr. Parth Dave

## 7. Date of IEC approval:

S.No.	Name of the Participating Centre	Date of IEC approval
1.	CARICD, New Delhi	7 <sup>th</sup> January, 2017
2.	CARIC, Mumbai	9 <sup>th</sup> February, 2019

## 8. CTRI Registration (for clinical trials): CTRI/2017/12/010937

**9. Date of initiation :**

S.No.	Name of the Participating Centre	Date of initiation
1.	CARICD, New Delhi	29 <sup>th</sup> November, 2018
2.	CARIC, Mumbai	16 <sup>th</sup> April, 2019

**10. Current status :****Table - 27: Status of project along with participating centers**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs
1.	CARICD, New Delhi	30	27	03
2.	CARIC, Mumbai	30	24	06
	<b>Total</b>	<b>60</b>	<b>51</b>	<b>09</b>

11. **Summary of the Project:** Study completed in January, 2020. Data verification is under process.

#### 4.1.13 Clinical evaluation of *Sapthasaram Kashayam* & *Saraswatharishtam* in the management of Primary Dysmenorrhoea- An Exploratory study

**1. Objectives**

- **Primary Objective**

- To assess the effect of *Sapthasaram Kashayam* & *Saraswath arishtam* in the management of primary dysmenorrhoea.

- **Secondary Objective**

- To observe the changes in the quality of life of patients of Kasthartava (Primary Dysmenorrhoea) by using Health Survey SF-36 Questionnaire (RAND).
- To observe the changes in the psychosomatic status by using Mestural Distress Questionnaire and Hamilton's Anxiety rating scale

2. **Study Design:** Prospective interventional single arm multi centre study.

3. **Sample Size:** 100 (50 in each centre)

4. **Duration of Study :** 2 years

5. **Interventions :** *Sapthasaram Kashayam* & *Saraswath arishtam*

6. **Participating centre along with PI :**

S.No.	Name of the Participating Centre	Name of PI
1.	RARILSD, Trivandrum	Dr. D. Sudhakar
2.	CARICD, New Delhi	Dr. Sakshi Sharma





## 7. Date of IEC approval:

S.No.	Name of the Participating Centre	Date of IEC approval
1.	RARILSD, Trivandrum	14 <sup>th</sup> February, 2018
2.	CARICD, New Delhi	21 <sup>st</sup> September, 2017

## 8. CTRI Registration (for clinical trials) : CTRI/2016/02/009857

## 9. Date of initiation :

S.No.	Name of the Participating Centre	Date of initiation
1.	RARILSD, Trivandrum	3 <sup>rd</sup> April, 2018
2.	CARICD, New Delhi	8 <sup>th</sup> May, 2018

## 10. Status of the project during reporting period:

**Table – 28: Status of project along with participating Centre**

S.No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs
1.	RARILSD,Trivandrum	50	48	02
2.	CARICD, New Delhi	50	48	02
	<b>Total</b>	<b>100</b>	<b>96</b>	<b>04</b>

11. **Summary of Project:** Study completed in March, 2020. Data has been verified and analysis is under process.

### 4.1.14 Clinical Evaluation of Efficacy of Indukanta Ghrita and Trayodashang Guggulu in the Management of Rheumatoid Arthritis vis –a–vis Amavata

#### 1. Objective

- **Primary objective:** To assess the clinical efficacy of Indukanta Ghrita and Trayodashang guggulu in the Management of Rheumatoid Arthritis vis –a–vis Amavata.
- **Secondary Objective:** To assess the clinical safety of Indukanta Ghrita and Trayodashang guggulu in the Management of Rheumatoid Arthritis vis –a–vis Amavata.

2. **Study Design** : Interventional
3. **Sample size** : 50 in each centre
4. **Duration of Study** : 2 years
5. **Intervention** : Indukanta Ghrita & Trayodashang Guggulu

#### 6. Participated centre along with PI :

Sl.No.	Name of the participating centre	Name of PI
1.	NARIP, Cheruthurthy	Dr. Akashlal .M
2.	CARIDD, Kolkata	Dr. Rohit Ravte

**7. Date of IEC approval:**

Sl.No.	Name of the participating centre	Date of IEC approval
1.	NARIP Cheruthuruthy	8 <sup>th</sup> June, 2018
2.	CARIDD, Kolkata	16 <sup>th</sup> April, 2018

**8. CTRI Registration/Reference (for clinical trials):** CTRI/2018/07/015025**9. Date of initiation :**

Sl.No.	Name of the participating centre	Date of initiation
1.	NARIP Cheruthuruthy	3 <sup>rd</sup> December, 2018
2.	CARIDD, Kolkata	16 <sup>th</sup> October, 2018

**10. Current Status :****Table- 29: Status of projects along with participating centres**

S.No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs
1.	NARIP cheruthuruthy	50	48	02
2.	CARIDD, Kolkata	50	38	12
<b>Total</b>		<b>100</b>	<b>86</b>	<b>14</b>

**11. Summary of Project:** Study completed in February, 2020.**ONGOING PROJECTS****4.1.15 Clinical evaluation of the Efficacy of Varunadi Kwatha and Chandraprabha Vati in the management of Mutrashmari (Urolithiasis)****1. Objectives :**

- To evaluate the efficacy of Varunadi kwatha and Chandraprabha Vati in the management of Mutrasmarri (Urolithiasis)

**2. Study Design :** Interventional, Open Clinical, OPD Level**3. Sample Size :** 80**4. Duration of Study:** 2 Years**5. Interventions:** Varunadi Kwatha and Chandraprabha Vati**6. Participating centre along with PI :**

S.No.	Name of the Participating Centre	Name of PI
1.	NARIP, Cheruthuruthy	Dr. Rohit K. S.



## 7. Date of IEC approval:

S.No.	Name of the Participating Centre	Date of IEC approval
1.	NARIP, Cheruthuruthy	24 <sup>th</sup> January, 2018

## 8. CTRI Registration (for clinical trials) :

CTRI/2019/09/021055

## 9. Date of initiation :

S.No.	Name of the Participating Centre	Date of initiation
1.	NARIP, Cheruthuruthy	24 <sup>th</sup> December, 2019

## 10. Current status :

**Table – 30: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	NARIP, Cheruthuruthy	07	00	00	07

## 11. Summary of Project: Study is in progress.

### 4.1.16 Clinical evaluation of Svadamshtadi Kashaya and Hajarulayahuda Bhasma in the Management of Mutrashmari (Urolithiasis)

#### 1. Objectives :

- **Primary Objectives:** To assess the clinical efficacy of *Svadamshtadi Kashaya* and *Hajarulayahuda Bhasma* in the management of *Mutrashmari* (Urolithiasis)

#### 2. Study Design: Open label Interventional

#### 3. Sample Size: 75

#### 4. Duration of Study: 2 years

#### 5. Interventions: *Svadamshtadi Kashaya* and *Hajarulayahuda Bhasma*

#### 6. Participating centre along with PI :

S.No.	Name of the Participating Centre	Name of PI
1.	RARISD, Vijayawada	Dr. B. Venkateshwarlu

## 7. Date of IEC approval:

S.No.	Name of the Participating Centre	Date of IEC approval
1.	RARISD, Vijayawada	9 <sup>th</sup> December, 2016

## 8. CTRI Registration (for clinical trials):

CTRI/2017/03/008096

## 9. Date of initiation:

S.No.	Name of the Participating Centre	Date of initiation
1.	RARISD, Vijayawada	29 <sup>th</sup> November, 2017

**10. Current status:****Table - 31: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	RARISD, Vijayawada	70	58	10	02

11. **Summary of Project:** Study is continuing.

#### 4.1.17 Clinical efficacy of Kaishore Guggulu and Balaguduchyadi Taila in the management of Gout (Vatarakta)

##### 1. Objectives :

- **Primary objective:** To assess the clinical efficacy especially the hypouricemic effect of Kaishore Guggulu and Balaguduchyadi Taila in the patients of Gout (Vatarakta)
- **Secondary objective:** The study the safety of Kaishore Guggulu, Balaguduchyadi Taila in the patient of Gout(Vatarakta)

2. **Study Design :** Interventional

3. **Sample Size:** 220 (110 at each centre)

4. **Duration of Study :** 3 Years

5. **Interventions :** Kaishore Guggulu and Balaguduchyadi Taila

##### 6. Participated centre along with PI :

S.No.	Name of the Participating Centre	Name of PI
1.	CARICD, New Delhi	Dr. Deepa Makhija
2.	RARIID, Patna	Dr. Deepika Tewari

##### 7. Date of IEC approval:

S.No.	Name of the Participating Centre	Date of IEC approval
1.	CARICD, New Delhi	21 <sup>st</sup> September, 2017
2.	RARIID, Patna	10 <sup>th</sup> June, 2017

8. **CTRI Registration (for clinical trials) :** CTRI/2018/04/013326

##### 9. Date of initiation :

S.No.	Name of the Participating Centre	Date of initiation
1.	CARICD, New Delhi	7 <sup>th</sup> July, 2018
2.	RARIID, Patna	16 <sup>th</sup> May, 2018



## 10. Current status :

**Table -32: Status of project along with participating Centers**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	CARICD, New Delhi	50	42	4	4
2.	RARIID, Patna	77	64	3	10
	<b>Total</b>	<b>127</b>	<b>106</b>	<b>7</b>	<b>14</b>

## 11. Summary of the Project: Study is in progress.

### 4.1.18 Clinical evaluation of the efficacy of *Pushyanug Churna* in the management of *Sweta Pradara* w.r.t. Bacterial Vaginosis (Leucorrhoea)

#### 1. Objectives

- **Primary Objective:** To evaluate the therapeutic efficacy of *Pushyanug Churna* on the clinical signs and symptoms of *Swetapradara* (Leuorrhoea) w.s.t. Bacterial Vaginosis. .
- **Secondary Objective:**
  - To assess the clinical safety of *Pushyanug Churna* in the management of *Swetapradara* (Leuorrhoea) w.s.t. Bacterial Vaginosis.
  - To assess the clinical safety of *Pushyanug Churna* on quality of life of the women with *Swetapradara* (Leuorrhoea) w.s.t. Bacterial Vaginosis.

#### 2. Study Design: Prospective interventional single arm multi centre clinical trial.

#### 3. Sample Size: 80 (40 in each centre)

#### 4. Duration of Study : 2 Years

#### 5. Interventions : *Pushyanug Churna*

#### 6. Participating centre along with PI :

S. No.	Name of the Participating Centre	Name of PI
1.	CARICD, New Delhi	Dr. Seema Jain
2.	RARIMCH, Nagpur	Dr. Savita Sharma

#### 7. Date of IEC approval:

S. No.	Name of the Participating Centre	Date of IEC approval
1.	CARICD, New Delhi	27 <sup>th</sup> August, 2018
2.	RARIMCH, Nagpur	28 <sup>th</sup> September, 2018

#### 8. CTRI Registration (for clinical trials) : CTRI/2018/07/014717

**9. Date of initiation :**

S. No.	Name of the Participating Centre	Date of initiation
1.	CARICD, New Delhi	3 <sup>rd</sup> April, 2018
2.	RARIMCH, Nagpur	8 <sup>th</sup> May, 2018

**10. Status of the project during reporting period:****Table – 33: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	CARICD, New Delhi	40	37	03	00
2.	RARIMCH, Nagpur	34	24	07	03
	<b>Total</b>	<b>74</b>	<b>61</b>	<b>10</b>	<b>03</b>

**11. Summary of Project:** The study is going on.**4.1.19 Clinical evaluation of Drakshavaleha in the management of Pandu (Iron Deficiency Anaemia)****1. Objectives :**

- **Primary objective** - To assess the clinical efficacy of Draksha awaleha in the management of Pandu (Iron Deficiency Anaemia)
- **Secondary objective** - To assess the clinical safety of Draksha awaleha in the management of Pandu (Iron Deficiency Anaemia)

**2. Study Design :** Interventional**3. Sample Size :** 60**4. Duration of Study :** 2 Years**5. Interventions :** Drakshawleha**6. Participated centre along with PI :**

S.No.	Name of the Participating Centre	Name of PI
1.	RARIND, Mandi	Dr. Vikas Nariyal

**7. Date of IEC approval:**

S.No.	Name of the Participating Centre	Date of IEC approval
1.	RARIND, Mandi	21 <sup>st</sup> July, 2018

**8. CTRI Registration (for clinical trials) :** CTRI/2018/08/015146**9. Date of initiation :**

S.No.	Name of the Participating Centre	Date of Initiation
1.	RARIND, Mandi	5 <sup>th</sup> October, 2018



## 10. Current status :

**Table - 34: Status of project along with participating Centers**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	RARIND, Mandi	34	20	14	0

## 11. Summary of the Project: Study is in progress.

### 4.1.20 Clinical evaluation of Drakshasava in the management of Pandu (Iron Deficiency Anaemia)

#### 1. Objectives :

- **Primary objective**-To assess the clinical efficacy of Drakshasava in the management of Pandu (Iron Deficiency Anaemia)
- **Secondary objective**-To assess the clinical safety of Drakshasava in the management of Pandu (Iron Deficiency Anaemia)

#### 2. Study Design : Interventional

#### 3. Sample Size : 60

#### 4. Duration of Study : 2 Years

#### 5. Interventions : Drakshasava

#### 6. Participated centre along with PI :

S. No.	Name of the Participating Centre	Name of PI
1.	RARIECD, Jaipur	Dr. Monika Kumari

#### 7. Date of IEC approval:

S.No.	Name of the Participating Centre	Date of IEC approval
1.	RARIECD, Jaipur	7 <sup>th</sup> August, 2018

#### 8. CTRI Registration (for clinical trials) : CTRI/2018/08/015485

#### 9. Date of initiation :

S.No.	Name of the Participating Centre	Date of initiation
1.	RARIECD, Jaipur	17 <sup>th</sup> September, 2018

## 10. Current Status :

**Table -35: Status of project along with participating Centers**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	RARIED, Jaipur	48	35	4	9

## 11. Summary of the Project: Study is in progress.



#### 4.1.21 Clinical Evaluation of Eladi Churna and Draksharishta in the management of Kasa (Stable Chronic Bronchitis)

##### 1. Objectives :

- **Primary objective**-To evaluate and validate the clinical efficacy of *Eladi Churna* and *Draksharishta* in the management of *Kasa* (Stable Chronic Bronchitis)
- **Secondary objective**-To evaluate the safety of *Eladi Churna* and *Draksharishta* in the management of *Kasa* (Stable Chronic Bronchitis)

##### 2. Study Design : Interventional

##### 3. Sample Size: 130 (65 at each centre)

##### 4. Duration of Study : 1 Year

##### 5. Interventions : Eladi Churna and Draksharishta

##### 6. Participated centre along with PI :

S.No.	Name of the Participating Centre	Name of PI
1.	CARIRD, Patiala	Dr. Harbans Singh
2.	CARIDD, Kolkata	Dr. Rohit Kumar Ravte

##### 7. Date of IEC approval:

S.No.	Name of the Participating Centre	Date of IEC approval
1.	CARIRD, Patiala	9 <sup>th</sup> May, 2018
2.	CARIDD, Kolkata	17 <sup>th</sup> April, 2018

##### 8. CTRI Registration (for clinical trials) : CTRI/2018/07/014714

##### 9. Date of initiation :

S. No.	Name of the Participating Centre	Date of initiation
1.	CARIRD, Patiala	3 <sup>rd</sup> December, 2018
2.	CARIDD, Kolkata	27 <sup>th</sup> December, 2018

##### 10. Current status :

**Table - 36: Status of project along with participating Centers**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	CARIRD, Patiala	65	63	02	00
2.	CARIDD, Kolkata	65	40	19	6
	<b>Total</b>	<b>130</b>	<b>103</b>	<b>21</b>	<b>6</b>

##### 11. Summary of the Project: Study is in progress.





#### 4.1.22 Clinical Evaluation of Varunadi Kwath Churna and Apamarga Kshara in the management of Mutrashmari (urolithiasis)

##### 1. Objectives :

- **Primary Objectives:** To validate the therapeutic efficacy of *Varunadi Kwath Churna* and *Apamarga Kshara* in the management of *Mutrashmari* (Urolithiasis).
- **Secondary Objectives:** To assess the clinical safety of *Varunadi Kwath Churna* and *Apamarga Kshara* in the management of *Mutrashmari* (Urolithiasis).

##### 2. Study Design : Interventional

##### 3. Sample Size : 75

##### 4. Duration of Study: 2 Years

##### 5. Interventions: Varunadi Kwath Churna and Apamarga Kshara

##### 6. Participating centre along with PI:

S.No.	Name of the Participating Centre	Name of PI
1.	RARIUD, Jammu	Dr. Aaditya B. Shah

##### 7. Date of IEC approval:

S.No.	Name of the Participating Centre	Date of IEC approval
1.	RARIUD, Jammu	1 <sup>st</sup> October, 2018

##### 8. CTRI Registration (for clinical trials) : CTRI/2018/11/016388

##### 9. Date of initiation:

S.No.	Name of the Participating Centre	Date of initiation
1.	RARIUD, Jammu	19 <sup>th</sup> May, 2019

##### 10. Current status:

**Table – 37: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	RARIUD, Jammu	09	08	01	00

##### 11. Summary of Project: Study is in progress.

#### 4.1.23 Clinical evaluation of Shadbindu Taila Nasya and Chitraka Haritaki in the management of Pinasa (Chronic Rhinosinusitis)

##### 1. Objectives :

- **Primary objective-** To validate the clinical efficacy of Shadbindu Taila Nasya and Chitraka Haritaki in the management of Pinasa (Chronic Rhinosinusitis)



- **Secondary objective-** To evaluate the safety of Shadbindu Taila Nasya and Chitraka Haritaki in the management of Pinasa (Chronic Rhinosinusitis)

2. **Study Design :** Interventional

3. **Sample Size :** 120 (60 at each centre)

4. **Duration of Study :** 1 Year

5. **Interventions :** Shadbindu Taila Nasya and Chitraka Haritaki

6. **Participated centre along with PI :**

S. No.	Name of the Participating Centre	Name of PI
1.	CARICD, New Delhi	Dr. Shweta Mata
2.	CARIRD, Patiala	Dr. Harbans Singh

7. **Date of IEC approval:**

S. No.	Name of the Participating Centre	Date of IEC approval
1.	CARICD, New Delhi	25 <sup>th</sup> October, 2017
2.	CARIRD, Patiala	22 <sup>nd</sup> March, 2019

8. **CTRI Registration (for clinical trials) :** CTRI/2019/04/018509

9. **Date of initiation :**

S. No.	Name of the Participating Centre	Date of initiation
1.	CARICD, New Delhi	8 <sup>th</sup> July, 2019
2.	CARIRD, Patiala	29 <sup>th</sup> August, 2019

10. **Current status :**

**Table - 38: Status of project along with participating Centers**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	CARICD, New Delhi	35	33	1	1
2.	CARIRD, Patiala	31	29	0	2
	<b>Total</b>	<b>66</b>	<b>62</b>	<b>1</b>	<b>3</b>

11. **Summary of the Project:** Study is in progress.

#### 4.1.24 Clinical Study on Efficacy and Safety of an Ayurvedic Formulation Kutajavleha in the management of Grahani Roga

1. **Objectives :**

- **Primary Objectives:** To evaluate the efficacy & Safety of an Ayurvedic Formulation 'Kutajavaleha' in the management of *Grahani Roga*.

2. **Study Design :** Interventional



3. **Sample Size** : 80 (40 at each centre)

4. **Duration of Study**: 2 Years

5. **Interventions**: Kutajavaleha

6. **Participating centre along with PI** :

S.No.	Name of the Participating Centre	Name of PI
1.	RARIGID, Guwahati	Dr. P.L. Bharti
2.	RARIID, Patna	Dr. Deepika Tewari

7. **Date of IEC approval**:

S.No.	Name of the Participating Centre	Date of IEC approval
1.	RARIGID, Guwahati	9 <sup>th</sup> August, 2018
2.	RARIID, Patna	15 <sup>th</sup> January, 2019

8. **CTRI Registration (for clinical trials)** : CTRI/2019/01/017277

9. **Date of initiation** :

S.No.	Name of the Participating Centre	Date of initiation
1.	RARIGID, Guwahati	2 <sup>nd</sup> August, 2019
2.	RARIID, Patna	29 <sup>th</sup> August, 2019

10. **Current status** :

**Table- 39: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	RARIGID, Guwahati	35	20	04	11
2.	RARIID, Patna	32	13	06	13
	<b>Total</b>	<b>67</b>	<b>33</b>	<b>10</b>	<b>24</b>

11. **Summary of Project**: Study is in progress.

#### 4.1.25 Clinical evaluation of Pathyadi Kwatha and Anu Taila Nasya in the management of Ardhavabhedaka (Migraine)

1. **Objectives**:

- **Primary Objectives**: To assess the clinical efficacy of Pathyadi Kwatha and Anu Taila Nasya in the management of Ardhavabhedaka (Migraine).
- **Secondary Objectives**: To assess the clinical safety of Pathyadi Kwatha and Anu Taila Nasya in the management of Ardhavabhedaka (Migraine).

2. **Study Design** : Interventional open label



3. **Sample Size** : 120 (60 at each centre)
4. **Duration of Study:** 2 years
5. **Interventions** : Pathyadi kwatha and Anu Taila
6. **Participating centre along with PI:**

S. No.	Name of the participating centre	Name of PI
1.	RARIMD, Bengaluru	Dr. Srinibash Sahoo
2.	CARICD, New Delhi	Dr. Kishore Patel

7. **Date of IEC Approval**

S. No.	Name of the participating centre	Date of IEC Approval
1.	RARIMD, Bengaluru	3 <sup>rd</sup> July, 2019
2.	CARICD, New Delhi	2 <sup>nd</sup> April, 2019

8. **CTRI Registration/Reference (for clinical trials)** : CTRI/2019/07/020392

9. **Date of initiation:**

S. No.	Name of the participating centre	Date of initiation
1.	RARIMD, Bengaluru	30 <sup>th</sup> August, 2019
2.	CARICD, New Delhi	3 <sup>rd</sup> September, 2019

10. **Current status:**

**Table- 40: Status of projects along with participating centres**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	Drop outs	No. of cases continued
1.	RARIMD, Bengaluru*	19	04	04	11
2.	CARICD, New Delhi	20	08	01	11
<b>Total</b>		<b>39</b>	<b>12</b>	<b>05</b>	<b>22</b>

\*Site: NIMHANS Bengaluru

11. **Summary:** Study is in Progress.

**4.1.26 Clinical Evaluation of Chitraka Haritaki and Lavangadi Vati in the management of Kaphaj Kasa (Stable Chronic Bronchitis)**

1. **Objectives :**

- **Primary objective-** To evaluate and validate the clinical efficacy of Chitraka Haritaki and Lavangadi Vati in the management of Kaphaj Kasa (Stable Chronic Bronchitis)
- **Secondary objective-** To evaluate the safety of Chitraka Haritaki and Lavangadi Vati in the management of Kaphaj Kasa (Stable Chronic Bronchitis)



2. **Study Design** : Interventional
3. **Sample Size**: 120 (60 at each centre)
4. **Duration of Study** : 1 Year
5. **Interventions** : Chitraka Haritaki and Lavangadi Vati
6. **Participated centre along with PI** :

S. No.	Name of the Participating Centre	Name of PI
1.	CARIRD, Patiala	Dr. Harbans Singh
2.	CARIC, Mumbai	Dr. Manohar S. Gundeti

7. **Date of IEC approval**:

S. No.	Name of the Participating Centre	Date of IEC approval
1.	CARIRD, Patiala	22 <sup>nd</sup> March, 2019
2.	CARIC, Mumbai	9 <sup>th</sup> February, 2019

8. **CTRI Registration (for clinical trials)** : CTRI/2019/07/020214

9. **Date of initiation** :

S. No.	Name of the Participating Centre	Date of initiation
1.	CARIRD, Patiala	3 <sup>rd</sup> September, 2019
2.	CARIC, Mumbai	Project not initiated

10. **Current status** :

**Table -41: Status of project along with participating Centers**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	CARIRD, Patiala	37	19	3	15

11. **Summary of the Project**: Study is in progress.

#### 4.1.27 Clinical evaluation of Agastya Haritaki Rasayana and Apamarga Kshara in the management of Mild Stable Bronchial Asthma (Tamaka Shwasa)

1. **Objectives**:

- **Primary Objective** - To evaluate the efficacy of Agastya Haritaki Rasayana and Apamarga Kshara in Mild Stable Bronchial Asthma.
- **Secondary Objectives** - To evaluate the safety of Agastya Haritaki Rasayana and Apamarga Kshara in the patients of Mild Stable Bronchial Asthma.

2. **Study Design**: Interventional

3. **Sample Size**: 120 (60 at each Centre)



4. **Duration of Study:** 2 years

5. **Interventions:** Agastya Haritaki Rasayana and Apamarga Kshara

6. **Participated centre along with PI:**

S.No.	Name of the Participating Centre	Name of PI
1.	CARIRD, Patiala	Dr. Harbans Singh
2.	RARIND, Mandi	Dr. Vikas Nariyal

7. **Date of IEC approval:**

S.No.	Name of the Participating Centre	Date of IEC approval
1.	CARIRD, Patiala	22 <sup>rd</sup> March, 2019
2.	RARIND, Mandi	17 <sup>th</sup> December, 2018

8. **CTRI Registration (for clinical trials):** CTRI/2019/07/020213

9. **Date of initiation:**

S.No.	Name of the Participating Centre	Date of initiation*
1.	CARIRD, Patiala	18 <sup>th</sup> October, 2019
2.	RARIND, Mandi	4 <sup>th</sup> December, 2019

8. **Current status:**

**Table - 42: Status of project along with participating Centres**

S.No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	CARIRD, Patiala	25	16	00	09
2.	RARIND, Mandi	06	02	00	04
<b>Total</b>		<b>31</b>	<b>18</b>	<b>00</b>	<b>13</b>

11. **Summary of Project:** Study is ongoing.

#### 4.1.28 Clinical evaluation of Jirakadyarishta in the management of Grahani

1. **Objectives :**

- **Primary objective:** To evaluate the clinical efficacy of Jirakadyarishta in the Management of Grahani
- **Secondary Objective:** To evaluate the clinical safety of Jirakadyarishta in the Management of Grahani

2. **Study Design :** Interventional, open label

3. **Sample Size :** 100 (50 at each centre)

4. **Duration of Study:** 2 Years



5. **Interventions:** Jirakadyarishta

6. **Participating centre along with PI :**

S.No.	Name of the Participating Centre	Name of PI
1.	RARIGID, Guwahati	Dr. Ekta
2.	CARIHD, Bhubaneswar	Dr. K. K. Ratha

7. **Date of IEC approval:**

S.No.	Name of the Participating Centre	Date of IEC approval
1.	RARIGID, Guwahati	30 <sup>th</sup> April, 2019
2.	CARIHD, Bhubaneswar	22 <sup>nd</sup> June, 2019

8. **CTRI Registration (for clinical trials) :** CTRI/2019/08/020763

9. **Date of initiation :**

S.No.	Name of the Participating Centre	Date of initiation
1.	RARIGID, Guwahati	24 <sup>th</sup> December, 2019
2.	CARIHD, Bhubaneswar	16 <sup>th</sup> January, 2020

10. **Current status :**

**Table – 43: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	RARIGID, Guwahati	05	00	01	04
2.	CARIHD, Bhubaneswar	07	00	05	02
<b>Total</b>		<b>12</b>	<b>00</b>	<b>06</b>	<b>06</b>

11. **Summary of Project:** Study is in progress.

**4.1.29 Clinical evaluation of Mustakarishtha in the management of Grahani**

1. **Objectives :**

- **Primary Objectives:** To evaluate the clinical efficacy of *Mustakarishtha* in the Management of Grahani
- **Secondary Objectives:** To evaluate the clinical safety of *Mustakarishtha* in the Management of Grahani

2. **Study Design :** Interventional, open label

3. **Sample Size :** 100 (50 at each centre)

4. **Duration of Study:** 2 Years

**5. Interventions: Mustakarishtha****6. Participating centre along with PI :**

S.No.	Name of the Participating Centre	Name of PI
1.	RARIGID, Guwahati	Dr. Jeuti Rani Das
2.	CARIHD, Bhubaneswar	Dr. Gurucharan Bhuyan

**7. Date of IEC approval:**

S.No.	Name of the Participating Centre	Date of IEC approval
1.	RARIGID, Guwahati	30 <sup>th</sup> April, 2019
2.	CARIHD, Bhubaneswar	24 <sup>th</sup> June, 2019

**8. CTRI Registration (for clinical trials) :** CTRI/2019/09/021371**9. Date of initiation :**

S.No.	Name of the Participating Centre	Date of initiation
1.	RARIGID, Guwahati	4 <sup>th</sup> January, 2020
2.	CARIHD, Bhubaneswar	20 <sup>th</sup> January, 2020

**10. Current status :****Table -44: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	RARIGID, Guwahati	05	00	00	05
2.	CARIHD, Bhubaneswar	05	00	00	05
<b>Total</b>		<b>10</b>	<b>00</b>	<b>00</b>	<b>10</b>

**11. Summary of Project:** Study is in progress.**4.1.30 Randomised Placebo Controlled Double Blind Clinical Trial on the Efficacy of AYUSH MANAS in the management of Smriti Daurbalya (Cognitive Deficit)****1. Objectives :**

- **Primary Objectives:** To assess the clinical efficacy of AYUSHMANAS in the management of Smriti Daurbalya (CD)
- **Secondary Objectives:** To assess the clinical safety of AYUSHMANAS in the children suffering from Smriti Daurbalya (CD)

**2. Study Design :** Double blind randomized placebo controlled trial**3. Sample Size :** 150 patients (75 in each group)**4. Duration of Study:** 3 Years





5. **Interventions:** AYUSH MANAS and Placebo

6. **Participating centre along with PI :**

S.No.	Name of the Participating Centre	Name of PI
1.	RARIMD, Bengaluru	Dr. G. V. Ramana

7. **Date of IEC approval:**

S.No.	Name of the Participating Centre	Date of IEC approval
1.	RARIMD, Bengaluru	20 <sup>th</sup> November, 2017

8. **CTRI Registration (for clinical trials) :** CTRI/2019/07/020324

9. **Date of initiation :**

S.No.	Name of the Participating Centre	Date of initiation
1.	RARIMD, Bengaluru	4 <sup>th</sup> Jan, 2020

10. **Current status :**

**Table – 45: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	RARIMD , Bengaluru	25	00	00	25

11. **Summary of Project:** Study is in progress.

#### 4.1.31 Clinical evaluation of Satavari Guda and Ashokarishta in the management of Abnormal Uterine Bleeding (Asrigdara)

1. **Objective:**

- **Primary Objective:** To evaluate the therapeutic efficacy of Satavari Guda and Ashokarishta in the management of Abnormal Uterine Bleeding (Asrigdara)
- **Secondary Objective:**
  - To assess the clinical safety of Satavari Guda and Ashokarishta in the management of Abnormal Uterine Bleeding (Asrigdara)
  - To assess the changes in Psychological General Well Being Index (PGWBI) of subjects.

2. **Study Design:** Single Arm Prospective Interventional Clinical Trial

3. **Sample Size:** 80 (40 in each centre)

4. **Duration of Study :** 2 Year

5. **Interventions :** *Shatavari Guda and Ashokarishta*

6. **Participating centre along with PI :**



S. No.	Name of the Participating Centre	Name of PI
1.	CARIRD, Patiala	Dr. Rinku Tomar
2.	RARILSD, Trivandrum	Dr. Emy S Surendran

#### 7. Date of IEC approval: -

S. No.	Name of the Participating Centre	Date of IEC approval
1.	CARIRD, Patiala	22 <sup>nd</sup> March, 2019
2.	RARILSD, Trivandrum	30 <sup>th</sup> March, 2019

#### 8. CTRI Registration (for clinical trials) : CTRI/2019/07/020119

#### 8. Date of initiation :

S. No.	Name of the Participating Centre	Date of initiation
1.	CARIRD, Patiala	20 <sup>th</sup> January, 2020
2.	RARILSD, Trivandrum	10 <sup>th</sup> March, 2020

#### 9. Status of the project during reporting period:

**Table – 46: Status of project along participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	CARIRD, Patiala	06	0	01	05
2.	RARILSD, Trivandrum	02	0	0	02
<b>Total</b>		<b>08</b>	<b>0</b>	<b>01</b>	<b>07</b>

#### 11. Summary of Project: The study is ongoing.

#### 4.1.32 Clinical evaluation of the efficacy of Pushyanuga Churna and Usheerasava in the Management of Abnormal uterine bleeding (Asrigdara)

##### 1. Objectives

- **Primary Objective:** To evaluate the therapeutic efficacy of *Pushyanug Churna* and *Usheerasava* in the management of Abnormal Uterine Bleeding (Asrigdara)
- **Secondary Objective:**
  - To assess the clinical safety of *Pushyanug Churna* and *Usheerasava* in the management of Abnormal Uterine Bleeding (Asrigdara).
  - To assess the changes in Psychological General Well Being Index (PGWBI) of subjects.

##### 2. Study Design: Single arm prospective interventional clinical trial.

##### 3. Sample Size: 80 (40 in each centre)

##### 4. Duration of Study : 2 Years



5. **Interventions :** *Pushyanug Churna* and *Usheerasava*

6. **Participating centre along with PI :**

S. No.	Name of the Participating Centre	Name of PI
1.	RARIND, Mandi	Dr. Anubha Chandla
2.	RARIDD, Gwalior	Dr. Neelam Singh

7. **Date of IEC approval:**

S. No.	Name of the Participating Centre	Date of IEC approval
1.	RARIND, Mandi	9 <sup>th</sup> April, 2019
2.	RARIDD, Gwalior	18 <sup>th</sup> April, 2019

8. **CTRI Registration (for clinical trials) :** CTRI/2019/06/019802

9. **Date of initiation :**

S. No.	Name of the Participating Centre	Date of initiation
1.	RARIND, Mandi	15.1.2020
2.	RARIDD, Gwalior	12.03.2020

10. **Status of the project during reporting period:**

**Table – 47: Status of project along participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	RARIND, Mandi	09	0	02	07
2.	RARIDD, Gwalior	01	0	0	01
<b>Total</b>		<b>10</b>	<b>0</b>	<b>02</b>	<b>08</b>

11. **Summary of Project:** The study is ongoing.

#### 4.1.33 Clinical Safety and efficacy of Triphala Ghrita and Anu Taila in the management of Dry Age Related Macular Degeneration(Jarajanya Drishtigata Roga)

##### 1. Objective

- **Primary objective:** To assess clinical efficacy of Triphala Ghrita and Anu Taila in the management of Dry Age Related Macular Degeneration (Jarajanya Drishtigata Roga)
- **Secondary Objective:** To assess the Clinical safety of Triphala Ghrita and Anu Taila in the management of Dry Age Related Macular Degeneration (Jarajanya Drishtigata Roga)

2. **Study Design** : Interventional
3. **Sample size** : 80 (40 at each centre)
4. **Duration of Study** : 2 years
5. **Intervention** : Triphala Ghrita & Anu taila

**6. Participated centre along with PI :**

S.No.	Name of the participating centre	Name of PI
1.	CARICD, New Delhi	Dr. Nandini Jadhav
2.	RARIED, Lucknow	Dr. Krishna Kumar V.,

**7. Date of IEC approval:**

S.No.	Name of the participating centre	Date of IEC approval
1.	CARICD, New Delhi	16 <sup>th</sup> July, 2019
2.	RARIED, Lucknow	12 <sup>th</sup> April, 2019

**8. CTRI Registration/Reference (for clinical trials):** CTRI/2019/06/019667**9. Date of initiation :**

S.No.	Name of the participating centre	Date of initiation
1.	CARICD, New Delhi	5 <sup>th</sup> February, 2020
2.	RARIED, Lucknow	To be initiated

**10. Current Status :****Table - 48: Status of projects along with participating centres**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	CARICD, New Delhi	03	0	0	03
2.	RARIED, Lucknow	0	0	0	0
<b>Total</b>		03	0	0	03

**11. Summary of Project:** Study under progress.**4.1.34 Clinical Evaluation of Narikela Lavana and Amalakyadi Churna in the management of Amlapitta (Functional Dyspepsia)****1. Objectives :**

- **Primary objective-** Clinical efficacy of Narikela Lavana and Amalakyadi Churna in the management of Amlapitta (Functional Dyspepsia)
- **Secondary objective-** Clinical safety of Narikela Lavana and Amalakyadi Churna in the management of Amlapitta (Functional Dyspepsia)

**2. Study Design :** Interventional**3. Sample Size:** 110 (55 at each centre)**4. Duration of Study :** 1 Year**5. Interventions :** Narikela Lavana and Amalkyadi Churna



## 6. Participated centre along with PI :

S. No.	Name of the Participating Centre	Name of PI
1.	RARIGID, Guwahati	Dr. Ekta
2.	CARIHD, Bhubaneswar	Dr. Ashok Kumar Panda

## 7. Date of IEC approval:

S. No.	Name of the Participating Centre	Date of IEC approval
1.	RARIGID, Guwahati	1 <sup>st</sup> May, 2019
2.	CARIHD, Bhubaneswar	22 <sup>nd</sup> June, 2019

## 8. CTRI Registration (for clinical trials) : CTRI/2019/09/021133

## 9. Date of Initiation :

S. No.	Name of the Participating Centre	Date of Initiation
1.	RARIGID, Guwahati	28 <sup>th</sup> February, 2020
2.	CARIHD, Bhubaneswar	3 <sup>rd</sup> February, 2020

## 10. Current status :

**Table -49: Status of project along with participating Centers**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	RARIGID, Guwahati	1	0	0	1
2.	CARIHD, Bhubaneswar	4	0	1	3
<b>Total</b>		<b>5</b>	<b>0</b>	<b>1</b>	<b>4</b>

## 11. Summary of the Project: Study is in progress.

### 4.1.35 Clinical evaluation of Panchatikta Ghrita and Nalpamaradi Taila in the management of Vicharchika (Eczema)

#### 1. Objectives:

- **Primary Objective** - To evaluate the clinical efficacy of Panchatikta Ghrita and Nalpamaradi taila in the management of Vicharchika (Eczema)
- **Secondary Objectives** - To evaluate the safety of Panchatikta Ghrita and Nalpamaradi taila in patients suffering with Vicharchika (Eczema)

#### 2. Study Design: Interventional

#### 3. Sample Size: 120

#### 4. Duration of Study: 2 years



5. **Interventions:** Panchatikta Ghrita and Nalpamaradi Taila

6. **Participated centre along with PI:**

S.No.	Name of the Participating Centre	Name of PI
1.	RARISD, Vijaywada	Dr. Midhuna Mohan K

7. **Date of IEC approval:**

S.No.	Name of the Participating Centre	Date of IEC approval
1.	RARISD, Vijayawada	1 <sup>st</sup> August, 2019

8. **CTRI Registration (for clinical trials):** CTRI/2019/12/022236

9. **Date of initiation:**

S.No.	Name of the Participating Centre	Date of initiation
1.	RARISD, Vijayawada	18 <sup>th</sup> February, 2020

10. **Current status:**

**Table - 50: Status of project along with participating Centres**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	RARISD, Vijayawada	02	00	01	01

11. **Summary of Project:** Study is ongoing.

#### 4.1.36 Evaluation of Ayush-SR Tablet in Occupational Stress among IT professionals –A Randomized double blind placebo controlled clinical study.

1. **Objectives**

- **Primary Objective:** To assess the clinical efficacy of AYUSH –SR in patients suffering with occupational stress.
- **Secondary Objective:** To assess the safety of Ayurvedic intervention in patients suffering with occupational stress.

2. **Study Design:** Randomised double blind placebo control trial

3. **Sample Size:** 100 (50 in each group)

4. **Duration of Study :** 3 years

5. **Interventions :** Ayush-SR and Placebo tablets

6. **Participating centre along with PI :**

S. No.	Name of the Participating Centre	Name of PI
1.	ACAMH&NS,Bengaluru	Dr. G.V Ramana



## 7. Date of IEC approval:

S. No.	Name of the Participating Centre	Date of IEC approval
1.	ACAMH&NS, Bengluru	22 <sup>nd</sup> November, 2017

## 8. CTRI Registration (for clinical trials) : CTRI/2019/08/020798

## 9. Date of initiation :

S. No.	Name of the Participating Centre	Date of initiation
1.	ACAMH&NS, Bengluru	30 <sup>th</sup> January, 2020

## 10. Status of the project during reporting period:

**Table – 51: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	ACAMH & NS, Bengluru	04	0	0	04

## 11. Summary of Project: Study is in progress.

### 4.1.37 Clinical evaluation of Panchatikta Ghrita & Nalpamardi Taila in the management of Psoriasis.

#### 1. Objectives:

- **Primary objectives** - To evaluate the clinical efficacy of Panchatikta Ghrita & Nalpamardi Taila in the management of Psoriasis.
- **Secondary objectives** - To evaluate the safety of Panchatikta Ghrita & Nalpamardi Taila in the management of Psoriasis.

2. **Study Design** : Interventional open label

3. **Sample Size** : 120 (60 at each centre)

4. **Duration of Study:** 2 years

5. **Interventions** : Panchatikta Ghrita & Nalpamardi Taila

#### 6. Participating centre along with PI:

S. No.	Name of the participating centre	Name of PI
1.	RARISD, Ahmedabad	Dr. Hetalben Amin
2.	RARISD, Vijaywada	Dr. Anumol. K.

**7. Date of IEC Approval**

S. No.	Name of the participating centre	Date of IEC Approval
1.	RARISD, Ahmedabad	8 <sup>th</sup> August, 2019
2.	RARISD, Vijaywada	1 <sup>st</sup> August, 2019

**8. CTRI Registration/Reference (for clinical trials) : CTRI/2020/01/022844****9. Date of initiation:**

S. No.	Name of the participating centre	Date of initiation
1.	RARISD, Ahmedabad	18 <sup>th</sup> March, 2020
2.	RARISD, Vijayawada	To be initiated

**10. Current status:****Table – 52: Status of projects along with participating centres**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	Drop outs	No. of cases continued
1.	RARISD, Ahmedabad	01	00	00	01
2.	RARISD, Vijayawada	To be initiated			

**11. Summary:** Study is in Progress.**4.1.38 Clinical evaluation of Jatiphaladya Churna & Chitrakadi Gutika in the management of Grahani****1. Objectives :**

- **Primary Objectives:** To evaluate the clinical efficacy of Jatiphaladya Churna & Chitrakadi Gutika in the Management of Grahani
- **Secondary Objectives:** To evaluate the clinical safety of Jatiphaladya Churna & Chitrakadi Gutika in the Management of Grahani

**2. Study Design :** Interventional, open label**3. Sample Size :** 100 (50 at each centre)**4. Duration of Study:** 2 Years**5. Interventions:** Jatiphaladya Churna and Chitrakadi Gutika**6. Participating centre along with PI :**

S.No.	Name of the Participating Centre	Name of PI
1.	CARIHD, Bhubaneswar	Dr. Purnendu Panda
2.	RARIGID, Guwahati	Dr. M.N. Suryavanshi





## 7. Date of IEC approval:

S.No.	Name of the Participating Centre	Date of IEC approval
1.	CARIHD, Bhubaneswar	24 <sup>th</sup> June, 2019
2.	RARIGID, Guwahati	30 <sup>th</sup> April, 2019

8. CTRI Registration (for clinical trials) : CTRI/2019/08/020607

## 9. Date of initiation :

S.No.	Name of the Participating Centre	Date of initiation
1.	CARIHD, Bhubaneswar	16 <sup>th</sup> January, 2020
2.	RARIGID, Guwahati	To be initiated

## 10. Current status :

**Table -53: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	CARIHD, Bhubaneswar	03	00	00	03
2.	RARIGID, Guwahati	To be initiated			

11. **Summary of Project:** Study is in progress.

### 4.1.39 Clinical evaluation of Panchatikta ghrita and Gandhakadya Malahara in the management of Vicharchika (Eczema)

#### 1. Objectives:

- **Primary Objective** - To evaluate the clinical efficacy of Panchatikta Ghrita and Gandhakadya Malahara in the management of Vicharchika (Eczema)
- **Secondary Objectives** - To evaluate the safety of Panchatikta Ghrita and Gandhakadya Malahara in patients suffering with Vicharchika (Eczema)

2. **Study Design:** Interventional

3. **Sample Size:** 120

4. **Duration of Study:** 2 years

5. **Interventions:** Panchatikta Ghrita and Gandhakadya Malahara

#### 6. Participated centre along with PI:

S.No.	Name of the Participating Centre	Name of PI
1.	RARISD, Ahmedabad	Dr. Anil Damodar Avhad

**7. Date of IEC approval:**

S.No.	Name of the Participating Centre	Date of IEC approval
1.	RARISD, Ahmedabad	5 <sup>th</sup> February, 2019

**8. CTRI Registration (for clinical trials):** CTRI/2020/02/023491**9. Date of initiation:**

S.No.	Name of the Participating Centre	Date of initiation*
1.	RARISD, Ahmedabad	20 <sup>th</sup> March ,2020

**10. Current status:****Table - 54: Status of project along with participating Centres**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	RARISD, Ahmedabad	04	00	00	04

**11. Summary of Project:** Study is in progress.**4.1.40 Ayurveda Interventions for Cancer: Systematic Review, Meta-analysis; and Revival, Documentation, Validation and analysis of data from practitioners, institutes.****1. Objectives:**

- Systematic Review and Meta-analysis of the published clinical data in view of safety and efficacy and effectiveness of Ayurveda/herbal intervention in the management of cancer either as stand-alone or as add –on to conventional management.
- Documentation, Validation and Analysis of unpublished clinical data from practitioners and institutes engaged in integrative Ayurveda oncology.
- Generate a comprehensive database with extensive data-mining options to serve the cause for setting objective, pragmatic research goals in the field of Ayurvedic cancer research.

**2. Study Design** : Systematic Review, Meta Analysis**3. Duration of Study:** 2 years**4. Interventions** : Ayurveda interventions: oral, topical or formulations or therapies**5. Participating centre along with PI:**

S. No.	Name of the participating centre	Name of PI
1.	CARIC, Mumbai	Dr. Manohar Saheb Gundeti

**6. Date of IEC Approval**

S. No.	Name of the participating centre	Date of IEC Approval
1.	CARIC, Mumbai	9 <sup>th</sup> February, 2019



7. **CTRI Registration/Reference (for clinical trials) :** CTRI/2019/07/020392

8. **Date of initiation:**

S. No.	Name of the participating centre	Date of initiation
1.	CARIC, Mumbai	18 <sup>th</sup> June, 2019

9. **Current status:**

**Table – 55: Status of projects along with participating centres**

S. No.	Participating Centre	Total No. of communications made	Total No. of responses / consent received	Total visit	Total Data acquired
1.	CARIC, Mumbai	86	13	20	491

11. **Summary:** Study is in Progress.

#### 4.2 Knowledge, Attitude and Practice (KAP) Studies

One project on Knowledge, Attitude and Practice study has been completed and 3 projects are going on. Details are as under:-

##### Completed project

#### 4.2.1 Awareness about Neuro Psychiatric disorders among Ayurvedic Doctors –KAP Study

1. **Objectives :**

- **Primary Objectives:** To assess the Knowledge, Attitude and Practice (KAP) with respect to Neuropsychiatric disorders diagnosis, treatment and prevention by Ayurvedic doctors

2. **Study Design :** Online survey questionnaire

3. **Sample Size :** 400 participants

4. **Duration of Study:** 1year

5. **Participating centre along with PI :**

S.No.	Name of the Participating Centre	Name of PI
1.	ACAMH&NS, Bengaluru	Dr. G. V. Raman

6. **Date of IEC approval:**

S.No.	Name of the Participating Centre	Date of IEC approval
1.	ACAMH&NS, Bengaluru	22 <sup>nd</sup> November, 2017

7. **Date of initiation :**

S.No.	Name of the Participating Centre	Date of initiation
1.	ACAMH&NS, Bengaluru	31 <sup>st</sup> December 2018

## 8. Current status :

**Table – 56: Status of project along with participating Centre**

S. No.	Participating Centre	Target	Total Submission till March, 2019
1.	ACAMH & NS, Bengaluru	400	402

## 9. Summary of Project: Study completed.

### Ongoing Projects

#### 4.2.2 Knowledge, Attitude and Practice towards Ayurvedic medicine use among the Diabetics- a cross sectional study in India (KAP)

##### 1. Objectives :

- **Primary objective-** To evaluate the Knowledge, Attitude and Practice (KAP) among the diabetics on Ayurvedic care in all CCRAS centers and Ayurvedic Medical Colleges Hospital of India
- **Secondary objective-** To determine factors influencing the use of Ayurvedic treatment.

##### 2. Study Design : A Cross Sectional

##### 3. Sample Size: 1500 (750 at each centre)

##### 4. Duration of Study : 1 Year

##### 5. Participated centre along with PI :

S. No.	Name of the Participating Centre	Name of PI
1.	RARIED, Jaipur	Dr. S.K. Vedi
2.	RARIMD, Bengaluru	Dr. Shashidhar. H. Doddamani

##### 6. Date of IEC approval:

S. No.	Name of the Participating Centre	Date of IEC approval
1.	RARIED, Jaipur	1 <sup>st</sup> September, 2018
2.	RARIMD, Bengaluru	15 <sup>th</sup> September, 2018

##### 7. Date of initiation :

S. No.	Name of the Participating Centre	Date of initiation
1.	RARIED, Jaipur	28 <sup>th</sup> November, 2018
2.	RARIMD, Bengaluru	28 <sup>th</sup> November, 2018



## 8. Current status :

**Table - 57: Status of project along with participating Centers**

S. No.	Participating Centre	No. of cases enrolled till date	No. of cases enrolled current month
1.	RARIED, Jaipur	441	20
2.	RARIMD, Bengaluru	573	40
<b>Total</b>		<b>1014</b>	<b>60</b>

## 9. Summary of the Project: Study is in progress.

### 4.2.3 A Cross Sectional Study on Knowledge, Attitude and Practice on Skin disorders among Ayurveda and Allopathic Fraternity

#### 1. Objectives :

- **Primary Objectives:** To assess the Knowledge, Attitude and Practice (KAP) with respect to Skin disorders diagnosis, treatment and prevention in Ayurvedic and Allopathy fraternity.

#### 2. Study Design : Online survey questionnaire

#### 3. Sample Size : 300 participants (150 each fraternity)

#### 4. Duration of Study: 6 Month (4 month extension)

#### 5. Participating centre along with PI :

S.No.	Name of the Participating Centre	Name of PI
1.	RARISD, Ahmedabad	Dr. Amin Hetalben

#### 6. Date of IEC approval:

S.No.	Name of the Participating Centre	Date of IEC approval
1.	RARISD, Ahmedabad	2 <sup>nd</sup> November, 2019

#### 7. Date of initiation :

S.No.	Name of the Participating Centre	Date of initiation
1.	RARISD, Ahmedabad	31 <sup>st</sup> December 2019

## 8. Current status :

**Table - 58: Status of project along with participating Centre**

S. No.	Participating Centre	Total Submission
1.	RARISD, Ahmedabad	Ayurveda Fraternity-150 Allopath Fraternity-25

## 11. Summary of Project: Study is in progress.



#### 4.2.4 Consumer perception about Ayurvedic treatment for Skin Disorders: a web based survey of Indian populations

##### 1. Objectives :

- **Primary Objectives:** To document the consumer perception about Ayurvedic treatment for Skin disorders through a web based cross sectional survey of Indian population

##### 2. Study Design : Online survey questionnaire

##### 3. Sample Size : 382 participants

##### 4. Duration of Study: 1 year

##### 5. Participating centre along with PI :

S.No.	Name of the Participating Centre	Name of PI
1.	RARISD, Ahmedabad	Dr. Amin Hetalben

##### 6. Date of IEC approval:

S.No.	Name of the Participating Centre	Date of IEC approval
1.	RARISD, Ahmedabad	2 <sup>nd</sup> November, 2019

##### 7. Date of initiation :

S.No.	Name of the Participating Centre	Date of initiation
1.	RARISD, Ahmedabad	31 <sup>st</sup> December 2019

##### 8. Current status :

**Table - 59: Status of project along with participating Centre**

S. No.	Participating Centre	Total Submission
1.	RARISD, Ahmedabad	105

##### 9. Summary of Project: Study is in progress

#### 4.2.5 A Cross Sectional Study on Knowledge Aptitude and Practice on Gastro-intestinal disorders among Ayurveda and Allopathic fraternity

##### 1. Objectives: To assess the Knowledge, attitude and practice (KAP) with respect to Gastro-intestinal disorders diagnosis, treatment and prevention in Ayurvedic and Allopathy Fraternity.

##### 2. Study Design: Cross-sectional Survey

##### 3. Sample Size: 300

##### 4. Duration of the study: 1 year

##### 5. Participating Centre along with PI:

The study has been initiated at RARIGID, Guwahati and is presently continued from CCRAS hqrs. New Delhi.



PI- Dr Neha Dubey, R.O (Ay.)

Co-I: Dr T. Saketh Ram, RO (Ay.), NIIMH, Hyderabad

Dr Manohar Gundeti, RO (Ay.) I/C, RRAPCARIC, Mumbai

6. **Date of IEC approval:** 10<sup>th</sup> August, 2018

7. **Date of Initiation:** 23<sup>rd</sup> October, 2018

8. **Current status:**

**Table - 60: Status of project along with participating Centre**

S. No.	Participating Centre	No of submissions by Ayurveda Fraternity	No of submissions by Allopathic Fraternity
1.	RARIGID, Guwahati/CCRAS Hqrs.	77	9

9. **Summary of the project:** Study is in progress.

### 4.3 Systematic Review Projects on Ayurveda Interventions in Major Disease areas - An Initiative under CCRAS-IMR

The council has taken initiative as a short term grant under CCRAS-IMR scheme for initiation of projects for Systematic Review and Meta-analysis on Efficacy and Safety of Ayurveda interventions in major diseases/conditions.

In continuation to the above, Council has sanctioned 28 Systematic Review projects so far out of which 20 projects has been registered and 8 projects has been submitted for registration with PROSPERO (International prospective register of systematic reviews, Under NIHS). The status of all these projects is given below:

**Table – 61: Status of Projects**

S. No.	Title of the Project	Institute Involve	Status of the Project	PROSPERO Registration
1.	Ayurvedic treatment in Hemiplegia: A systematic review	NARIP, Cheruthuruthy	On-going	Registered CRD42019131887
2.	Ayurveda interventions for Sciatica: A systematic review	NARIP, Cheruthuruthy	On-going	PROSPERO CRD42019131893
3.	Ayurvedic interventions in Gout: A systematic review	NARIP, Cheruthuruthy	On-going	Submitted to PROSPERO
4.	Ayurveda intervention for Parkinson Disease: A systematic review	NARIP, Cheruthuruthy	On-going	Submitted to PROSPERO
5.	Ayurveda intervention in Iron Deficiency Anemia: A systematic review	NARIP, Cheruthuruthy	On-going	PROSPERO CRD42019131191



6.	Ayurveda management of Fistula in Ano: A systematic review	NARIP, Cheruthuruthy	On-going	PROSPERO CRD42019131911
7.	Systematic review and Meta-analysis of Ayurvedic interventions for Conjunctivitis.	RARIED, Lucknow	On-going	Registered CRD42019129436
8.	Ayurveda Interventions for Diabetic Retinopathy - A Systematic Review	RARIED, Lucknow	On-going	Submitted to PROSPERO
9.	Systematic review and Meta-analysis of Ayurvedic interventions for Rheumatoid Arthritis.	CCRAS Headquarters, New Delhi	On-going	Registered CRD42019133722
10.	Systematic review and Meta-analysis of Ayurvedic interventions for Dysmenorrhea.	CCRAS Headquarters, New Delhi	On-going	Submitted to PROSPERO
11.	Systematic Review of Efficacy and Safety of Ayurveda interventions for Female Infertility	CCRAS Headquarters, New Delhi	On-going	Submitted to PROSPERO
12.	Efficacy and safety of Ayurveda interventions for Sinusitis- A Systematic Review	CCRAS Headquarters, New Delhi	On-going	Registered CRD42018103995
13.	Systematic review and Meta-analysis of Ayurvedic interventions for Urolithiasis.	RARIMD, Bengaluru	On-going	Submitted to PROSPERO
14.	Ayurveda Interventions for Glaucoma- A Systematic Review	RARIMD, Bengaluru	On-going	Registered CRD42019133911
15.	Systematic Review on efficacy of Ayurveda interventions in Bronchial Asthma	RAIFR, Pune	On-going	Registered CRD42019134041
16.	Effectiveness and safety of Ayurveda intervention in children and adolescent with ADHD	CARIC Mumbai	On-going	Registered CRD42019129676
17.	Efficacy and safety of Ayurveda intervention in Essential Hypertension: A systematic review	CARIC Mumbai	On-going	Registered CRD42019123886
18.	Efficacy and safety of Ayurveda interventions for Allergic Rhinitis: a systematic review.	CARIC Mumbai	On-going	Registered CRD42018107035
19.	Efficacy and safety of Ayurveda interventions for Psoriasis: a systematic review	CARIC Mumbai	On-going	Registered CRD42018097298
20.	Ayurveda Interventions for Dry Eye Syndrome - A Systematic Review	CARICD, New Delhi	On-going	Registered CRD42020133825
21.	Ayurveda Interventions for Depression- A Systematic Review	CARICD, New Delhi	On-going	Registered CRD42020139382





22.	Ayurveda Interventions for Anxiety Disorders- A Systematic Review	NIMHANS, Bengaluru	On-going	Registered CRD42019139230
23.	Efficacy and safety of Ayurveda interventions for Polycystic Ovary Syndrome: A Systematic Review	CARIDD, Kolkata	On-going	Registered CRD42019131743
24.	A systematic review of the safety and efficacy of Ayurveda interventions for Hepatitis.	RARC, Agartala	On-going	Registered CRD42019103115
25.	“Efficacy and Safety of Ayurveda interventions for Obesity: A Systematic Review”	RARI, Ranikhet	On-going	Registered CRD42019130104
26.	Ayurveda Interventions for Epilepsy	RARIDD, Gwalior	On-going	Submitted to PROSPERO
27.	Ayurveda Interventions for Diabetes	CARIC, Mumbai	On-going	Submitted to PROSPERO
28.	Ayurveda Interventions for Hypothyroidism	CCRAS Hqrs	On-going	Registered CRD42019144799

#### 4.4 Collaborative Clinical Research Projects

Under collaborative Clinical Research, 1 projects viz. Controlled Clinical Trial to assess the effectiveness of topical application of C I herbal oil on superficial external wound and split thickness skin graft donor's site for surgical wound healing with AIIMS, New Delhi have been completed and 7 projects viz. Clinical study of coded drug in the management of Dengue fever & prevention its complications in collaboration with ICMR; Ayush D for pre-diabetic subjects; Ayush D for Type-II Diabetes Mellitus, Validation and Reliability Testing of Ayurveda Diagnostic Methods, Carctrol S for Cancer Patients, AYUSH-SL for patients of Chronic Lymphodema and Reproductive & Child Health project for Ante-Natal Care with reputed organizations have been going on.

#### Completed Projects

##### 4.4.1. Controlled Clinical Trial to assess the effectiveness of topical application of C I herbal oil on superficial external wound and split thickness skin graft donor's site for surgical wound healing

#### 1. Objectives:

- To compare the healing times of superficial external wounds and STSG donor sites receiving C1 oil with conventional paraffin gauze dressings.
- To compare patients' pain levels of superficial external wounds and STSG donor sites receiving C1 oil with conventional paraffin gauze dressings.
- To compare the incidence of infections of superficial external wounds and STSG donor sites receiving C1 oil with conventional paraffin gauze dressings.
- To determine the wound complications from the use of C1 oil, if any



2. **Study Design** : Randomized controlled trial.

3. **Sample Size** : 50

4. **Duration of Study** : 2 years

1<sup>st</sup> year (phase 1) in STSG donor sites

2<sup>nd</sup> phase in superficial external wounds

5. **Interventions** : Local application of C1 Oil

6. **Participating centre along with PI:**

S. No.	Name of the Participating Centre	Name of PI
1.	Jai Prakash Narayan Apex Trauma Center, (JPNATC), AIIMS, New Delhi	Dr. Maneesh Singhal

7. **Date of IEC approval:**

S. No.	Name of the Participating Centre	Date of IEC approval
1.	Jai Prakash Narayan Apex Trauma Center, (JPNATC), AIIMS, New Delhi	18 <sup>th</sup> August, 2015

8. **CTRI Registration (for clinical trials)** : CTRI/2017/10/010150

9. **Date of initiation:**

S. No.	Name of the Participating Centre	Date of initiation
1.	Jai Prakash Narayan Apex Trauma Center, (JPNATC), AIIMS, New Delhi	1 <sup>st</sup> June, 2016

10. **Current status:**

**Table -62: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	Jai Prakash Narayan Apex Trauma Center, (JPNATC), AIIMS, New Delhi	52	50	02	00

11. **Summary of Project:** The second phase is completed in July 2019.

### Ongoing projects

#### 4.4.2. Evaluation of Add on Efficacy & Safety of an Ayurvedic coded Formulation in the management of Dengue Fever & Prevention of its complications – A Double Blind Clinical Study (Collaborative)

##### 1. Objectives:

- **Primary objectives** - To describe the safety profile in terms of systemic events, unsolicited adverse events and serious adverse events during the trial period.



- **Secondary objectives** - To describe the Hematological, Immunological and any Capillary leak response from the baseline to the end of the drug trial period.
2. **Study Design** : Randomized placebo Controlled trial
  3. **Sample Size** : 250 (75 in each group at Belagavi and 50 in each group at Kolar)
  4. **No. of Groups** : 2
  5. **Duration of Study**: 2 years
  6. **Interventions** : Oral intervention of polyherbal formulation PJ-7: 700mg (2 tablets of 350 mg each) twice daily for 10 days.

**7. Participating centre along with PI:**

S. No.	Name of the Participating Centre	Name of PI
<b>I</b>	<b>Belagavi</b>	
	Shri BMK Ayurveda Mahavidyalaya Belagavi	Dr. B.S. Prasad
	National Institute Traditional Medicine (NITM) Belagavi	Dr. S.L. Hoti
	KLE University's J.N. Medical College	Dr. V.A. Kothiwale
<b>II</b>	<b>Kolar</b>	
	Department of Integrative Medicine, Sri Devaraj Urs Academy and Higher Education and Research , SDUAHER, Kolar	Dr. Neetina kumar Patil

**8. Date of IEC approval:**

S. No.	Name of the Participating Centre	Date of IEC approval
1.	Shri BMK Ayurveda Mahavidyalaya Belagavi	25 <sup>th</sup> March, 2017
2.	Sri Devaraj Urs Academy and Higher Education/Kolar	22 <sup>nd</sup> January, 2018

**9. CTRI Registration (for clinical trials) : CTRI/2017/11/010586**

**10. Date of initiation:**

S. No.	Name of the Participating Centre	Date of initiation
1.	Shri BMK Ayurveda Mahavidyalaya, Belagavi	1 <sup>st</sup> September, 2017
2.	Department of Integrative Medicine, SDUAHER, Kolar	1 <sup>st</sup> August, 2018

**11. Current status :**

**Table -63: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	Drop outs	No. of cases continued
1.	Shri BMK Ayurveda Mahavidyalaya, NITM, JNMC, Belagavi	150	141	09	00
2.	Department of Integrative Medicine, SDUAHER, Kolar	89	87	02	00
3.	Total	239	228	11	00



12. **Summary of Project:** BMK Mahavidyalaya, Belgavi enrolment has been completed in November 2019. Kolar study is in Progress.

#### 4.4.3. A Randomized Placebo Controlled Prospective Phase II Clinical Study of an Ayurvedic Coded Drug 'AYUSH-D' on Glycemic control in Pre-Diabetic Subjects (Collaborative)

##### 1. Objectives:

- **Primary objectives** - To evaluate the clinical efficacy of AYUSH-D as therapy for Glycemic control in the management of Pre-Diabetes.
- **Secondary objectives** - To evaluate the clinical safety of AYUSH-D as therapy for Glycemic control in the management of Pre-Diabetes.

2. **Study Design** : Randomized Double blind placebo controlled Clinical trial

3. **Sample Size** : 264 patients (66{33 in each group} in each center)

4. **No. of Groups** : 2

5. **Duration of Study:** 2½ years

##### 6. Interventions:

- a) **Group 1:** Diet & Lifestyle modification + AYUSH D (2 tablets of 1 gram each thrice daily) before meals.
- b) **Group 2:** Diet & Lifestyle modification + Placebo (2 tablets of 1 gram each thrice daily) before meals.

##### 7. Participating centre along with PI:

S. No.	Name of the Participating Centre	Name of PI
1.	RARIMD, Bengaluru	Dr. Shubhashree M.N.
2.	AIIMS, New Delhi	Dr. Rajesh Khadgawat
3.	RAPA Medical College, Mumbai	Prof. K.R. Kohli
4.	KLEU's Shri BMK Ayurveda Mahavidyalaya, Belgavi	Dr. Basavaraj R. Tubaki

##### 8. Date of IEC approval:

S. No.	Name of the Participating Centre	Date of IEC approval
1.	RARIMD, Bengaluru	15 <sup>th</sup> September, 2017
2.	AIIMS, New Delhi	4 <sup>th</sup> May, 2018
3.	RAPA Medical College, Mumbai	29 <sup>th</sup> November, 2017
4.	KLEU's Shri BMK Ayurveda Mahavidyalaya, Belgavi	21 <sup>st</sup> July, 2017

9. **CTRI Registration (for clinical trials)** : CTRI/2017/11/010716



## 10. Date of initiation:

S. No.	Name of the Participating Centre	Date of initiation
1.	RARIMD, Bengaluru	9 <sup>th</sup> October, 2018
2.	AIIMS, New Delhi	15 <sup>th</sup> October, 2018
3.	RAPA Medical College, Mumbai	20 <sup>th</sup> October, 2018
4.	KLEU's Shri BMK Ayurveda Mahavidyalaya, Belgavi	11 <sup>th</sup> October, 2018

## 11. Current status :

**Table – 64: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	RARIMD, Bengaluru	64	32	05	27
2.	AIIMS, New Delhi	11	06	02	03
3.	RAPA, Medical College, Mumbai	33	12	06	15
4.	KLEU's Shri BMK Ayurveda Mahavidyalaya, Belgavi	66	39	09	18
<b>Total</b>		<b>174</b>	<b>89</b>	<b>22</b>	<b>63</b>

## 12 Summary of Project: Study is in Progress

### 4.4.4. A Randomized Placebo Controlled Prospective Phase II Clinical Study of an Ayurvedic Coded Drug 'AYUSH-D' in the management of Type 2 Diabetes Mellitus as add on Therapy to Metformin (Collaborative)

#### 1. Objectives:

- **Primary objective** - To evaluate the clinical efficacy of AYUSH-D as add on therapy to Metformin for Glycemic control in the management of Type 2 Diabetes Mellitus.
- **Secondary objective** - To evaluate the clinical safety of AYUSH-D as add on therapy to Metformin in Type 2 Diabetes Mellitus.

2. **Study Design** : Randomized Double blind placebo controlled Clinical trial

3. **Sample Size** : 264 (66 in each center and 33 in each group)

4. **No. of Groups** : 2

5. **Duration of Study:** 2½ years

#### 6. Interventions:

a) **Group 1:** Metformin + AYUSH D (2 tablets of 1 gram each thrice daily) before meals.

b) **Group 2:** Metformin + Placebo (2 tablets of 1 gram each thrice daily) before meals.

**7. Participating centre along with PI :**

S. No.	Name of the Participating Centre	Name of PI
1.	RARIMD, Bengaluru	Dr. Shubhashree M.N.
2.	AIIMS, New Delhi	Dr. Rajesh Khadgawat
3.	RAPA Medical College, Mumbai	Prof. K.R. Kohli
4.	RGGPGAC, Paprola	Dr. Vijay Chaudhary

**8. Date of IEC approval:**

S. No.	Name of the Participating Centre	Date of IEC approval
1.	RARIMD, Bengaluru	15 <sup>th</sup> September, 2017
2.	AIIMS, New Delhi	4 <sup>th</sup> May, 2018
3.	RAPA Medical College, Mumbai	29 <sup>th</sup> November, 2017
4.	RGGPGAC, Paprola	16 <sup>th</sup> January, 2018

**9. CTRI Registration (for clinical trials) : CTRI/2017/11/010716**
**10. Date of initiation:**

S. No.	Name of the Participating Centre	Date of initiation
1.	RARIMD, Bengaluru	10 <sup>th</sup> October, 2018
2.	AIIMS, New Delhi	9 <sup>th</sup> October, 2018
3.	RAPA Medical College, Mumbai	17 <sup>th</sup> October, 2018
4.	RGGPGAC, Paprola	10 <sup>th</sup> October, 2018

**11. Current status:**
**Table-65: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	RARIMD, Bengaluru	66	48	12	06
2.	AIIMS, New Delhi	66	53	06	07
3.	RAPA Medical College, Mumbai	54	24	06	24
4.	RGGPGAC, Paprola	43	27	04	12
<b>Total</b>		<b>229</b>	<b>152</b>	<b>28</b>	<b>49</b>

**12. Summary of Project: Study is in Progress**
**4.4.5. Validation and Reliability Testing of Ayurveda Diagnostic Methods**

The First phase of this project will be done in IMR mode and for second phase validation the project will be executed in collaborative mode.



## 1. Objectives :

- i) To develop standardized Ayurvedic Case Taking Protocol (SACTP) in consideration with elements of diagnosis/case recording from Ayurveda and standard health records format(s).
- ii) To develop standard diagnosis protocols for selected diseases frequently managed through Ayurveda.
- iii) To develop interface for integration/ customization and development of diagnosis gadgets which are aptly integrated with latest Information Technology tools such as *Internet of Things (IoT)* for Ayurveda specific diagnostic requirements.

### Deliverables:

- i) Standardized Ayurvedic Case Taking Protocol (SACTP) integrated with Electronic Health Record System for point of care case recoding.
- ii) Norms for reporting about methodologies on “Standardization of Ayurvedic Diagnostics”
- iii) Standardized Diagnostic Protocols for selected diseases frequently managed through Ayurveda.
- iv) Ayurvedic clinical case report(s) /case series portal.
- v) Interface for integration/customization and development of diagnostic gadgets based on Internet of Things.
- vi) Publication of Article(s) in Scientific Journals based on interim developments and finalized work(s)

## 2. Study Design : Tool Development: Validation and Reliability Testing

## 3. Duration of Study : 3 Years

This Project will be carried out in two Phases .The first phase reliability testing, validation will be done at CCRAS institute, and phase two validation will be done in collaborative mode at six identified centers as follows: The first phase validation it is being executed at CCRAS Hqrs and NIIMH Hyderabad. The Hyderabad institution is responsible for development of software for smooth execution of this project.

## 4. Participated center along with PI :

S. No.	Name of the Participating Institutes	Name of the Principal Investigator	CCRAS Institutes	Name of the Co-Investigator of CCRAS
1.	All India Institute of Ayurveda, New Delhi	Dr. V.G. Huddar, Associate Professor	Central Ayurveda Research Institute for Cardiovascular Diseases, New Delhi	Dr. Deepa Makhija, R.O (Ay.)



2.	Pt. Khushilal Sharma Govt. (Autonomous) Ayurveda College & Institute, Bhopal	Prof.Umesh Shukla Principal	Regional Ayurveda Research Institute for Drug Development, Gwalior	Dr. Shyam B. Singh, Research Officer
3.	National Institute of Ayurveda, Jaipur	Dr. H.M.L. Meena, Associate Professor	M.S. Regional Ayurveda Research Institute for Endocrine Disorders, Jaipur	Dr. S.K. VEDI, R.O. (Ay)
4.	Sri Dharmasthala Manjunatheshwara, College of Ayurveda, Karnataka	Dr. Prakash Mangalasseri, Professor	Regional Ayurveda Research Institute for Metabolic Disorders, Bengaluru	Dr. Subhashree M.N. , R.O. (Ay)
5.	Vaidyaratnam P.S. Varier, Ayurveda College Kottakal, Kerala	Dr. Girish K.J, Professor	National Ayurveda Research Institute for Panchakarma, Cheruthuruthy, Kerala	Dr. Shreedipti, R.O. (Ay)
6.	Institute for post- graduation teaching and Research in Ayurveda, Gujarat	Dr. Mandip Goyal, Associate Professor	Regional Ayurveda Research Institute for Skin Disorders (RARISD), Ahmedabad	Dr. Prateek Aggarwal, R.O. (Ay)

5. **Date of Initiation** : 7/06/2018 (CCRAS Hqrs) and for Collaborative centers budget was sanctioned to the nearby CCRAS institutes on 29/03/19

6. **Current status** :

**Table-66: Status of project along with participating Centers**

S. No.	Identified Disease/ Condition	Participating Centre	Status
1.	Twaka Vikara (Skin Diseases)	CCRAS Hq. New Delhi	Proforma Developed 1 <sup>st</sup> Phase of Validation and Reliability testing of developed profoma at 8Clinical Research Institute under CCRAS- completed Data Analysis – Going-On 1 <sup>st</sup> Draft “Ayurveda based Clinical Methods for Diagnosis of Skin Diseases (Twaka Vikara) - Published
		NIIMH, Hyderabad	Development of e-module – Going-on





2.	Pranvahasrotovikara (Shwasa and Kasa)	CCRAS Hq. New Delhi	Proforma Developed 1 <sup>st</sup> Phase of Validation and Reliability testing of developed profoma at 10 Clinical Research Institute under CCRAS- completed Data Analysis – Going-On 1 <sup>st</sup> Draft “Ayurveda based Clinical Methods for Diagnosis of Respiratory Diseases (Pranvahasrotovikara- Shwasa and Kasa) – Near to Completion.
		NIIMH, Hyderabad	Development of e-module – eModule developed
		Collaborating Centres	2 <sup>nd</sup> Phase Validation started
3.	Jawara	CCRAS Hq. New Delhi	Proforma Developed 1 <sup>st</sup> Phase of Validation and Reliability testing of developed profoma at 10 Clinical Research Institute under CCRAS- completed Data Analysis – Going-On 1 <sup>st</sup> Draft “Ayurveda based Clinical Methods for Diagnosis of Jwara- started
		NIIMH, Hyderabad	Development of e-module – eModule developed
		Collaborating Centres	2 <sup>nd</sup> Phase Validation started
4.	Unmada	CCRAS Hq. New Delhi	1 <sup>st</sup> phase of compilation –Done
		NIIMH, Hyderabad	Development of e-module – Not Started
5.	Annavaashrotovikara (Atisara, Pravahika, Grahani, Arsha, Shula)	CCRAS Hq. New Delhi	1 <sup>st</sup> phase of compilation –Done 1 <sup>st</sup> Phase of Validation and Reliability testing of developed profoma at 10 Clinical Research Institute under CCRAS- completed Data Analysis – Going-On Development of e-module – Almost completed
		NIIMH, Hyderabad	Development of e-module – Almost completed



6.	Vatavyadhi	CCRAS Hq. New Delhi	1 <sup>st</sup> phase of compilation –Going On
		NIIMH, Hyderabad	Development of e-module – Not Started
7.	Mutravahashrotovikara	CCRAS Hq. New Delhi	1 <sup>st</sup> phase of compilation –Going On
		NIIMH, Hyderabad	Development of e-module – Not Started
8.	Prameha	CCRAS Hq. New Delhi	1 <sup>st</sup> phase of compilation –Done 1 <sup>st</sup> Phase of Validation and Reliability testing of developed profoma at 10 Clinical Research Institute under CCRAS- Ongoing
		NIIMH, Hyderabad	Development of e-module – Not Started

**11. Summary of the Project:** Study is in progress.

#### 4.4.6. A phase II trial to study efficacy, toxicity and immunomodulatory effect of Carctol-S in high grade serous epithelial ovarian cancer at first serological relapse (Collaborative)

##### 1. Objectives:

###### I. Clinical

- **Primary Objective:** To evaluate the effect of Carctol-S treatment on serum Ca 125 levels in patients with high grade serous epithelial ovarian cancer at first serological relapse.
- **Secondary Objective:**
  - To study toxicity profile of Carctol-S according to NCI CTCAE version 4.03 in patients with high grade serous epithelial ovarian cancer at first serological relapse.
  - To study the quality of life of patients measured at baseline and at 12 weeks, 24 weeks, 36 weeks and 48 weeks after starting the treatment using EORTC QLQ C30 and EORTC QLQ-OV28

###### II. Basic sciences

Immune profiling of Ovarian Cancer patients before Carctol-S treatment (T0), 12 weeks of treatment (T1), 24 weeks of treatment (T2) and at end of treatment i.e. after 48 weeks (T3) with Carctol-S

2. **Study Design** : Phase-II, Prospective, open label interventional clinical trial
3. **Sample Size** : The study is planned according to Simon optimal two-stage design. A total of 35 patients (18 in the first stage and 17 in the second stage of trial) will be recruited.
4. **Duration of Study:** 2 years
5. **Interventions** : CARCTOL- S 2 Capsule (3gms/day) thrice daily



## 6. Participating centre along with PI:

S. No.	Name of the participating centre	Name of PI
1.	Tata Memorial Hospital, ACTREC & RRAP-CARIC Mumbai	Dr. Amita Maheshwari Dr. Shubhada Chiplunkar Dr. Manohar Saheb Gundeti

## 7. Date of IEC Approval

S. No.	Name of the participating centre	Date of IEC Approval
1.	Tata Memorial Hospital, ACTREC & RRAP-CARIC Mumbai	21 <sup>st</sup> January 2019

## 8. CTRI Registration/Reference (for clinical trials) : CTRI/2019/02/017873

## 9. Date of initiation:

S. No.	Name of the participating centre	Date of initiation
1.	Tata Memorial Hospital, ACTREC & RRAP-CARIC Mumbai	30 <sup>th</sup> May, 2019

## 10. Current status:

**Table – 67: Status of projects along with participating centres**

S. No.	Participating Centre	Target	No. of cases enrolled	No. of cases completed	No. of patients withdrawn till date	No. of cases continued
1.	Tata Memorial Hospital ACTREC & RRAP-CARIC, Mumbai	18+17*	12	00	08	04

## 11. Summary: Study is in Progress.

\*Based on the outcome of first 18 participants, rest 17 participants will be enrolled

### 4.4.7. Multi-centric Collaborative Double Blind study on clinical evaluation of AYUSH-SL in chronic Filarial Lymphoedema in patients receiving mass drug administration

#### 1. Objectives :

- **Primary Objectives:** To determine efficacy of AYUSH-SL for reducing filarial lymphoedema in lymphatic filariasis patients receiving MDA treatment.
- **Secondary Objectives:** To evaluate Quality of Life (QoL), Percentage decrease in recurrence of acute episodes and Clinical safety

#### 2. Study Design : Randomized double blind placebo controlled trial



3. **Sample Size :** 180 (60 at each centre)

4. **Duration of Study:** 3 Years

5. **Interventions:** 2 tablets of AYUSH-SL or matching placebo twice a day.

6. **Participating centre along with PI :**

S.No.	Name of the Participating Centre	Name of PI
1.	CARIHD, Bhubaneswar	Dr. G. C. Bhuyan
2.	RARISD, Vijayawada	Dr. G. Babu
3.	Calcutta School of Tropical Medicine(CSTM) in collaboration with CARIDD, Kolkata	Dr. Santanu K Tripathi

7. **Date of IEC approval:**

S.No.	Name of the Participating Centre	Date of IEC approval
1.	CARIHD, Bhubaneswar	22 <sup>nd</sup> June, 2019
2.	RARISD, Vijayawada	10 <sup>th</sup> December, 2016
3.	CSTM, Kolkata	28 <sup>th</sup> October, 2016

8. **CTRI Registration (for clinical trials) :** CTRI/2019/08/020498

9. **Date of initiation :**

S.No.	Name of the Participating Centre	Date of initiation
1.	CARIHD, Bhubaneswar	23 <sup>rd</sup> January, 2020
2.	RARISD, Vijayawada	24 <sup>th</sup> February, 2020
3.	CSTM, Kolkata	To be initiated

10. **Current status :**

**Table -68: Status of project along with participating Centre**

S. No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	CARIHD, Bhubaneswar	10	00	02	08
2.	RARISD, Vijayawada	14	00	01	13
3.	CSTM, Kolkata	-	-	-	-
<b>Total</b>		<b>24</b>	<b>0</b>	<b>3</b>	<b>21</b>

11. **Summary of Project:** Study is in progress.



#### 4.4.8. Feasibility of introducing Ayurveda intervention in Reproductive and Child Health (RCH) in PHCs of selected district (Gadchiroli) of Maharashtra (Effectiveness of Ayurvedic Intervention for Ante-Natal care (Garbhini Paricharya) at Primary Health Care level: A Multi Centre Operational Study)

##### 1. Objectives

###### • Primary

- To study the effectiveness of Ayurvedic interventions on core outcome indicators related to antenatal care like-
  - ❖ Pre-eclampsia/ Eclampsia,
  - ❖ Anemia
  - ❖ Urinary Tract Infection
  - ❖ Nausea/ Vomiting
- To study the effectiveness of Ayurvedic interventions in lowering adverse perinatal and neonatal outcomes like
  - ❖ Intra Uterine Growth Retardation
  - ❖ Number of Stillbirth/ Neonatal Deaths
  - ❖ Premature labour
  - ❖ Low birth weight
  - ❖ Neonatal morbidity like RDS (Respiratory Distress Syndrome)
- To study the effectiveness of Ayurvedic interventions in postnatal outcomes like
  - ❖ Establishment of early and adequate Lactation
  - ❖ Puerperal Sepsis

###### • Secondary

- To study the acceptability of Ayurvedic management during ante natal care and post natal care among the Pregnant women

2. **Study Design:** Prospective cluster randomized intervention trial.

3. **Study site:** 30 PHCs of Gadchiroli District of Maharashtra. The study will be executed through RARIMCH, Nagpur

4. **Sample Size:** 30 PHCs of Gadchiroli = 9,000 pregnant women (Approx. 4500 in each group). Approx. 300 per PHC



- **Group I** (Conventional medicine) = 4500
  - **Group II** (Conventional medicine + Ayurvedic Treatment) = 4500
5. **Duration of Study** : 2 years
6. **Interventions**
- **Ante Natal Care-** AYUSH ADE candy, AYUSH AG tablet & AYUSH GG Tablet
  - **Post Natal Care-** AYUSH BL oil, AYUSH SDM tablet & AYUSH PK Avaleha

7. **Participating centre along with PI**

S. No.	Name of the Participating Centre	Name of PI
1.	RARIMCH, Nagpur	Dr. Prashant Shinde

8. **Date of IEC approval:**

S. No.	Name of the Participating Centre	Date of IEC approval
1.	RARIMCH, Nagpur	13 <sup>th</sup> June, 2019

9. **CTRI Registration (for clinical trials):** CTRI/2019/08/020917

10. **Date of initiation:**

S. No.	Name of the Participating Centre	Date of initiation
1.	RARIMCH, Nagpur	5 <sup>th</sup> November, 2019

11. **Status of the project during reporting period:**

**Table – 69: Status of project along participating Centre**

S.No.	Participating Centre	No. of cases enrolled	No. of cases completed	No. of cases Drop outs	No. of cases continued
1.	RARIMCH, Nagpur	813	000	07	806
2.	Total	813	000	07	806

12. **Summary of Project:** The study is ongoing.



## 5. LITERARY RESEARCH AND DOCUMENTATION PROGRAMME

The Council's Literary Research and Documentation Programme broadly relates to medico-historical studies, transcription, translation and publication of classical treatises, important/ rare works, unpublished texts and their commentaries to Hindi, English or other languages. These works have been carried out by the Headquarter of Council along with selected peripheral Institutes. National Institute of Indian Medical Heritage (NIIMH), Hyderabad with the objective of literary research additionally focuses on medico-historical studies, preparation of biography of eminent scholars, preparation of e-books on classics of AYUSH Systems of Medicine etc. Apart from NIIMH, National Research Institute for Sowa-Rigpa, Leh, National Ayurveda Research Institute for Panchakarma, Cheruthuruthy and Regional Ayurveda Research Institute for Mother & Child Health Care, Nagpur has also been involved in the literary research. During the period under report the following achievements have been made:

### 5.1. Publication and Documentation:

The Council publishes books, monographs, technical reports and the outcomes of Intra Mural Research projects, sponsored research projects, compilation of research related data, medico-historical data, which are useful and informative for researchers, academicians and students as well as public. The following publications have been published during the reporting period.

#### Books-

1. Chikitsa Prabhakar of Shri Prabhakar Ogale – English Translation
2. Medicinal Plants for Longevity – Evidence Based Rasayana Approach of Ayurveda
3. Select flora of Medicinal Importance in Sowa –Rigpa and Ayurveda.
4. Basic Tenets of Dravyaguna - A Profile and Focus on Pharmacological Thoughts in Ayurveda.

#### Glimpses Series:

5. Glimpses of CCRAS Contributions (50 Glorious years): Vol. VI – (Pharmacology Research and Safety Studies)
6. Glimpses of CCRAS Contributions (50 Glorious Years): Vol. VII- Medico-Historical Studies and Literary Research

#### Technical Reports-

7. Health related Demography of the Schedule Caste population of Patiala District, Punjab – Ayurveda Mobile Health Care Programme Under Schedule Caste Sub Plan (SCSP)- (2015-2017) – Technical Report
8. Quality and Safety of Select Rasakalpa – Metal & Mineral Based Formulations – Technical Report (Volume -I) Arogyavardhini Vati, Mahayogaraja Guggulu, Vasanta Kusumakara Rasa & Mahalakshmi Vilas Rasa
9. Quality and Safety of Select Rasakalpa – Metal & Mineral Based Formulations – Technical Report (Volume -II) Rasamanikya, Makardhwaja, Kajjali & Rasa Sindura
10. "Quality and Safety of Select Rasakalpa– Metal & Mineral Based Formulations – Technical Report (Volume -3) Hridayarnava Rasa



11. Quality and Safety of Select Rasakalpa – Metal & Mineral Based Formulations – Technical Report (Volume -4) Tamra Bhasma
12. Quality and Safety of Select Rasakalpa – Metal & Mineral Based Formulations – Technical Report (Volume -5) Naga Bhasma
13. Ayurveda Based Seasonal Collection Practices for Selected Medicinal Plants – A Scientific Appraisal - Technical Report (Volume - 1)
14. Ayurveda Intervention (Ayush QOL-2C) in Improving quality of Life in Local Non Metastatic Breast Cancer as adjuvant to Radiotherapy & Chemotherapy – (A Report of Double Blind Randomized Placebo controlled clinical Study)
15. Health related Demography in Ahmadabad District-Gujarat- Swasthya Rakshan Programme (2016-2017)(SRP-I), Technical Report

#### **Compendium of Select Research**

16. Evidence Based Clinical Efficacy and Safety of Classical Ayurveda Medicines - Compendium of Select Research Publications (Volume – I)
17. Ayurveda for Longevity – Compendium of Select Research Publications
18. Ayurveda and Integrative Medicine – Compendium of Select Research Publications

#### **Booklets:**

19. Medicinal Flowers of AYUSH - Booklet
20. Rededicating Three Ancient Healthcare Traditions to Humanity - Conference Booklet

#### **Others:**

21. A Catalogue of CCRAS Publications
22. CCRAS Wall Calendar 2020

Besides these, following issues of Journals of CCRAS have also been released during the reporting period-

#### **Journals:**

1. Journal of Research in Ayurvedic Sciences (JRAS), Vol- 2, Issue –4, October to December 2018.
2. Journal of Drug Research in Ayurvedic Sciences (JDRAS), Vol- 3, Issue – 3, July to September 2018
3. Journal of Drug Research in Ayurvedic Sciences (JDRAS), Vol- 3, Issue – 4, October to December 2018

#### **5.2. Intra Mural Literary Research Projects**

Under the Intra Mural Research Programme, 04 projects have been completed and 16 Projects has been going on during the reporting period. The brief report of these projects is as follows:



**Table –70: List of IMR Projects**

Completed Projects: 04
<ol style="list-style-type: none"> <li>1. A chronicle of Dravyaguna: Tangible History based on Paleo-botanical, Archeological sources.</li> <li>2. Preparation of Āyurveda Grantha Samuccaya (Ayurveda E-Book portal).</li> <li>3. Marmadarpanam - Hindi and English Translation with comparative notes with Marma described in Ayurveda.</li> <li>4. Documentation and validation of Local Health Tradition &amp; Folk Claims.</li> </ol>
Ongoing projects
A. Projects carried forward from the previous year: 7
<ol style="list-style-type: none"> <li>5. English and Hindi Translation of Netra Prakashika</li> <li>6. English translation of Abhinava Chintamani and Editing of Hindi version of the text published by the Council</li> <li>7. Implementation &amp; Maintenance of “National AYUSH Morbidity and Standardized Terminologies Portal (NAMSTP)</li> <li>8. E-book preparation of Al-Qanun Fi al-Tibb (Canon of Medicine) written by Avicenna (Arabic Text)</li> <li>9. AYUSH Research Portal</li> <li>10. Preparation of Printed copies of Digitized Medical Manuscripts from South India, Madhya Pradesh and Maharashtra</li> <li>11. History of Inception and Development of Homoeopathy in India</li> </ol>
B. Projects initiated during the reporting period: 9
<ol style="list-style-type: none"> <li>12. Expansion of Integrated E-Books Portal (Āyurveda Grantha Samuccaya) by inclusion of classical books on Rasashastra</li> <li>13. Ayurveda in Buddhist Literature (Trpitaka): A Medico-Historical Investigation.</li> <li>14. Publication of ‘Charak Pradipika’ – an important commentary of Charak Samhita</li> <li>15. Expansion of Integrated E-Books Portal (Āyurveda Grantha Samuccaya) by inclusion of classical books on Medieval period</li> <li>16. Drafting of W.H.O International Terminologies of Ayurveda (ITA)</li> <li>17. Developing of SNOMED-CT Extension for Ayurveda through National Resource Centre (NRC) for EHR Standards (NRCeS), C-DAC, Pune:</li> <li>18. E-Book Preparation of Charakasamhita, published by Shree Gulabkunverba Ayurvedic Society Edition, Jamnagar (1949).</li> <li>19. Effective Implementation of AYUSH-Hospital Management Information System (A-HMIS) at peripheral Institutes of CCRAS involved in Clinical services</li> <li>20. Software up gradation and maintenance of CCRAS AYUR Prakriti Web Portal</li> </ol>



## Completed Projects

### 5.2.1. A Chronicle of Dravyaguna: Tangible History based on paleo-botanical, Archeological Sources

**Objectives:** Systematic reconstruction of medicinal substances usage from Pre-Vedic (2500 BC) till Samhita period (500 BC) period based on Paleo-botanical and archeological evidences.

**Duration of Study:** One year and further extended for 6 more months.

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Book

**Participating centre along with PI:** Dr. T. Saketh Ram, Research Officer (Ay.), NIIMH, Hyderabad

**Date of initiation:** 02.02.2018

**Current Status:** The project has been completed.

**Summary of work done:** The drafting of monograph has been completed.

**Relevant information, if any:** The tenure of the project was extended by 6 months w.e.f. 02-02-2019.

### 5.2.2. Preparation of Āyurveda Grantha Samuccaya (Ayurveda E-Book portal).

**Objectives:** To prepare an “Ayurveda E-Book Portal” with effective search option(s) viz., key word in the context (KWIC) along with advanced epistemological, ontological and heuristic capabilities. The work will primarily cover primary texts of Ayurveda viz., Brihatrayi (Charakasamhita, Sushrutasamhita, Vagbhata), Laghutrayi (Madhavanidana, Sharangadharasamhita, Bhavaprakasha), important nighantu (lexicons), Ayurveda texts mentioned under Schedule 1 of D& C act 1940 and any other Ayurvedic text based literary work(s) already published by CCRAS/RAV/Ministry of AYUSH so far.

**Duration of Study:** One and half years

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Platform independent, multi device compatible dynamic web portal and mobile application(s).

**Participating centre along with PI:** Dr. M.M. Sharma, R.O. (Ayu.), CCRAS Headquarter.

**Date of initiation:** 22.06.2018.

**Current Status:** The project has been completed.

**Summary of work done in the project:**

- The project has been completed and the Portal is to be launched after security audit and hosting.
- Typing of 52 books, proof reading of 18 books and uploading of 10 books - Charakasamhita, Sushrutasamhita, Ashtangahridayam, Ashtangasangraha, Madhavanidana, Sharangadharasamhita, Ayurvedasutra, Rajamarthanda, Vaidyamanorama and Anjananidana have been completed.



### 5.2.3. Marmadarpanam - Hindi and English Translation with comparative notes with Marma described in Ayurveda.

**Objectives:** Hindi and English translation of Marmadarpanam alongwith comparative notes with Marma described in Ayurveda Classics.

**Duration of Study:** One year

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Book

**Participating centre along with PI:** Dr. M.M.Sharma, R.O. (Ayu.) CCRAS Headquarters.

**Date of initiation:** 05.06.2018.

**Current Status:** The project has been completed.

**Summary of work done:** The translation work has been completed and the editing work is in progress.

### 5.2.4. Documentation and Validation of Local Health Traditions & Folk Claims

**Objectives:**

- To screen Local Health Traditions (LHTs) and folk claims collected through CCRAS-Tribal Health Care Research Program (THCRP) and Medico-Ethno-Botanical Survey (MEBS) Program during 2007-08 to 2017-2018 for novelty and uniqueness.
- Systematic documentation of coded drugs with new indication and usage.
- Systematic documentation of non-coded drugs/ claims as per Extra-pharmacopoeial format.
- Assessment of non-coded drugs/claims for Rasapanchaka and Pharmacological profile with scientific rationale along with safety and efficacy studies through pilot clinical studies as feasible.
- To publish the LHTs and folk claims found in Ayurvedic, Ethno-medical literature and related published literature, which are in vogue in tribal areas and communities

**Duration of Study:** One year

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Book.

**Participating centre along with PI:** Dr. V. Sridevi, Research Officer (Ay.), CCRAS Hq., New Delhi.

**Date of initiation:** 18-10-2018.

**Current Status:** Completed

**Summary of work done:** Short listing of novel claims and preparation of document on LHTs collected under Tribal Health Care Research Program (THCRP) for publication (excluding the short listed claims) is under the process of completion.



## Ongoing projects

### 5.2.5. Translation of Netra Prakashika (English and Hindi)

**Objectives:** To translate the classical work on Ophthalmology in Ayurveda named Netra Prakashika into English and Hindi and publish it.

**Duration of study:** One year

**Nature of document/ publication (Book, manuscript, Bibliography etc.):** Book

**Participating centre along with PI:** Dr. V.K. Lavaniya, Research Officer (Ay.), CCRAS Hqrs., New Delhi.

**Date of initiation:** March, 2017.

**Current Status:** The work is in progress.

**Summary of work done:** The English translation work of 12 out of 14 chapters has been completed. The translation of last two chapters has been assigned to expert, completion of which is awaited.

### 5.2.6. English translation of Abhinava Chintamani and Editing of Hindi version of the text published by the Council

**Objectives: -**

- Editing of Sanskrit version of the text followed by editing of Hindi translation of the text.
- English translation of text and finalization of the text.

**Duration of Study:** Two years

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Book

**Participating centre along with PI:** Dr. V. Sridevi, Research Officer (Ay.), NIIMH, Hyderabad

**Date of initiation:** 26-09-2017.

**Current Status:** The work is in progress.

**Summary of work done:**

- Editing of Sanskrit mūla patha of 4 chapters (out of 66 chapters) completed. Thus the editing of Sanskrit version of all the 66 chapters is completed.
- Review of edited Sanskrit mūla patha of all 66 chapters by internal subject expert in Sanskrit is completed

Editing of Hindi version (translated text) of 5 chapters viz., Tṛṣṇāroga nirūpaṇa (No. 21), Mūrcchāroga nirūpaṇa (No. 22) , Madātyayaroga nirūpaṇa (No. 23), Dāharoga nirūpaṇa (No. 24) and Unmādaroga nirūpaṇa (No. 25) is completed.

**Relevant information, if any:** The tenure of the project was extended for further two years.



### 5.2.7. Implementation & Maintenance of “National AYUSH Morbidity and Standardized Terminologies Portal (NAMSTP)”

#### Objectives:

- To collect and systematically present National AYUSH Morbidity Statistics and Health Care Service Delivery indices.
- To promote usage of Electronic Health Records [E.H.R] across AYUSH Domain.
- To work as “NAMSTP Secretariat” on behalf of Ministry of AYUSH in terms of coordinating further revisions of ASU-Morbidity Codes, Standardized terminologies, and cross linkages with W.H.O. ICD-10/11, SNOMED etc., in liaison with World Health Organization, Central Bureau of Health Intelligence, Directorate General of Health Services (CBHI-DGHS), Ministry of Health and Family Welfare, Government of India, National Informatics Centre/Digital India, Quality Council of India (QCI), National Resource Centre for E.H.R Standards (NRCeS) etc.

**Duration of Study:** Three years

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Online Dynamic Web Portal; Publication of National Ayurveda, Siddha, Unani Morbidity codes and standardized terminologies.

**Participating centre along with PI:** Dr. T. Saketh Ram, R.O (Ayurveda), NIIMH Hyderabad.

**Date of initiation:** 14<sup>th</sup> May 2018

**Current Status:** The portal is being maintained successfully.

#### Summary of work done:

**Table – 71: Data Upload Status**

S. No.	Medical Sys.	Number of Institute having OPD	Number of Institute having IPD	Total number of cases April 2019 to March 2020		
				OPD	Outreach OPD	IPD
1	Ayurveda	41	14	871165	335633	16467
2	Yoga & Naturopathy	-	-	-	-	-
3	Unani	23	7	542123	151627	15396
4	Siddha	2	1	44318	6645	42
5	Homoeopathy	18	3	506516	125439	5281
6	<b>Total</b>	84	25	1964122	619344	37186

### 5.2.8. AYUSH Research Portal ([www.ayushportal.nic.in](http://www.ayushportal.nic.in))

#### Objectives:

- To carry out the entrusted the work of software design and development.
- Ayurveda research related data upload and
- Maintenance of AYUSH Research Portal.



**Duration of Study:** 3 years

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Online Research Portal

**Participating centre along with PI:** Dr. P.V.V.Prasad, AD (Ay.), National Institute of Indian Medical Heritage, Hyderabad.

**Date of initiation of the Project:** 18-06-2018.

**Summary of work done:**

- Research article abstracts sent to the committees of AYUSH Research Portal: 1225
- Research article abstracts uploaded: 1207

**Table – 72: Research abstracts uploaded in AYUSH Research Portal**

S. No.	Category	AYUSH MEDICAL SYSTEM					
		Ayurveda	Yoga & Naturopathy	Unani	Siddha	Homoeopathy	Sowa Rigpa
1	Clinical Research	2818	1003	427	144	722	0
2	Preclinical Research	11129	199	204	410	147	0
3	Drug Research	5253	0	1196	428	441	0
4	Fundamental Research and Others	1928	219	626	359	1073	0
<b>Total</b>		21128	1421	2453	1341	2383	0
<b>Grand Total</b>		<b>28726</b>					

**Relevant information, if any:**

The task of AYUSH Research Portal has been entrusted to NIIMH, Hyderabad by CCRAS/ AYUSH in October 2010

### 5.2.9. E-book preparation of Al-Qanun Fi al-Tibb (Canon of Medicine) written by Avicenna (Arabic Text).

**Objectives:** To prepare E-Book of Al-Qanun Fi al-Tibb (written by Avicenna) by-

- Typing and typesetting of Arabic text of Al-Qanun
- Correction and proofreading of Arabic text of Al-Qanun
- Preparing of E-Book by uploading the data to the software in five parts in CD form

**Duration of Study:** Two years

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** E-book

**Participating centre along with PI:** Dr. Ashfaque Ahmad, Research Officer (Unani), NIIMH Hyderabad.

**Date of initiation:** 13-08-2018



**Current Status:** The work is in progress.

**Summary of work done:**

- Typing and typesetting of Al-Qanun Volume Two (from page 171 to page 236) total 66 pages, Volume Three (334 pages), Volume four (554 pages) and Volume 5 (from page 01 to page 82) total 82 pages has been completed
- Correction and proof-reading of above texts has been completed
- Addition of the data to the software module has been done.

**5.2.10. History of Inception and development of Homoeopathy In India.**

**Objectives:** To prepare comprehensive history of Homoeopathy in India since its inception and consequent developments till date and publish in the form of Monograph.

**Duration of Study:** 18 months

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Book

**Participating centre along with PI:** Dr. Biswo Ranjan Das, R.O (Homoeopathy), NIIMH Hyderabad.

**Date of initiation:** 1<sup>st</sup> March 2019

**Current Status:** The work is in progress.

**Summary of work done:** Information has been collected on:

- History of Homoeopathy in Maharashtra,
- History of Homoeopathy in Odisha
- Central Council of Homoeopathy (CCH)
- History about Indian Institute of Homoeopathic Physicians (IIHP)
- History and Progress of Homoeopathy in the states like Assam, Andhra Pradesh, Delhi, and Telangana
- History of Central Council for Research in Homoeopathy (CCRH) since inception
- History of Homoeopathy in West Bengal
- Biography of following Homoeopathic Physician Dr. L.D. Dhawale, Dr. Diwan Jai Chand, Dr. D.N. Chatterjee, Dr. Bankim Chowdhury, has been collected.
- Sehgal school of Revolutionized Homoeopathy
- Predictive School of Homoeopathy
- The Annual Report of All India Institute of Homoeopathy,
- A Short History of the General Council and State Faculty of Homoeopathic Medicine, West Bengal,



- History of Introduction and Spread of Homoeopathy in India,
- History of Medicine,
- The Homoeopathic Enquiry Committee,
- Homoeopathy and National Crisis

#### 5.2.11. Preparation of Printed copies of Digitized Medical Manuscripts from South India, Madhya Pradesh and Maharashtra

##### Objectives:

- To save and preserve the data of digitized Medical Manuscripts collected from South India, Madhya Pradesh and Maharashtra in print format for posterity.
- Identification, short-listing and prioritizing of rare and unpublished manuscripts for further appraisal of experts from the digitized collections.

**Duration of Study:** Two years

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Printed Copies of manuscripts digitized from South India, Madhya Pradesh and Maharashtra.

**Participating centre along with PI:** Dr. P.V.V. Prasad, Assistant Director (Ay), NIIMH Hyderabad.

**Date of initiation:** 18-03-2019

**Current Status:** The work is in progress.

**Summary of work done:** Image processing work of 619 manuscripts have been completed.

#### 5.2.12. Expansion of Integrated E-Books Portal (Āyurveda Grantha Samuccaya) by inclusion of classical books on Rasashastra

**Objectives:** To expand the Integrated E-Books Portal (Āyurveda Grantha Samuccaya) by addition of classical books on Rasashastra available in public domain.

**Duration of Study:** One and half years

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Platform independent, multi device compatible dynamic web portal and mobile application(s).

**Participating centre along with PI:** Dr. M.M. Sharma, R.O. (Ayu.), CCRAS Headquarter

**Date of initiation:** 27.05.2019

**Current Status:** The work is in progress.

**Summary of work done:** Typing of 19 books has been completed.





### 5.2.13. Ayurveda in Buddhist Literature (Tripitaka): A Medico-Historical Investigation

#### Objectives:

- To explore the hidden knowledge of Ayurveda in the Buddhist literature, particularly in Tripitaka.
- To find out Buddhist philosophical approach to health care.
- Analysis of Ayurvedic material available in Tripitaka, according to the Buddhist point of view

**Duration of Study:** 3 years

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Book

**Participating centre along with PI:** Dr Balaji Potbhare, Research Officer (Ay), RARIMCH, Nagpur

**Date of initiation:** 07.05.2019

**Current Status:** The work is in progress.

**Summary of work done:** Reviewed 33 books and documented 84 books

**Relevant information, if any:** The project was transferred from NIIMH, Hyderabad to RARIMCH, Nagpur due to transfer to P.I.

### 5.2.14. Publication of 'Charak Pradipika' – an important commentary of Charak Samhita

**Objectives:** To publish the latest Sanskrit commentary of Charaka Samhita Charaka Pradipika (Sutrasthana to Indriyasthana) written by Jyotishchandra Saraswati along with mulashloka and make it available in public domain.

**Duration of Study:** One and half years

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Book

**Participating centre along with PI:** Dr. M.M. Sharma, R.O. (Ayu.), CCRAS Headquarter

**Date of initiation:** 27.05.2019

**Current Status:** The work is in progress.

**Summary of work done:** The typing and proof reading of available commentary (upto Indriya Sthan) has been completed.

### 5.2.15. Expansion of Integrated E-Books Portal (Āyurveda Grantha Samuccaya) by inclusion of classical books on Medieval period

**Objectives:** To expand the Integrated E-Books Portal (Āyurveda Grantha Samuccaya) by addition of classical books from Medieval Period available in public domain.

**Duration of Study:** One and half years

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Platform independent, multi devise compatible dynamic web portal and mobile application(s).



**Participating centre along with PI:** Dr. M.M. Sharma, R.O. (Ayu.), CCRAS Headquarter

**Date of initiation:** 30.12.2019

**Current Status:** The work is in progress.

**Summary of work done:** Typing of 12 books and proof reading of 04 books has been completed.

#### 5.2.16. Drafting of W.H.O International Terminologies of Ayurveda (ITA)

**Objectives:** To support Ministry of AYUSH for coordinating the activity of “Drafting of W.H.O International Terminologies of Ayurveda” till the completion and release of the document.

**Duration of Study:** One and half years

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Book

**Participating centre along with PI:** Dr. T. Saketh Ram, R.O (Ayurveda), NIIMH, Hyderabad

**Date of initiation:** 10-08-2019

**Current Status:** The work is in progress.

**Summary of work done:** First Draft of W.H.O International Terminologies of Ayurveda (ITA) along with word index has been submitted to Dr. Asit Panja, Consultant, W.H.O Hwad Office, Geneva and common editable Google document has been created for collaborative revision of the ITA-1<sup>st</sup> Draft for core expert group.

#### 5.2.17. Developing of SNOMED-CT Extension for Ayurveda through National Resource Centre (NRC) for EHR Standards (NRCeS), C-DAC, Pune

**Objectives:** Development of National Extensions of Systematized Nomenclature of Medicine - Clinical Terms (SNOMED-CT) for AYURVEDA with a target of release of four National Extensions per year.

**Duration of Study:** Three years

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Ayurveda, Siddha and Unani Release of National Extension from SNOMED CT.

**Participating centre along with PI:** Dr. T. Saketh Ram, R.O (Ayurveda), NIIMH, Hyderabad

**Date of initiation:** 09-12-2019

**Current Status:** The work is in progress.

**Summary of work done:** Recruitment of project staff has been completed. Two SRF (Ay.) have joined the project. Preparatory work to initiate project with NRCeS, CDAC, Pune is in progress.

#### 5.2.18. E-Book Preparation of Charakasamhita, published by Shree Gulabkunverba Ayurvedic Society Edition, Jamnagar (1949)

**Objectives:** Development of Interactive E-Book edition of Carakasamhita (Shree Gulabkunverba Ayurvedic Society Edition, Jamnagar, 1949) with English translation in a manner to serve the Scholar and also appealing for a common reader without diluting essence and authenticity of book.



**Duration of Study:** 06 Months

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** E-book

**Participating centre along with PI:** Dr. T. Saketh Ram, R.O (Ayurveda), NIIMH, Hyderabad

**Date of initiation:** 26-12-2019

**Current Status:** The work is ongoing.

**Summary of work done:**

- Addition of Devanagari text for volume-5 (500 pages completed);
- Typing work on Volume -6 is in progress.
- Work on web/mobile interface design in consultation with Mr. Aswani, Expert web designer, Hyderabad has been initiated vide.
- Work on Illustrations has been initiated by allotting work to three artists

**5.2.19. Effective Implementation of AYUSH-Hospital Management Information System (A-HMIS) at peripheral Institutes of CCRAS involved in Clinical services**

**Objectives:**

- To improve patient care and work efficiency in the institutes of CCRAS
- To derive comprehensive data of all hospital, which helps in effective AYUSH health policy
- Efficient management of hospitals of CCRAS
- Effective documentation of AYUSH
- To improve research in AYUSH
- To eliminate the chances of errors in AYUSH hospital
- To collect data on National AYUSH morbidities

**Duration of Study:** One year

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Centralized data of patients is being collected through a dedicated online web based portal that can be utilized for further research work and patients care in Ayurvedic Hospitals.

**Participating centre along with PI:**

Sl. No.	Name of the Institute	Name of the Principal Investigator
1	Raja Ramdeo Anandilal Podar (RRAP) Central Ayurveda Research Institute for Cancer, Mumbai	Dr. Parth Dave, Research Officer (Ay.)
2	Dr. Achanta Lakshmipathi Research Centre for Ayurveda, Chennai	Dr. K Prameela Devi, Research Officer (Ay.)



3	Central Ayurveda Research Institute for Cardiovascular Diseases, New Delhi	Dr. Sakshi Sharma, Research Officer (Ay.) Dr. Rajkala Patil, Research Officer (Ay.) Dr. Shaizi Layeeq, Research Officer (Ay.)
4	Central Ayurveda Research Institute for Drug Development, Kolkata	Dr. Dipsundar Sahu, Research Officer (Ay.)
5	Central Ayurveda Research Institute for Hepatobiliary Disorders, Bhubneshwar	Dr. Krishna Rao, Research Officer (Ay.)
6	National Ayurveda Research Institute for Panchakarma, Cheruthuruthy	Dr. P P Pradeep Kumar, Research Officer (Ay.)
7	Regional Ayurveda Research Institute for Skin Disorders, Vijayawada	Dr. Midhuna Mohan, Research Officer (Ay.)
8	Central Ayurveda Research Institute for Respiratory Disorders, Patiala	Dr. AJV Saiprasad, Research Officer (Ay.)
9	Regional Ayurveda Research Institute for Drug Development, Gwalior	Dr. Shyam Babu Singh, Research Officer (Ay.)
10	Regional Ayurveda Research Institute for Eye Diseases, Lucknow	Dr. Krishna Kumar V, Research Officer (Ay.)
11	M.S. Regional Ayurveda Research Institute for Endocrine Disorders, Jaipur	Dr. S K VEDI, Research Officer (Ay.)
12	Regional Research Center of Ayurveda, Port Blair	Dr. Abhayadev. A, Research Officer (Ay.)
13	Regional Ayurveda Research Institute for Mother and Child Health, Nagpur	Dr. Savita Sharma, Research Officer (Ay.) Dr. Balaji Potbhare, Research Officer (Ay.)
14	Regional Ayurveda Research Institute for Metabolic Disorders, Bangalore	Dr. M N Shubhashree, Research Officer (Ay.)
15	Regional Ayurveda Research Institute for Life Style Related Disorders, Trivandrum	Dr. Varsha Sumedhan, Research Officer (Ay.)
16	Regional Ayurveda Research Institute for Infectious Diseases, Patna	Dr. Vimal Tewari, Research Officer (Ay.)
17	Regional Ayurveda Research Institute for Gastro-Intestinal Disorders, Guwahati	Dr. Ekta Dogra, Research Officer (Ay.)
18	Advanced Center for Ayurveda in Mental Health and Neurosciences, Bengaluru	Dr. Srinivash Sahoo, Research Officer (Ay.) Dr. Tejaswini C, Research Officer (Ay.)
19	Regional Ayurveda Research Institute, Itanagar	Dr. Arvind Kumar, Research Officer (Ay.)
20	Regional Ayurveda Research Institute for Urinary Disorders, Jammu	Dr. Gopesh Sharma, Research Officer (Ay.)
21	Regional Ayurveda Research Institute for Nutritional Disorders, Mandi	Dr. Vineeta Kumari Negi, Research Officer (Ay.)
22	Regional Ayurveda Research Institute, Ranikhet	Dr. Harit Kumari, Research Officer (Ay.)



23	Regional Ayurveda Research Centre, Dimapur	Dr. P. Srinivasan, Research Officer (Ay.)
24	Regional Ayurveda Research Centre, Agartala	Dr. T K Mandal, Research Officer (Ay.)
25	Regional Ayurveda Research Institute, Gangtok	Dr. Shriprakash, Assistant Director (Ay.) Dr. Rahul D Ghuse, Research Officer (Ay.)
26	Regional Ayurveda Research Institute for Skin Disorders, Ahmadabad	Dr. Anil Damodar Avhad, Research Officer (Ay.)

**Date of Initiation:** 01 October, 2019

**Current Status:** Ongoing

**Summary of work done:** During the reporting period, 26 Institutes of the CCRAS has implemented AHMIS in their respective hospitals. Total 457484 patients were registered and out of which 314125 patients were consulted through AHMIS during the year 2019-20. Although, this programme was running in the institutes of CCRAS from the beginning of financial year 2019-20 however it was initiated in a project mode w.e.f. 1.10.2019. After initiation of the programme, total 264069 patients were registered out of which 206740 patients were consulted through AHMIS. The institute wise bifurcation of registered and consulted patients since 01.04.2019 has been given in the below mentioned Table.

**Table - 73: Institute wise number of patients registered and consulted through AHMIS from 01.04.2019 to 31.03.2020**

S. No.	Name of the Institute	No. of patients Registered in A-HMIS						No. of patients Consulted in A-HMIS					
		M	F	T	MC	FC	Total	M	F	T	MC	FC	Total
1.	CARIC, Mumbai	8461	11919	0	164	170	20714	7798	11082	0	152	154	19186
2.	ALRCA, Chennai	1116	1711	0	47	48	2922	1100	1680	0	46	48	2874
3.	CARICD, New Delhi	20191	18127	7	890	708	39923	5946	5082	1	239	239	11507
4.	CARIDD, Kolkata	4925	4045	1	134	139	9244	3658	3031	1	96	101	6887
5.	CARIHD, Bhubneshwar	11519	8460	0	293	203	20475	8196	6078	0	208	156	14638
6.	NARIP, Cheruthuruthy	13289	18788	3	275	258	32613	11206	16171	3	221	210	27811
7.	RARISD, Vijayawada	23540	27937	15	663	505	52660	8697	10391	9	274	172	19543
8.	CARIRD, Patiala	13500	13497	0	466	315	27779	5171	5140	0	205	161	10677
9.	RARIDD, Gwalior	7126	7291	0	354	242	15013	5481	5411	0	268	174	11334
10.	RARIED Lucknow	22960	19919	0	860	606	44345	20064	17918	0	740	503	39225
11.	RARIECD, Jaipur	14078	11620	0	420	261	26379	11355	9175	0	331	198	21059
12.	RRCA, Port Blair	967	1001	0	93	61	2122	898	911	0	82	56	1947
13.	RARIMCH, Nagpur	12855	18838	4	315	332	32344	11592	17239	4	282	292	29409
14.	RARIMD, Bangalore	6919	5336	1	134	95	12485	5416	4159	0	103	65	9743
15.	RARILSD, Trivandrum	5167	9399	0	146	158	14870	4050	7458	0	109	121	11738
16.	RARIID, Patna	8032	10670	0	354	371	19427	6065	7999	0	286	297	14647
17.	RARIGID, Guwahati	6547	7015	0	232	219	14013	2360	2499	0	79	69	5007
18.	ACAMH & NS, Bengaluru	2218	1906	0	182	43	4349	1962	1716	0	158	38	3874
19.	RARI, Itanagar	2491	2768	0	147	123	5529	2216	2459	0	136	107	4918



20.	RARIUD, Jammu	6811	5551	0	214	142	12718	2841	2222	0	108	64	5235
21.	RARIND, Mandi	2736	4447	1	295	295	7774	2195	3493	1	240	233	6162
22.	RARI, Ranikhet	1524	3207	1	93	49	4874	1366	2887	1	85	43	4382
23.	RARC, Dimapur	293	362	0	22	22	699	279	341	0	22	22	664
24.	RARC, Agartala	3524	4346	0	61	107	8038	3079	3817	0	49	89	7034
25.	RARI, Gangtok	5887	4796	0	194	122	10999	5427	4429	0	177	115	10148
26.	RARISD, Ahmadabad	8188	6626	0	249	113	15176	7824	6303	0	239	110	14476
<b>Total</b>		<b>214864</b>	<b>229582</b>	<b>33</b>	<b>7297</b>	<b>5707</b>	<b>457484</b>	<b>146242</b>	<b>159091</b>	<b>20</b>	<b>4935</b>	<b>3837</b>	<b>314125</b>

M- Male, F-Female, T- Transgender, MC- Male Child and FC- Female Child

**Table - 74: Institute wise number of patients registered and consulted through AHMIS from 01.10.2019 to 31.03.2020 (As a Project Mode)**

S. No.	Name of the Institute	No. of patients Registered in A-HMIS						No. of patients Consulted in A-HMIS					
		M	F	T	MC	FC	Total	M	F	T	MC	FC	Total
1.	CARIC, Mumbai	4644	6539	0	104	102	11389	4512	6396	0	101	100	11109
2.	ALRCA, Chennai	564	944	0	22	30	1560	563	937	0	22	30	1552
3.	CARICD, New Delhi	13173	12161	5	530	425	26294	5111	4323	1	174	171	9780
4.	CARIDD, Kolkata	3874	3246	1	103	104	7328	3224	2699	1	79	86	6089
5.	CARIHD, Bhubneshwar	6698	4823	0	182	135	11838	5768	4189	0	149	119	10225
6.	NARIP, Cheruthuruthy	10798	15758	1	197	200	26954	9964	14642	1	186	189	24982
7.	RARISD, Vijayawada	12459	14754	15	382	263	27873	8626	10296	9	273	167	19371
8.	CARIRD, Patiala	6538	6424	0	257	182	13401	5171	5140	0	205	161	10677
9.	RARIDD, Gwalior	4255	4384	0	226	147	9012	3327	3334	0	170	109	6940
10.	RARIED Lucknow	12184	10258	0	403	284	23129	11240	9613	0	374	259	21486
11.	RARIECD, Jaipur	7772	6171	0	218	126	14287	5991	4538	0	157	85	10771
12.	RRCA, Port Blair	508	514	0	54	30	1106	479	473	0	47	27	1026
13.	RARIMCH, Nagpur	6785	10655	2	185	214	17841	6066	9722	2	163	185	16138
14.	RARIMD, Bangalore	3847	2982	1	78	65	6973	2715	2081	0	55	40	4891
15.	RARILSD,, Trivandrum	3045	5472	0	81	108	8706	2524	4576	0	69	90	7259
16.	RARIID, Patna	4949	6632	0	217	232	12030	3653	4793	0	170	179	8795
17.	RARIGID, Guwahati	3444	3612	0	117	130	7303	1123	1154	0	33	35	2345
18.	ACAMH&NS, Bengaluru	0	0	0	0	0	0	0	0	0	0	0	0
19.	RARI, Itanagar	1372	1532	0	87	66	3057	1211	1358	0	79	57	2705
20.	RARIUD, Jammu	3514	2780	0	123	86	6503	2804	2201	0	106	64	5175
21.	RARIND, Mandi	1467	2290	0	157	168	4082	1295	2071	0	137	147	3650
22.	RARI, Ranikhet	1173	2419	0	68	38	3698	1059	2218	0	61	33	3371
23.	RARC, Dimapur	293	362	0	22	22	699	279	341	0	22	22	664
24.	RARC, Agartala	1800	2311	0	36	46	4193	1524	1960	0	30	36	3550
25.	RARI, Gangtok	2839	2352	0	95	74	5360	2733	2284	0	90	72	5179
26.	RARISD, Ahmadabad	5174	4056	0	148	75	9453	4938	3855	0	144	73	9010
	<b>TOTAL</b>	<b>123169</b>	<b>133431</b>	<b>25</b>	<b>4092</b>	<b>3352</b>	<b>264069</b>	<b>95900</b>	<b>105194</b>	<b>14</b>	<b>3096</b>	<b>2536</b>	<b>206740</b>

**Relevant information, if any:** The 'Advanced Center for Ayurveda in Mental Health and Neurosciences, Bengaluru' was merged with the 'Regional Ayurveda Research Institute for Metabolic Disorders, Bangalore'. Therefore, data of this center after 01.10.2019 could not be included in the Table.



### 5.2.20. Software up gradation and maintenance of CCRAS AYUR Prakriti Web Portal

**Objectives:** To upgrade 'AYUR Prakriti Web Portal'(APWP) for incorporating functional modules, enhancement & scalability and friendly User Interface layouts and maintenance of the APWP application.

**Duration of Study:** 3 Years

**Nature of Document/ Publication (Book, Manuscript, Bibliography etc.):** Portal

The deliverables of the project are as below:

- Online responsive Web Application with all the required features and operations.
- Offline responsive Web Application with all the required features and operations.
- Offline responsive Mobile Application with all the required features and operations (Android/ IOS).

Publication will be done after completion of the project in peer reviewed journal.

**Participating centre along with PI:** Dr. Lalita Sharma, Research Officer (Ay.), CCRAS, Hqrs.

**Date of initiation:** 11-03-2020

**Current Status:** Ongoing

**Summary of work done:** The recruitment of the manpower- SRF IT and the purchase of Computer System & Printer for the project have been completed.

### 5.3. Collaborative Literary Research Projects

Under the Collaborative Literary Research Programme, one carried forward research project i.e Hindi translation of Marathi Compendium 'Chikitsa Prabhakar' has been completed during the reporting period. The brief report of the project is as follows:

#### Hindi translation of Marathi Compendium Chikitsa Prabhakar

**Objectives:**

- **Primary:** To make available an authentic Hindi translation of most popular Marathi Compendium Chikitsa Prabhakar.
- **Secondary:**
  - To include critical notes wherever required.
  - Preparation of appendix of botanical name wherever applicable

**Duration of study:** 1 year

**Nature of document/ publication (Book, manuscript, Bibliography etc.):** Book

**Participating centre along with PI:** Dr. Abhijit H. Joshi, Acting Registrar, Tilak Maharashtra Vidyapeeth, Pune.



**Date of initiation:** 21.02.2019.

**Current Status:** The project has been completed.

**Summary of work done:** Translation of the whole book (up to Page No. 754) has been completed.

#### 5.4. CCRAS-Research Management Information System (RMIS)

CCRAS, New Delhi has initiated RMIS programme for offering suggestions/inputs related to planning/ designing /protocol related, sampling and statistical issues etc. as required by M.D./M.S, Ph.D scholars and guides across Ayurvedic Institutes/Colleges.

Services offered under CCRAS-RMIS programme are as follows:

- Formulating research question /hypothesis
- Trial Design
- Setting of objectives
- Sampling/sample size.
- Selection criteria
- Investigations required ( for diagnosis and assessment)
- Assessment criteria/methods
- Suggestions on Feasibility of interventions identified for study
- Ethical Issues
- Suggested useful literatures relevant to proposed study
- General comments on the Synopsis /research plan
- Data analysis and interpretation (of completed projects).

#### 5.5. Documentation of Folklore Claims /LHTs

During the reporting period, 363 folklore claims have been collected and documented out of which 65 from Medico-ethno-botanical survey at RAIFR, Pune, 206 from THCRP and 92 from AMHCP under SCSP from traditional healers and general public from different tribal, forest areas and SC Population dominated villages across the country. Details of THCRP and AMHCP are as under:

**Table -75: LHTs/folk claims documented through THCRP and AMHCP**

S.No.	Institute Name	LHTs/ Folk claim collected through THCRP	LHTs/ Folk claim collected through AMHCP
1.	CARIHD, Bhubaneswar	17	7
2.	RARIECD, Jaipur	15	4
3.	RARIDD, Gwalior	11	5





4.	RARISD, Vijayawada	15	5
5.	RARIMCH, Nagpur	15	5
6.	RARIMD, Bangalore	17	Project not allotted
7.	RARIID, Patna	16	5
8.	RARIGID, Guwahati	15	5
9.	RARI, Gangtok	15	5
10.	RARIND, Jammu	15	5
11.	ALRCA, Chennai	15	5
12.	RARC, Port Blair	15	Project not allotted
13.	NRISR, Leh	06	-do-
14.	RARISD, Ahmedabad	10	5
15.	RARC, Tripura	09	Project not allotted
16.	CARICD, New Delhi	Project not allotted	0
17.	NARIP, Cheruthuruthy	-do-	6
18.	CARIDD, Kolkata	-do-	0
19.	CARIRD, Patiala	-do-	5
20.	RARIED, Lucknow	-do-	5
21.	CARIC, Mumbai	-do-	1
22.	RARILSD, Trivandrum	-do-	5
23.	RARIND, Mandi	-do-	9
24.	ACAMH&NS, Bangalore	-do-	5
<b>Total</b>		206	92

## 5.6 Research Papers

During the reporting year, 160 research papers published in various National and International Journal's, 19 papers published in conference proceedings souvenirs etc. and 48 Books/Chapter were also published. (Details are annexed at **Annexure-II**)



## 6. RESEARCH ORIENTED PUBLIC HEALTH CARE PROGRAMMES (OUTREACH ACTIVITIES)

**Council has undertaken 5 programmes as Research Oriented Public Health Care Programmes outreach activities viz.**

1. Tribal Health Care Research Programme under Tribal Sub Plan
2. Ayurveda Mobile Health Care Programme under Scheduled Castes Sub Plan
3. Reproductive and Child Health Care Programme under Scheduled Castes Sub Plan
4. Integration of AYUSH (Ayurveda) with National Programme for Prevention and control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)
5. Ayurvedic Health Centres under North East Plan

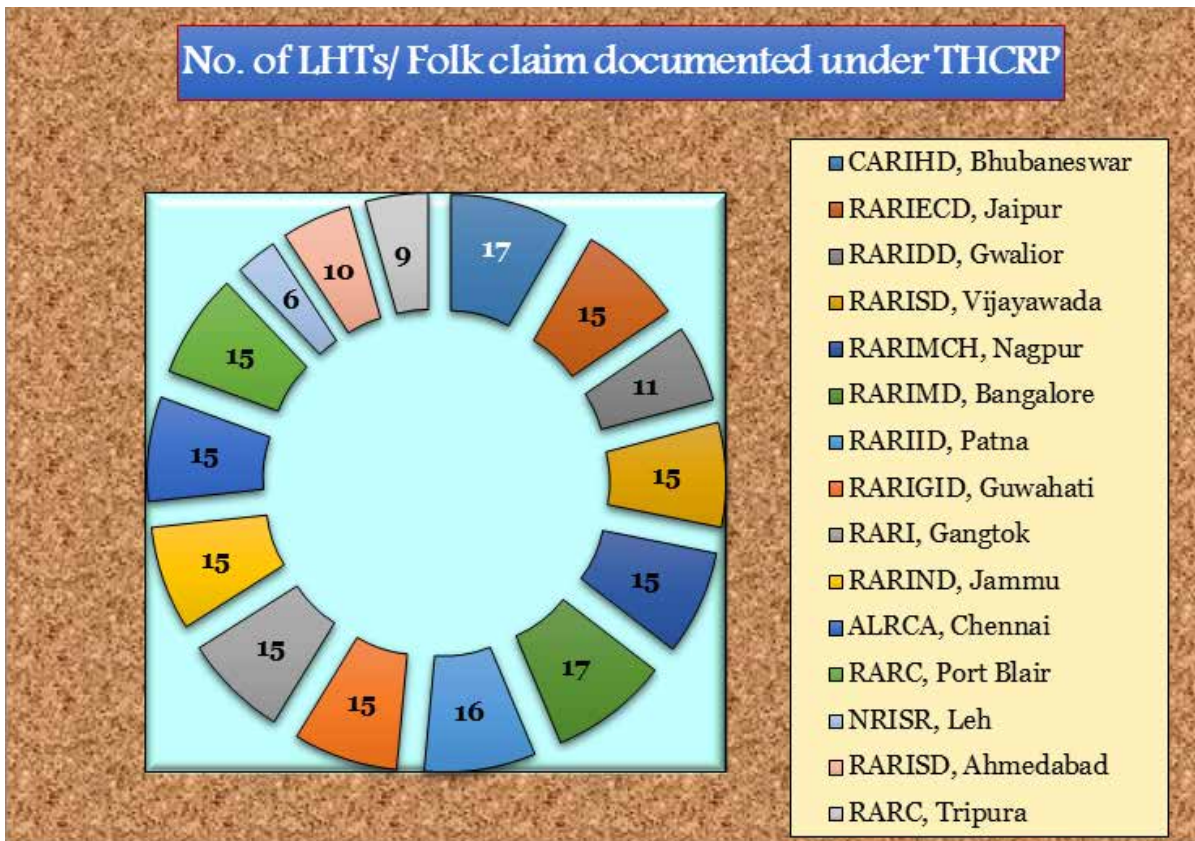
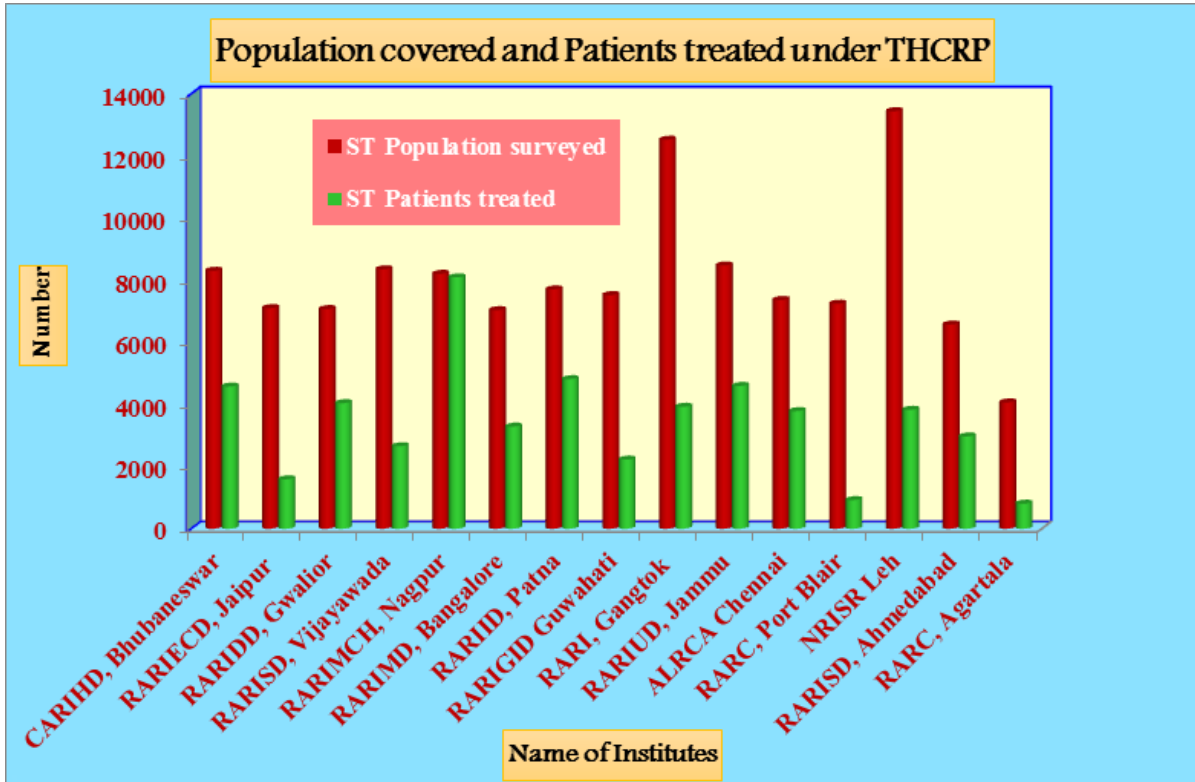
**Details of programmes are as under:-**

### 6.1 Tribal Health Care Research Programme under Tribal Sub Plan

This programme has been initiated with the aim to study the living conditions of tribal people, folk medicines and Local Health Traditions used by them, availability of medicinal plants in the area and for propagation of knowledge about hygiene, prevention of diseases, use of common medicinal plants in the area and to extend medical aid at their door steps and continued at 15 peripheral Institutes/ Centres in 15 States viz. CARIHD Bhubaneswar, RARIECD Jaipur, RARIDD Gwalior, RARISD Vijayawada, RARIMCH Nagpur, RARIMD Bangalore, RARIID Patna, RARIGID, Guwahati, RARI Gangtok, RARIUD Jammu, ALRCA Chennai, RRCA Port Blair, and NRISR Leh, RARISD Ahmedabad, RARCA, Tripura under Tribal Sub Plan (TSP). During the period under report, 206 folk claims were documented which will be published in future, 126411 population were covered out of them 121005 were tribal people across 165 villages and incidental medical aid and counseling on prevention and hygiene was extended to 59744 patients out of them 52133 were tribal patients. (Details are annexed at **Annexure-III**)

Carried out under this programme are:-

1. To Study the living conditions of tribal people
2. To Collect information related to health statistics
3. Study of dietetic habits
4. Nature and frequency of prevalent diseases etc.
5. Use of common medicinal plants in the area
6. To Provide medical aid at their door steps
7. Propagation of knowledge about Ayurvedic concept of Pathyapathya including hygiene habits, dietary practice.
8. Prevention of diseases by adopting healthy way of living & clean environment (Swachhata)



**Table- 76: Prevalent diseases under THCRP**

S.No.	Name of Institute	Prevalent Diseases
1.	CARIHD, Bhubaneswar	Amavata, Amlapitta, Arsha, Atisara, Balakasa, Balatisara, Grahani, Gridhrasi, Jwara, Kamala.
2.	RARIECD, Jaipur	Sandhivata, Kandru, Kasa, Udarashula, Pratishtyaya, Jwara, Shirahshoola, Amlapitta.
3.	RARIDD, Gwalior	Sandhivata, Kandru, Kasa, Pradara, Aadhaman, Pratishtyaya, Swasa, Parshavshoola.
4.	RARISD, Vijayawada	Sandhivata, Katishool, Kasa, Shirahshula, Jwara, Twak Roga, Udara Roga, Swasa.
5.	RARIMCH, Nagpur	Vatvyadhi, Angamarda, Vibandha, Manyastamba, Avabahuka, Kasa, Swasa.
6.	RARIMD, Bangalore	Sandhivata, Kushta, Shirahshoola, Kasa, Agnimandhya, Jwara, Amlapitta, Gridhrasi.
7.	RARIID, Patna, Bihar	Vibandha, Sandhivata, Kasa, Swasa, Atisara, Ajeerna, Amlapitta, Jwara, Slipada, Kandru.
8.	RARIGID, Guwahati	Vatavyadhi, Sandhivata, Trikshoola, Rakatvata, Kasa, Kandru, Shirahshula, Paama
9.	RARI, Gangtok	Aadhaman, Vibandha, Gridhrasi, Avabahuka, Sandhivata, Aartvakshya, Rajykhama.
10.	RARIUD, Jammu	Sandhivata, Kushta, Krimi, Kasa, Shwetpradara, Agnimandya, Vatavyadhi, Pratishtya.
11.	ALRCA, Chennai	Amavata, Amlapitta, Arsha, Arthava Dushti, Ashmari, Atisara, Gridhrasi, Jwara, Kasa.
12.	RRCA, Port Blair	Vibandha, Avabahuka, Sandhivata, Agnimandya, Kasa, Swasa, Parshavshula, Amlapitta.
13.	NRISR, Leh	Pad-kan smugpo (Peptic ulcer), Traig-drum (Arthritis), Thak-nad (Blood disease), sNing-nad (Heart problem), Lo-nad (Lungs diseases), Khal-nad (Kidney disease) Pho-wai-nad (Stomach problems) IPags-nad (Skin disease).
14.	RARISD, Ahmedabad	Kasa, Kushta, Jwara, Sandhivata, Vatavyadhi, Trikshula, Pidika, Swasa, Shewetpradra.
15.	RARC, Agartala	Sandhivata, Kasa, Kandru, Kushta, Avabahuka, Shewetpradra, Vibandha, Jwara, Amlapitta, Amavata.

## 6.2 Ayurveda Mobile Health Care Programme under Scheduled Castes Sub Plan (SCSP)

Ayurveda Mobile Health Care Programme under Scheduled Castes Sub Plan (SCSP) has been initiated at 20 institutes in 18 states across the country with the aim to study the living conditions of scheduled castes people, for propagation of knowledge about hygiene, prevention of diseases and to provide medical aid at their door steps.

### Objective:

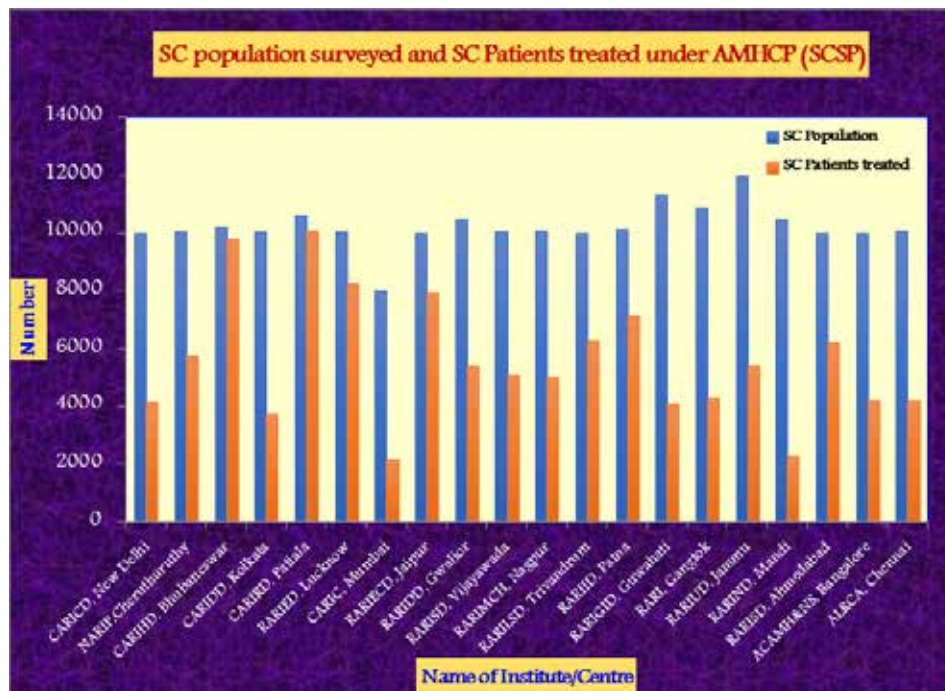
1. Provide medical aid at their door steps.
2. Study of the living conditions of sc people
3. Study of dietetic habits



4. Socio-demographic profile
5. Prevalence of diseases and collection of information related to health status
6. Propagation of knowledge about hygiene, and prevention of diseases
7. Propagation of Ayurveda concept on preventive health in relation to pathyapathya, sadvitta etc.

#### Work carried out

During the reporting year, a total 210215 scheduled castes population surveyed, 135 villages/ colonies covered through 4687 tours in 18 states and medical aid provided to 111775 scheduled castes patients. (Details are annexed at **Annexure-IV**)



**Table - 77: Prevalent Diseases under SCSP**

S. No.	Name of The Institute	Prevalent Diseases
1.	CARICD, New Delhi	Sandhivata, Kasa, Daurbalya, Amlapitta, Madhumeha, Kushtha, Sheetpitta, Vatavyadh, Vibandha, Hypertension
2.	NARIP, Cheruthuruthy	Vatavyadhi, Sandhivata, Amlapitta, Urahsula, Others, Grahanidosha, Swasa, Sirahsula, Vatarakta, Prameha
3.	CARIHD, Bhubaneswar	Sandhivata, Amlapitta, Daurbalya, Kandu, Krimi, Vatavyadhi, Agnimandya, Pratishyaya, Kasa, Vibandha
4.	CARIDD, Kolkata	Sandhivata, Amlapitta, Kasa, Vatavyadhi, Trikgraha, Swetapradar, Grahanidosha, Arsha, Kitibha, Madhumeha





5.	CARIRD, Patiala	Vatarakta, Amlapitta, Daurbalya, Kandu Sandhivata, Madhumeha, Gridhrasi, Kasa, Jwara, Pama,
6.	RARIED, Lucknow	Twakaroga, Sandhivata, Udarroga, Gridhrasi, Prameha, Katishula, Granthi, Jwara, Vatavyadhi
7.	CARIC, Mumbai	Sandhigatvata, Prameha, Kasa, Trikshula, Amlapitta, Pratishyaya, Daurbalya, Vibandha, Amlpitta, Vatavyadhi, Dadru
8.	RARIECD Jaipur	Twakroga, Pratishyaya, Kasa, Sandhivata, Amlapitta, Jwara, Prameha, Others, Rajodos, Shirahshula, Udarasul
9.	RARIDD, Gwalior	Sandhigatavata, Kasa, Vatavyadhi, Vibandha, Pratishyaya, Daurbalya, Swasa, Kandu, Swetaprada, Amlpitta,
10.	RARISD, Vijayawada	Sandhivata, Vatavyadhi, Prameha, Katishula, Daurbalya, Swasa, Gridhrasi, Twakaroga, Amlpitta, Vibandha
11.	RARIMCH, Nagpur	Sandhivata, Vatavyadhi, Amlapitta, Daurbalya, Kasa, Arsha Pratishyaya, Shirahshula, Kosthbadhata, Manyasthambha
12.	RARILSD, Trivandrum	Sandhivata, Vatavyadhi, Sandhishula, Gridhrasi, Others, Panduroga Swasa, Katishula, Kasa, Prameha
13.	RARIID, Patna	Vatavyadhi, Sandhigatavata, Kushtha, Daurbalya, Arsha, Vibandha, Swasa, Katishula, Kasa, Swetaprada
14.	RARIGID, Guwahati	Sandhivata, Amlapitta, Madhumeha, Jwara, Kasa, Vatavyadhi, Kandu, Raktagatvata, Daurbalya
15.	RARI, Gangtok	Vatavyadhi, Sandhivata, Amlapitta, Kasa, Udarashool, Vatarakta, Pratishyaya, Jwara, Shirahshula
16.	RARIUD, Jammu	Kasa, Sandhivata, Kushtha, Vatavyadhi, Amlapitta, Daurbalya, Vatarakta, Krimi, Pratishyaya, Madhumeha
17.	RARIND, Mandi	Sandhivata, Katishula, Raktagatvata, Amlapitta, Jwara, Gridhrasi, Agnimandhya, Madhumeha, Avabahuka, Vatavyadhi
18.	RARISD, Ahmedabad	Swasa, Madhumeha, Kandu, Daurbalya, Ajirna, Kushtha, Vibandha, Kasa, Pratishyaya,
19.	ACAMH&NS, Bangalore	Sandhigatavata, Vatavyadhi, Daurbalya, Prameha, Amlapitta, Kasa, Shiroroga, Jwara, Kushtha, Agnimandhya
20.	ALRCA, Chennai	Sandhigatavata Vatavyadhi, Daurbalya, Pratishyaya, Kushtha, Shirahshula Gridhrasi, Prameha, Kasa, Jwara, Daurbalya

### 6.3 Reproductive and Child Health Care Programme (RCH) under Schedule Caste Sub Plan (SCSP)

**Background:** The women and children are important constituents of any society. In India, from the ancient time, they are considered as a very important segment of society. They also constitute a large population group. From Reproductive and Child Health (RCH) view, this group is vulnerable and at more risk. Despite commendable work done in the field by the Government and NGOs, the health of the mother and child still form one of the most serious problems affecting the community. This situation is graver in the women and children of SC/ST community. UN report says that the average Dalit woman in India dies 14.6 years younger than women from higher castes. A woman's caste in



India increases her exposure to mortality because of poor sanitation and inadequate healthcare. The condition of SC women in India needs more attention.

Ayurveda the ancient tradition of Indian Systems of Medicine has sustained the population for centuries, with effective cures and remedies for numerous conditions, including those relating to women and children, with minimal side effects. As an apex body of research in Ayurveda, under the programme Schedule Caste sub-plan CCRAS has provided health care services and carried out awareness activities for maintenance and promotion of health of SC communities by Ayurvedic approaches through its different Institutes across the country. Considering the strength of Ayurveda in the management of health related problems of women and children, the Council has also decided extend its activities specially for women and children through RCH under SCSP programme at 19 Institutes in 18 States across the country. The programme was carried out from January 2019 to February 2020 with following aim and objectives-

### **AIMS**

- To provide mother and child health care awareness and medical services in the Schedule Caste (SC) dominant community.
- To provide health care services and to create awareness about health hygiene and diet among woman and children of Schedule Caste (SC) dominant Community.

### **OBJECTIVES**

1. To study the Socio-Economic status, living conditions, Educational status, dietetic habits, life styles and health care seeking behaviour of SC Women and Children
2. To generate awareness on Ayurvedic concepts i.e. Swasthavrita, Pathyapathya, Sadvitta, etc. for promotion and maintenance of health and improvement OF the quality of life
3. To provide primary health care services at their door steps through Ayurveda especially to women and children of SC community to reduce the mortality & morbidity.
4. To Collect the data regarding Traditional Practices during Pre-conception, Antenatal, Postnatal period and Children.

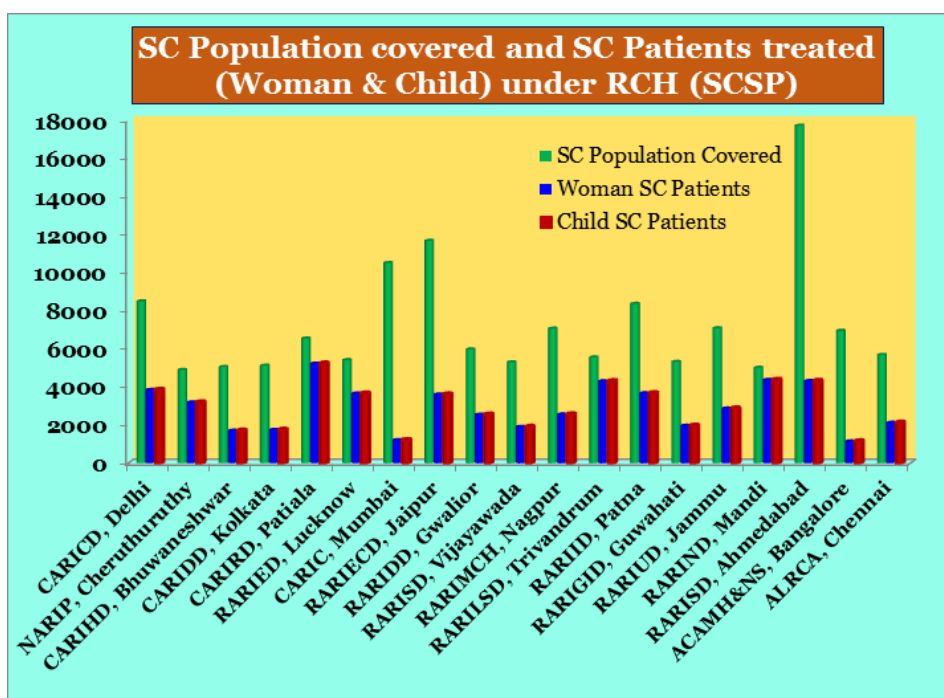
**Methodology:** Each Institute had selected 5-10 villages considering the predominance of SC population with the target of 5000 women and children. The approval of Institutional Ethics Committee was obtained at each participating Institute before initiation of the work. The data was collected in the specially designed data collection forms both in hard and soft copy (e-format). Following activities were carried out in the programme:

1. Demographic house hold survey of SC women and children
2. Health care services to pregnant women
3. Management of various gynecological problems of women of reproductive age
4. Health care services to children up to 12 years of age.

- Awareness activities for prevention of diseases and promotion of health through Ayurveda, home remedies for common ailments, importance of diet and nutrition, significance of ante natal, peri natal and post natal care.

**Work carried out during the reporting year**

Under this programme, total 101 villages were selected based on SC dominated population through 19 Institutes. Total 137558 target population (women & children) surveyed for their health and socio-economic status through 4382 Tours in 18 States. Total 73507 patients (women & children) were treated for various ailments out of which 67748 (55964 Women & 11784 child) were from Schedule caste. Further, 22519 required laboratory investigations were carried out and 1666 health related awareness activities were conducted during the reporting period. The detail comprehensive data on the activities are annexed at **Annexure V**)



**Table -78: Institute wise list of Prevalent Diseases**

S. No.	Name of the Institute	Prevalent Diseases
1.	CARICD New Delhi	Rajonivrittijanyalakshana, Krimi Roga, Kasa, Sandhigatvat, PID, Amlapitta, Swetapradar, Udavarta, Kustha, Asrigdar, Karshya
2.	NARIP, Cheruthuruthy	Udavarta, Vathvyadhi, Sandhigatvat, Swetapradar, Rajonivrittijanya lakshana, Dourblyata, Arthavakshaya, Muthrakrichram, Trikshul.
3.	CARIHD, Bhubaneshwr	Vathvyadhi, Swetapradar, Amlapitta, Udavarta, Amavata, Dourblyata, Sandhigatvat, Yonikandu, Kasa, Arsh,





4.	CARIDD Kolkata	Udavarta, Asrigdar (AUB), Rajonivrittijanya lakshana, Alpartava/ Nastartava, Swetapradar, Kandu, Udara shula, Vidradi, Krimi Roga, Jwara
5.	CARIRD, Patiala	Shwetpradra, Kasa, Sandhivata, Kandu, Pandu, Mutrakricha, Pratishtyaya, Rajonivrittijanya lakshana, Daurbalya, AUB
6.	RARIECD, Lucknow	Sandhivata, Vibandh, Swetapradara, Daurbalya, PID, Udavarta, Jwara, Kasa, Shiroruk, Pama, Krimi Roga, Twak Vikara
7.	CARIC, Mumbai	Sandhigata Vata, Vatavyadhi, Kasa, Pratishtyaya, Swetapradara, Kumarshosha, Agnimandya, Manovahasrotasvikara, Arochak
8.	RARIECD, Jaipur	Twaka Vikara , Pratishtyaya , Daurbalya Amlpitta, Sweta Pradara , Vibandh, Agnimandh, Aamvata, Madhumeha, Raktalpata (Pandu), Kostbaddhata
9.	RARIDD, Gwalior	Swetapradara, Sandhigata Vata ,Jwara, Pratishtyay, Daurbalya, Dysmenorhoea, Kasa, Kandu, Udara roga,
10.	RARISD, Vijayawada	Sandhigatavata, Katigraha, Madhumeha, Udavarta, Twakroga, Mutraroga, Swetapradara, Daurbalya, Karshya, Prathishtyaya
11.	RARIMH, Nagpur	Sandhigatvata, Vatavyadhi, Daurabalya, Kasa, Swetapradar, Alpartava/ Nastartava, Rajonivrittijanya lakshana, Udavarta, Prathishtyaya.
12.	RARILSD, Trivandrum	Sandhigata vata, Vatavyadhi, Rajonivriti, Gridrasi, Swasa, Pandu, Premeha, Grivasthamba, Kasa, Agnimandhya.
13.	RARIID, Patna	Sandhigatvat, Vathvyadhi, Rajonivrittijanyalak shana, Udavarta, Swetapradar, Pandu, Kushta, Krimi Roga, Karshya, Vibandh
14.	RARIGID, Guwahati	Vatavyadhi, Amlapitta, Swetapradar, Sandhigata vata, Udavarta, Jwara, Rajonivrittijanyalakshana, Kasa, Prameha, Yonikandu
15.	RARIUD, Jammu	Vatavyadhi, Pandu roga, Swetapradar, Alpartava/ Nastartava, Kasa, Hridayaroga, Daurabalya, Pandu, Krimi Roga, Kandu
16.	RARIND, Mandi	Shwetapradara, Sandhigatvata, Pandu, Raktgatvata, Amlapitta, Kukshishul, Udavarta, Pratishtyaya, Kukshishul, Kasa
17.	RARISD, Ahmadabad	Rajonivritti, Sandhivata, Swetapradar, Medoroga, Pandu, Vibandh, Madhumeha, Shula (sarvang), Alpartav, Daurbalya.
18.	ACAMH&NS, Bangalore	Sandhigatavata, Vatavyadhi, Madhumeha, Daurbalya, Swetapradar, Udavarta, Kasa, Agnimandya, Prathishtyaya, Jwara.
19.	ALRCA, Chennai	Rajonivrittijanyalakshana, Alpartava/ Nastartava, Swetapradar, Kateegraha, Sandhivata, Prathishtyayam, Aruchi, Jwara, Twak vikaram.



#### 6.4 Integration of AYUSH (Ayurveda) with National Programme for Prevention and control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)

Non Communicable Diseases (NCDs) kills almost 41 million people each year, equivalent to 71% of deaths globally. Every year, 15 million people die from a NCD between the ages of 30 and 69 years; over 85% of these “premature” deaths occur in low- and middle-income countries. Cardiovascular diseases account for most NCD deaths, followed by Cancers (9 million), respiratory diseases (3.9million), and Diabetes (1.6 million).These 4 groups of diseases account for over 80% of all premature NCD deaths. It is projected that globally NCDs will account for nearly 44 million deaths in 2020 (Global status report on non-communicable diseases 2010).

Keeping in view of the mortality rate due to NCDs, the Ministry of Health and Family Welfare, Government of India had launched the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke (NPCDCS) in 2008, to prevent the projected increase in the burden of Non-Communicable Diseases on pilot basis and thereafter it was launched in 21 states during the year 2010-12 with the aim of health promotion; prevention and control of NCDs through early screening.

The leading cause of NCDs is faulty diet and sedentary lifestyle. Ayurveda, the age old indigenous system of health care, primarily focuses on prevention of diseases through life style modifications. Therefore it was felt that AYUSH (Ayurveda) interventions (based on the fundamental concepts) can play a pivotal role in prevention, control and treatment of NCDs. With this view, several meetings were held under the chairmanship of Secretary, AYUSH, Ministry of AYUSH and officials of Directorate General of Health Services, Ministry of Health & Family Welfare and arrived at a conclusion to initiate the programme “**Integration of AYUSH (Ayurveda) with NPCDCS programme**” through CCRAS for execution in 3 identified Districts viz. Bhilwara (Rajasthan), Surendranagar (Gujarat), Gaya (Bihar) to prevent and control the projected increase in the burden of NCDs through early screening. Therefore, in view of the above, Integration of AYUSH (Ayurveda, Yoga, Unani & Homoeopathy) for promotion of health and prevention of diseases has been made one of the mandates of NPCDCS programme.

##### **The main objectives of this programme are as under:**

- Integration of Ayurveda to the existing healthcare system for promotion, prevention and control of non-communicable diseases through NPCDCS program.
- Early diagnosis of NCDs for management through food & life style changes through principles of Ayurveda.
- In chronic cases, to reduce drug dependency through Ayurveda, Yoga practices and Lifestyle changes.
- As an adjuvant therapy to reduce complications and associated symptoms.
- Capacity building of human resources
- Evaluation, monitoring and Surveillance of NCDs



The details about identified 03 districts are as under:

**Table - 79: Districts selected for integrating NPCDCS**

Sl. No.	State	Name of the CCRAS Nodal Institute	Districts	No. of CHCs + District Hospital (DH)	No. of PHCs in the District
1.	Bihar	RARIID, Patna	Gaya	17 CHCs & 1 DH	71
2.	Gujarat	RARISD, Ahmedabad	Surendranagar	10 CHCs & 1DH	37
3.	Rajasthan	RARIED, Jaipur	Bhilwara	22 CHCs & 1DH	75
	<b>3 - States</b>	<b>3 – Institutes</b>	<b>3 - Districts</b>	<b>49 CHCs &amp; 3 DH (52 Centres)</b>	<b>183</b>

**Table - 80: Staff engaged in project**

Name of the District & State	Total posts	Senior Consultant (Ay.)	Research Associate (Ay.)	Pharmacist (Ay.)	Yoga Instructor	Data Entry Operator (DEO)	Multi Tasking Staff (MTS)	
CCRAS Hqrs., New Delhi & Dte. GHS	04	CCRAS Hqr.	1	-	-	-	1	-
		At Dte. GHS	-	-	-	-	-	-
Surendranagar Distt., Gujarat	77	02	20	22	11	11	11	
Bhilwara Distt., Rajasthan	161	02	44	46	23	23	23	
Gaya Distt., Bihar	126	02	34	36	18	18	18	
<b>Total</b>	<b>369</b>							

To determine the outcomes and level of success in achieving the set goals, it was decided to carry out the Quarterly Monitoring visit by a monitoring team comprising of Officers from CCRAS Hqrs, New Delhi, Dte. GHS, Nirman Bhawan and outside expert from Reputed Institution and representatives from District authorities.

In view of the above, Monitoring visits were conducted at Surendranagar, Gujarat on 06<sup>th</sup> - 07<sup>th</sup> June, 2019 and on 03<sup>rd</sup> - 04<sup>th</sup> February, 2020, Bhilwara (Rajasthan) on 20<sup>th</sup> – 21<sup>st</sup> May, 2019, 10<sup>th</sup> July, 2019 and on 30<sup>th</sup> – 31<sup>st</sup> December, 2019 & Gaya (Bihar) on 29<sup>th</sup> – 30<sup>th</sup> May, 2019 and on 23<sup>rd</sup> – 25<sup>th</sup> January, 2020 respectively. The Monitoring Committee in all the districts found that the services provided in AYUSH-NPCDCS Clinics were instrumental in achieving the goals of lowering the burden of NCDs in these areas and also create awareness to protect the health by adopting Ayurvedic intervention, Lifestyle modifications and Yoga practices. The Committee appreciated the work done so far and

supposed that this programme will be success with visible improvement with the outsourced lab facilities for the patients enrolled under the programme.

Further, an Interim-analysis has revealed that the dosage or components of Conventional medicines/ prescription were either reduced or discontinued, in consultation and supervision of Allopathic doctors, after integrating the intervention of Ayurveda, lifestyle modification & Yoga in patients of Diabetes and Hypertension. Ayurveda-Allopathy Integrative Health Care Services seems to be a successful attempt of functional Integration through delivering in the context of Non- Communicable Diseases with encouraging benefits of stand-alone Ayurveda therapies as well as benefits as add-on therapies.

The aforesaid programme is functional at 52 centres i.e. 49 Community Health Centres (CHCs) and 3 District Hospitals of 3 identified districts, through AYUSH-NPCDCS Clinic/Lifestyle modification Clinics, established for prevention through early screening and management of selected Non-Communicable Diseases (NCDs) by Ayurvedic intervention, Lifestyle modifications and Yoga advices.

**Table – 81: Details of Service Delivery**

Name of the District (State)	Details of Service delivery				
	Total No. of Patients Screened	Total No. of Patients Enrolled	Total No. of Patients Enrolled/Registered for Yoga Classes	Camps conducted	No. of Persons attended the Camps
Bhilwara (Rajasthan)	153310	6940	70171	1615	134796
Gaya (Bihar)	70435	3707	246507	1059	40026
Surendranagar (Gujarat)	110145	4126	12887	110	9531
<b>Total</b>	<b>333890</b>	<b>14773</b>	<b>329565</b>	<b>2784</b>	<b>184353</b>

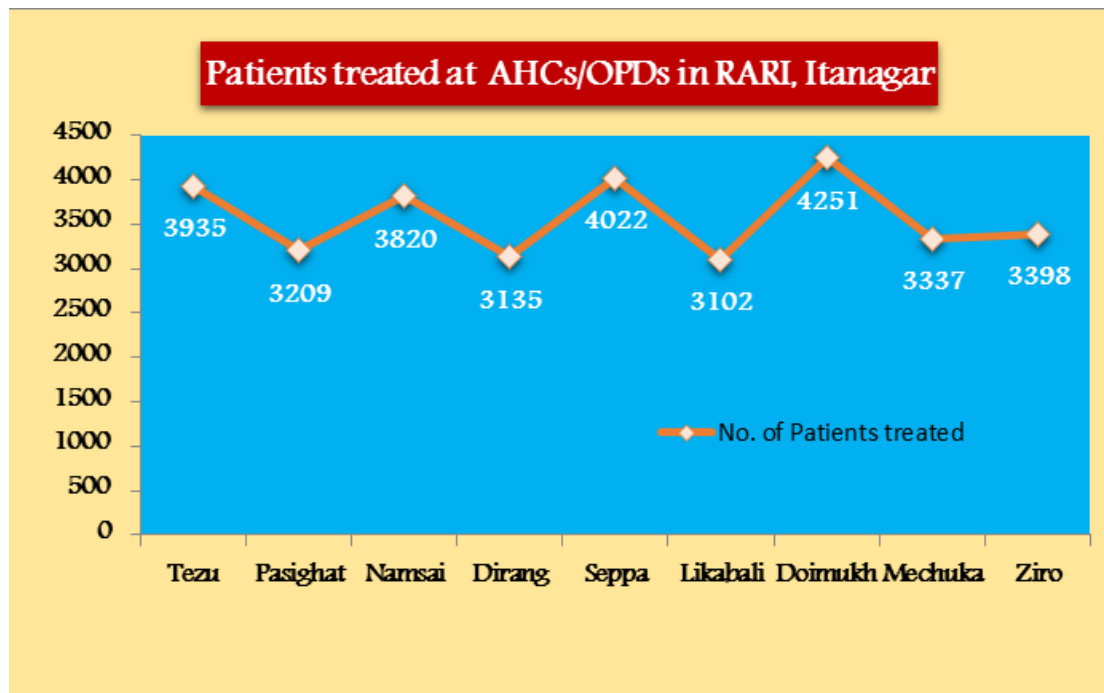
### 6.5 Ayurvedic Health Centres under NE Plan

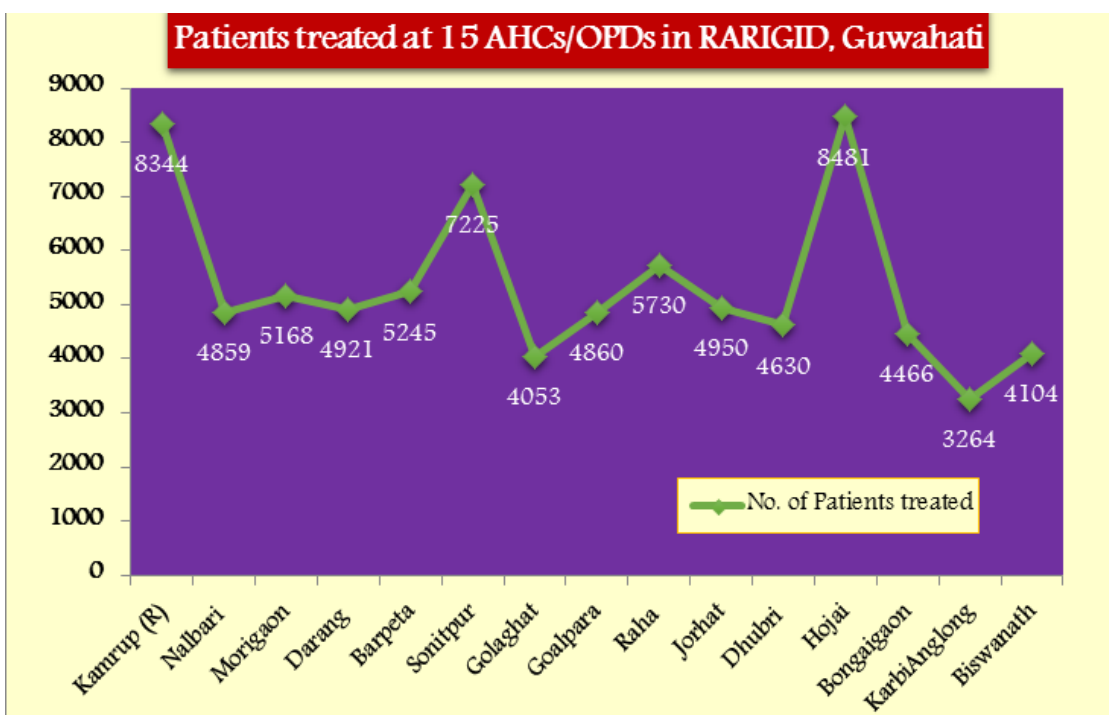
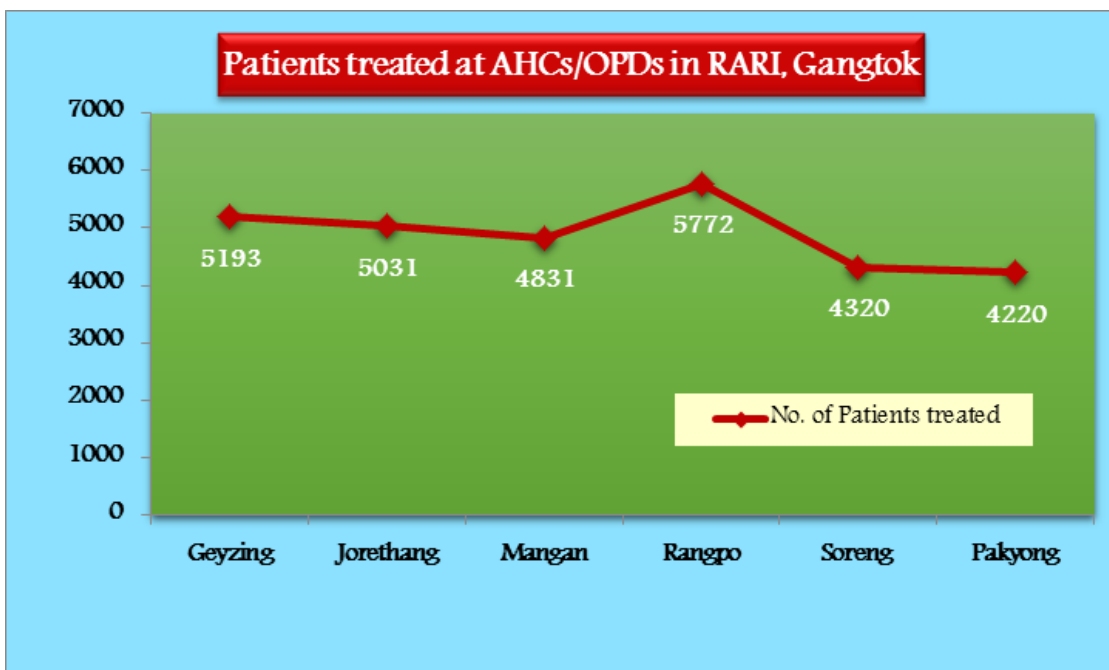
In North Eastern States, 30 Ayurvedic Health Centres in 30 districts of North-East states viz. 15 Ayurvedic Health Centres in Assam state, 6 Ayurvedic Health Centres in Sikkim state and 9 Ayurvedic Health Centres in Arunachal Pradesh state are functioning under the supervision of 3 CCRAS peripheral institutes viz. RARIGID, Guwahati, RARI, Gangtok and RARI, Itanagar in their states under outreach activities. During reporting period, 4 Projects (Ayurvedic Health Centres) has been sanctioned in the last quarter to RARC, Agartala, Tripura. The core objectives of the programme encompassing to provide health care services through OPDs; select research cases of allotted disease and refer to the concerned institutes; create Awareness about hygiene; distribute IEC material among the masses in local language & English/Hindi and document health related demography. Details are as under:



1. **Assam** –15 Ayurvedic Health Centres viz. Kamrup (R), Nalbari, Morigaon, Darang, Barpeta, Sonitpur, Golaghat, Goalpara, Raha, Jorhat, Dhubri, Hojai, Bongaigaon, Karbi Anglong & Biswanath are functioning and under the supervision of Regional Ayurveda Research Institute for Gastro-intestinal Disorders (RARIGID) Guwahati. A total 80300 patients were attended in these 15 centres.
2. **Sikkim** – 6 Ayurvedic Health Centres viz. Geyzing (West Sikkim), Jorethang (South Sikkim), Mangan (North Sikkim), Rangpo (East Sikkim), Soreng (West Sikkim) & Pakyong (East Sikkim) are functioning under the supervision of Regional Ayurveda Research Institute (RARI), Gangtok. During April 19- March 2020, a total 29367 patients were attended in these centres.
3. **Arunachal Pradesh** – 9 Ayurvedic Health Centres viz. Tezu, Pasighat, Namsai, Bomdila, Seppa, Likabali, Doimukh, Mechuka & Ziro are functioning under the supervision of Regional Ayurveda Research Institute (RARI) Itanagar. During April 19- March 2020, total 32209 patients were attended in these centres.
4. **Tripura** - During reporting period, 4 Projects on Documentation of Health Related Demography and Pharmacovigilance of Ayurvedic Medicine (AHCs) has been sanctioned in the last quarter to RARC, Agartala at Karkraban -Gomati District, Jirania -West Tripura District, Moharcherra - Khowai District & Shantirbazar - South Tripura District. The Process for initiation of these projects are under process.

Details are annexed at ANNEXED-VI







## 7. HEALTH CARE SERVICES

### 7.1 Health care services through Out-Patient Department (OPD) and In-Patient Departments (IPDs)

Research oriented health care services have been provided through Out-Patient Departments (OPDs) and In-Patient Departments (IPDs) at 26 peripheral institutes and 4 co-located units of the Council. 6,34,785 patients were benefited during the reporting period.

**Table - 82: Details on beneficiaries in OPD & IPD at CCRAS Institutes**

S. No.	Name of Institute/ Centres/ Unit	Out Patient Department (OPD)						In Patient Department (IPD)			Bed Occupancy %		
		New Patient		Old Patient		Total Patient		Admitted		Discharged			
		M	F	M	F	M	F	M	F	M		F	
1.	CARICD, New Delhi	16834	15182	31090	28442	47924	43624	91548	315	376	324	388	57.13
2.	NARIP, Cheruthuruthy	6009	7433	15686	22670	21695	30103	51798	508	338	562	362	89.05
3.	CARIHD Bhubaneswar	5975	4873	4773	3886	10748	8759	19507	448	358	468	374	72.60
4.	CARIDD Kolkata	5671	4474	10601	9683	16272	14157	30429	131	123	134	131	74.35
5.	CARIRD Patiala	4723	4368	10110	10680	14833	15048	29881	IPD not functioning				
6.	RARIED Lucknow	7175	6079	16271	14509	23446	20588	44034	IPD not Functioning				
7.	CARIC Mumbai	2655	3260	5894	8799	8549	12059	20608	106	251	107	261	49.48
8.	RARIED Jaipur	8716	7164	8245	7185	16961	14349	31310	140	164	148	173	48.78
9.	RARIDD Gwalior	7235	7735	5579	6936	12814	14671	27485	147	185	149	189	22.83
10.	RARISD Vijayawada	5936	6686	18214	21995	24150	28681	52831	89	111	95	114	96.20
11.	RARIMCH Nagpur	2847	4515	5191	9523	8038	14038	22076	171	182	171	183	88.81
12.	RARIMD Bangalore	3963	3114	8102	6607	12065	9721	21786	IPD not available				
13.	RARILSD Trivandrum	3246	5053	5184	10844	8430	15897	24327	188	205	200	223	80.24
14.	RARIID Patna	4082	5236	7612	10194	11694	15430	27124	IPD not Functioning				
15.	RARIGID Guwahati	3472	4072	3399	4113	6871	8185	15056	28	43	28	43	50.00
16.	RARI Gangtok	2131	1848	4325	3336	6456	5184	11640	IPD not Functioning				
17.	RARI Itanagar	1410	1525	1429	1706	2839	3231	6070	IPD not Functioning				
18.	RARIUD Jammu	3183	2443	3821	3235	7004	5678	12682	49	45	51	47	25.56
19.	RARIND Mandi	2332	3759	843	2029	3175	5788	8963	IPD not Functioning				
20.	RARISD Ahmedabad	1736	1685	4385	4286	6121	5971	12092	IPD not available				
21.	RARI Ranikhet	1311	2362	2912	5183	4223	7545	11768	IPD not available				

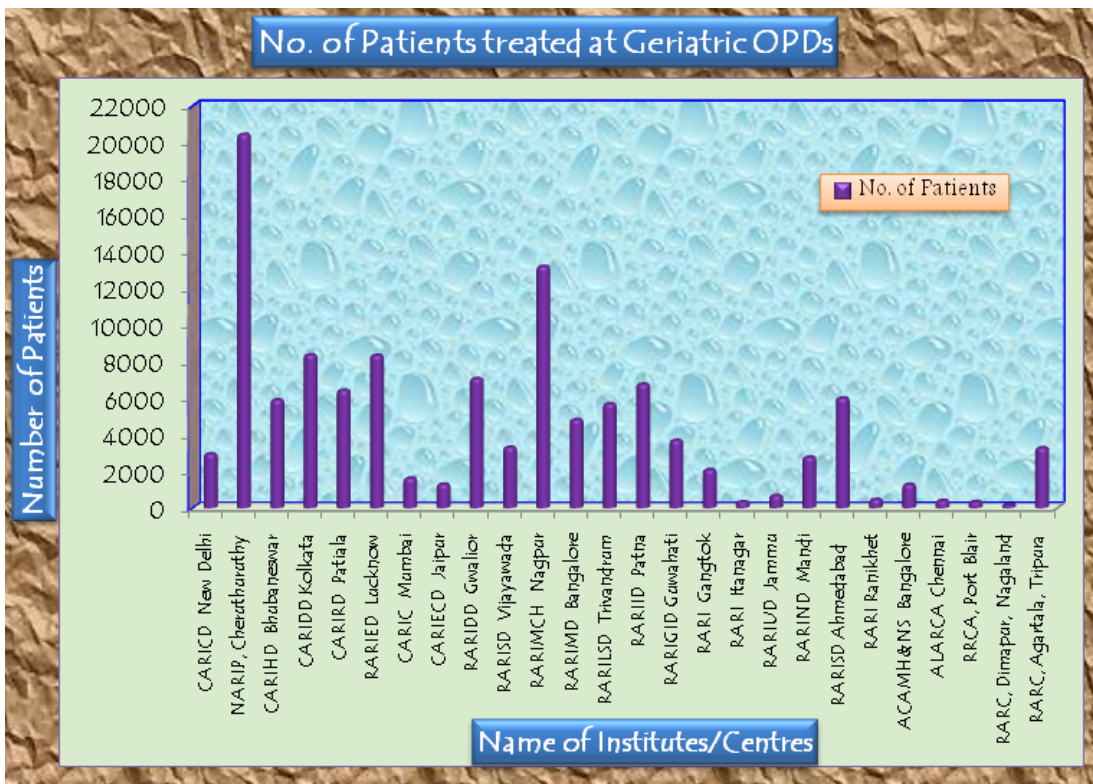
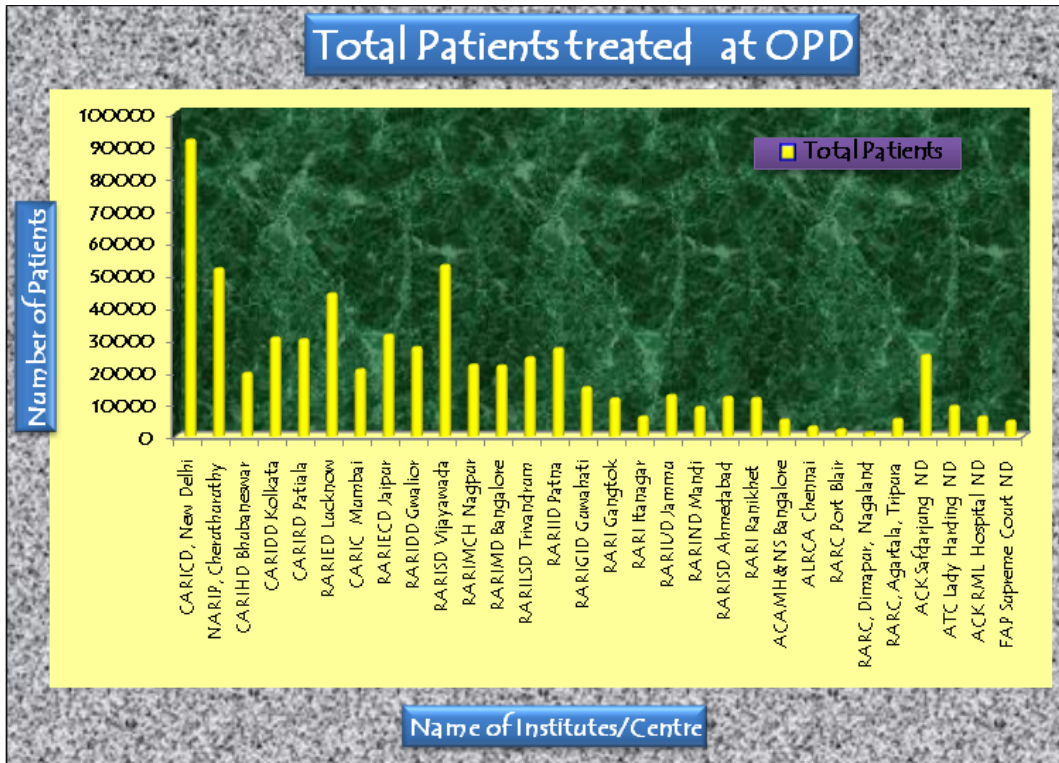


22.	ACAMH&NS Bangalore**	1732	1120	1209	1058	2941	2178	5119	113	64	117	64	43.73
23.	ALRCA Chennai	356	497	829	1314	1185	1811	2996	IPD not available				
24.	RARC Port Blair	469	482	591	576	1060	1058	2118	IPD not available				
25.	RARC, Dimapur, Nagaland	282	301	269	219	551	520	1071	IPD not available				
26.	RARC, Agartala, Tripura	679	1092	1339	2196	2018	3288	5306	IPD not available				
27.	ACK Safdarjung ND	5425	3771	9462	6413	14887	10184	25071	IPD not available				
28.	ATC Lady Harding ND	3097	2551	2108	1563	5205	4114	9319	IPD not available				
29.	ACK RML Hospital ND	1270	828	2363	1536	3633	2364	5997	IPD not available				
30.	FAP Supreme Court ND	1669	855	1551	698	3220	1553	4773	IPD not available				
Total		115621	114363	193387	211414	309008	325777	634785	2433	2445	2554	2552	61.44%

\*Average Bed Occupancy

\*\* ACAMH&NS, Bangalore was re-located at RARIMD, Bangalore w.e.f. 1<sup>st</sup> Oct., 2019.







## 7.2 Special clinics for Geriatric Health care

The Council has initiated promotion of special Ayurveda services for Geriatric health through special clinics for Geriatric health care at 26 CCRAS peripheral institutes. 1,17,783 patients have been benefited during the reporting period.

**Table - 83: Details on beneficiaries in special Geriatric clinics**

S. No.	Name of Institutes/Centre	Geriatric OPD Patients				Total Patient		Grand Total
		New Patient		Old Patient		M	F	
		M	F	M	F			
1.	CARICD New Delhi	448	367	1234	906	1682	1273	2955
2.	NARIP, Cheruthuruthy	2184	2262	8065	7931	10249	10193	20442
3.	CARIHD Bhubaneswar	1769	979	2143	1023	3912	2002	5914
4.	CARIDD Kolkata	1308	846	3742	2479	5050	3325	8375
5.	CARIRD Patiala	1109	620	3033	1668	4142	2288	6430
6.	RARIED Lucknow	1230	595	4498	2026	5728	2621	8349
7.	CARIC Mumbai	164	176	627	655	791	831	1622
8.	CARIECD Jaipur	352	212	478	254	830	466	1296
9.	RARIDD Gwalior	2185	1118	2600	1166	4785	2284	7069
10.	RARISD Vijayawada	306	220	1554	1230	1860	1450	3310
11.	RARIMCH Nagpur	1382	1573	5005	5252	6387	6825	13212
12.	RARIMD Bangalore	663	377	2427	1366	3090	1743	4833
13.	RARILSD Trivandrum	725	1127	1300	2550	2025	3677	5702
14.	RARIID Patna	880	948	2735	2205	3615	3153	6768
15.	RARIGID Guwahati	771	554	1509	862	2280	1416	3696
16.	RARI Gangtok	364	234	1043	454	1407	688	2095
17.	RARI Itanagar	80	58	141	49	221	107	328
18.	RARIUD Jammu	158	95	286	135	444	230	674
19.	RARIND Mandi	746	797	601	629	1347	1426	2773
20.	RARISD Ahmedabad	787	465	3097	1660	3884	2125	6009
21.	RARI Ranikhet	43	75	175	170	218	245	463
22.	ACAMH&NS Bangalore*	309	214	479	278	788	492	1280
23.	ALARCA Chennai	18	59	74	252	92	311	403
24.	RRCA, Port Blair	68	59	120	92	188	151	339
25.	RARC, Dimapur, Nagaland	49	45	54	13	103	58	161
26.	RARC, Agartala, Tripura	380	347	1438	1120	1818	1467	3285
<b>Total</b>		<b>18478</b>	<b>14422</b>	<b>48458</b>	<b>36425</b>	<b>66936</b>	<b>50847</b>	<b>117783</b>

\* ACAMH&NS, Bangalore was re-located at RARIMD, Bangalore w.e.f. 1<sup>st</sup> Oct., 2019



### 7.3 Ayush Wellness Clinic

AYUSH Wellness Clinic was established in President Estate during the month of July, 2015 with a view to provide medical care through various streams of AYUSH (viz. Ayurveda, Yoga and Naturopathy, Unani, Siddha & Homeopathy) to the President, officials of President's Secretariat and residents of the President's Estate. The Clinic was inaugurated by Hon'ble President of India Sh. Pranab Mukherjee on 25<sup>th</sup> July, 2015. During the reporting period, health care services were provided through OPD and Panchakarma therapy to the patients (both males and females). A total 6333 patients were treated in Ayurveda Out Patient Department out of them 4031 were males and 2302 were females. The details are as under:

**Table - 84: Details of patients visiting AYUSH Wellness Clinic**

S. No.	Ayurveda Department	OPD Patients						Grand Total
		New		Follow-up		Total		
		M	F	M	F	M	F	
1.	Out Patient Department	1328	663	2703	1639	4031	2302	6333

During the reporting year, Janu Sandhigata vata, others Vatavyadhi (viz. Katigraha, Gridhrasi, Avbahuka etc.), Medoroga, Madhumeha, Vyanabala Vaishamya, Amlapitta, Jwara, Kasa, Pratishaya, Shwasa, Khalitya-palitya and Pandu roga diseases were found prevalent in OPD.

Besides this, a total 3146 patients (1914 males & 1232 females) were also given various Panchakarma therapies (viz. *Abhyanga, Swedana, Kativasti, Januvasti, Shirodhara, Udvartan, Nasya, Patra potali sweda, Churna Pinda sweda* etc.) according to their diseased conditions.

## 8. MISCELLANEOUS ACTIVITIES

### 8.1. Award - President of India confers Vayoshreshtha Samman 2019 upon CCRAS

The Hon'ble President of India has conferred the Vayoshreshtha Samman upon CCRAS for rendering distinguished services for the cause of elderly persons as part of celebration of the International Day of Older Persons (IDOP) observed on 1<sup>st</sup> October every year, during an event held at Vigyan Bhawan on 3<sup>rd</sup> October, 2019.

Ministry of Social Justice and Empowerment recognized the efforts of the Council in the Geriatric Care domains through the services and related research activities by conferring the award under the category "Best Institution for Research in the Field of Ageing".

The annual award is conceptualized by the Ministry of Social Justice and Empowerment, Government of India to eminent senior citizens and institutions involved in rendering distinguished services for the cause of elderly persons as part of celebration of the International Day of Older Persons (IDOP).

The award was presented by His Excellency Hon'ble Sh. Ram Nath Kovind, the President of India to Prof. Vaidya K.S. Dhiman, Director General of the Council in a function held at Plenary Hall of Vigyan Bhavan, New Delhi on 03<sup>rd</sup> October 2019.





## 8.2. AYUSH Ph.D. Fellowship/SRF Scheme

AYUSH Ph.D. Fellowship Programme has been initiated by Ministry of AYUSH in the year 2016 in all Research Councils through CCRAS as a nodal council to encourage quality research in AYUSH Systems, to further enhance research opportunities for meritorious AYUSH Scholars and to generate good human resource for quality research in AYUSH sector. UGC has mutually recognized AYUSH-NET with UGC-NET for admission to Ph.D. programme and Secretary, AYUSH has requested Vice Chancellors of all universities to extend exemption to AYUSH-NET qualified candidates from their own University Entrance Test.

Total 102 candidates qualified the AYUSH-NET 2018 examination in all 5 streams except Yoga & Naturopathy (92 in Ayurveda, 4 in Homoeopathy, 4 in Siddha & 2 in Unani). Applications with research proposals received from some of the qualified candidates have been reviewed by the subject experts and two meetings of Expert Committee have been conducted for assessment and recommendation of the research proposals. AYUSH Ph.D. Fellowship has been awarded to 12 AYUSH-NET qualified candidates, so far.

This fellowship is also awarded to Non-AYUSH aspirants who have already qualified NET of CSIR, UGC, DBT etc. to pursue Ph.D. in AYUSH related fields in life sciences. The advertisement for Non-AYUSH (non-medical) aspirants was published in Employment News in 22-28 June, 2019 edition and also in all leading National Newspapers on 23.06.2019. Three Non-AYUSH Scholars have been awarded and two are in process for award of AYUSH Ph.D. Fellowship.

In another component of this scheme, applications are invited for selection of Universities/ Institutes running Ph.D. Fellowships/ Junior Research Fellowships (JRF) for streams in Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy to grant them fellowships. The applications are to be considered by the Ministry of AYUSH for selection of appropriate University/Institute on merits.

## 8.3. CCRAS Award Scheme

AYUSH Award Scheme was introduced in the year 2016 for giving awards in four different categories with 3 sub-categories in each (total 12 awards) namely Best Research Paper Award (for Literary, Clinical & Drug Research), Young Scientist Award (for Literary, Clinical, & Drug Research), Life Time Achievement Award (for Best Practitioner, Best Academician & Best Researcher) and Best Teacher Award (for Literary Research Teaching, Clinical Research Teaching & Drug Research Teaching) to encourage Ayurveda fraternity and other scientists for outstanding contribution in the field of Ayurveda.

The AYUSH Award of CCRAS, 2018 were presented to the 11 selected awardees on 14th August 2019 by Shri Shripad Yesso Naik, Hon'ble Minister of State (Independent Charge), Ministry of AYUSH on the occasion of National Seminar on Conservation of Bio-resources of Medicinal value: Current Scenario and Way Forward' scheduled on 14th August 2019 at A. P. Shinde Symposium Hall, NASC Complex, Pusa Campus, New Delhi. Awardees were presented with Cheque of respective award's prize, Certificate, Citation, Stole and Plaque. 4 scientists of CCRAS also received AYUSH Award of CCRAS, 2018 in different categories. List of Awardees is attached.





#### 8.4. Social Media Activities and Initiatives of the Council

The council has carried out various activities through social media with an objective of making relevant information accessible for the welfare of general public. The blog created on the website for this purpose is being updated with creative and informative content received from the scientists of the council regularly. Further, in this direction the Council has taken other initiatives including the following:

1. The Council blog on the website i.e. [www.ccras.nic.in](http://www.ccras.nic.in), is being updated with articles and write-ups on relevant topics received from council scientists all across the country. About 60 write-ups have been added to the existing repository on the blog.
2. All the peripheral institutes of CCRAS are being encouraged to develop brief and general interest articles pertaining to the latest developments in Ayurveda research and topics from Ayurveda and related domains. Such write-ups are being received and collected on the dedicated email account created for this purpose i.e. [ccras.socialmediacontent@gmail.com](mailto:ccras.socialmediacontent@gmail.com).
3. The council has been issuing guidelines for developing such articles that are informative non-controversial and pertain to general health/public health that could be intriguing and beneficial for the public.
4. Further, on recommendations and suggestions of authorities and officials at the Council and Ministry of AYUSH expressed time to time during meetings and other events, activities and achievements of CCRAS and AYUSH is regularly shared through social media platforms. In this direction, to commemorate Ayurveda Day – 2019, the Council has successfully made an impact using social media platforms to spread awareness regarding health related issues for the welfare of general public on the theme “Ayurveda for Longevity”.
5. Additionally, during the Ayurveda Day – 2019 event, public lectures, exhibitions of medicinal plants were organised across the country through CCRAS peripheral institutes and updates regarding the same is uploaded on the social media regularly. Furthermore, special camps, live demonstrations on various issues of public interest were also organized. Taking another initiative, the peripheral institutes of the Council organized *Run for Ayurveda* events in their respective regions. These efforts were appreciated by all and huge participation was witnessed. These events were thoroughly publicized through social media.
6. In order to enhance the impact and scale of social media efforts, identified nodal officers from the peripheral institutes were encouraged and assisted as needed for leveraging social media platforms for publicizing such events for public welfare. These officers were inducted into the social media page as editors so as to facilitate their social media activities and ensure timeliness of information shared.
7. Further, a twitter handle for the Council viz. @CCRAS\_MoAYUSH has been created to complement the existing efforts in this direction. The handle is kept active with timely sharing of information released by the Council and the Ministry.



8. Further, the YouTube channel of the Council has also been leveraged to share information about the activities and achievements of the Council. The channel (<http://www.youtube.com/c/CCRASMinistryofAYUSH>) has been kept active with video messages containing relevant information.

### 8.5. Musk Deer Research Project

The Council is maintaining a Musk Deer Research Centre (MDRC) at Mehroori, Distt.-Bageshwer under Regional Ayurveda Research Institute, Ranikhet, Uttarakhand. The main objective of the centre is to observe the pattern of breeding, feeding habit and behavior of musk Deer.

During the reporting year 2019-2020, data related to life cycle of musk deer in captivity including their feeding habit, behavioural pattern, diseases and their control were collected. In the reporting year, population of the musk deer Farm is 13 (7 males and 6 females). Total five female were crossed in the reporting year.

It is reported that the musk deer thrash on fodder in the form of soft leaves, which changes according to season i.e. round the year they don't rely on one type of fodder & changes according to change in season and availability. Fodder in the form of soft leaves in adequate amount like soft leaves of *Holboellia latifolia* (Ghophal), *Cotoneaster affinis* (Reevish), *Persicaria nepalensis* (Ratgiali), *Prunus domestica* (plum), *Bergenia ligulata* (Pashan bhade), *Rumex nepalensis* (Kluhia), *Phaseolus vulgaris* (Phras been) *Strobilanthes dalhousianus* (Ayyari) and *Jasminum officinale* (Lamed) etc and flower of *Rhododendron sps.* was provided.

### 8.6. Information about different Cells of CCRAS

#### 8.6.1. Intra Mural clinical Research and Protocol Development Cell

**Background of the scheme/cell:** The Council has framed Intra Mural clinical Research and Protocol Development Cell to execute the clinical research and for time bound formulation, co-ordination, development and promotion of clinical Research on Scientific lines.

**Details of scheme and objectives:** The Co-ordinator, members and secretarial staff were involved as per requirement for formulation implementation and monitoring of the project as per the objectives of this cell and all nodal officers related to clinical research projects were concerned as per assignment from time to time..

#### Objectives

- Submission of updated status of Intra Mural Clinical Research Projects for monthly quarterly and annual report and also parliament question related to the issue.
- Maintenance of details of all the files related to Intra Mural Clinical Research Projects being dealt by technical officer and admin section for ready appraisal.
- Examination and processing the Intra Mural Clinical Research Projects submitted by the external organization from time to time,



- Processing of the collaborative project for appraisal of ISC, PEMC, SAB, SAG as appropriate in association with concerned Nodal Officer and Programme Officer
- Coordination of collaborative projects by concerned Nodal Officer and Programme Officer.

### Activities and achievements

Scrutinized various concept notes of research proposals, intra mural clinical projects through Internal Scrutiny committee (ISC) and IMR Cell has also drafted the protocol on following disease conditions during this financial year (2019-20)

#### List of projects under Collaborative projects:

1. Systems Biology approach to delineate molecular signatures of Prakriti in healthy humans.
2. An investigation to evaluate the efficacy of Cannabis leaf preparation along with the Cancer Chemotherapy in patients with locally advanced solid tumours in improving the quality of life and minimizing side effects of the chemotherapy
3. A double blind, double dummy prospective randomized controlled study to evaluate the efficacy of classical Ayurveda management versus Methotrexate in Rheumatoid Arthritis-(AMRA Study)
4. A 36 week randomized double-blind placebo-controlled Crossover study to investigate efficacy and sustainability of individualized Ayurveda treatment in various subgroups of sub-optimally controlled Type 2 diabetes patients on top of pre-existing Oral drug therapy
5. Pre Clinical evaluation of Ayurvedic formulations against ionizing radiation-induced acute dermal injury in rats- implications in clinical study
6. Development of Automated Basti Yantra – A comprehensive tool for therapeutic induction of Enema

#### Intra Mural Clinical Research Projects

1. Impact of Ayurveda Based Lifestyle Advocacy and Practices among apparently healthy individuals across selected cities in India - A Randomized Parallel Group Study
2. Evaluation of efficacy and safety AYUSH-M3 in the management of Pre-hypertension - A double blind randomized control clinical study
3. Clinical evaluation of Lavan Bhaskara Churna in the management of AamAjirna- A Randomized parallel group study
4. Clinical evaluation of Vajra Kshara Churna in the management of AamAjirna- A Randomized parallel group study
5. Clinical evaluation of Sanjeevani Vati and Pippaladyasava in the management of Agnimandya
6. Clinical evaluation of Lashunadi Vati in the management of Agnimandya
7. Evaluation of AYUSH-SR Tablet in Occupational stress Among Nurses- A Randomized Double Blind Placebo Controlled Clinical Study





8. Randomized, Placebo-controlled, Double-blind clinical trial to evaluate the effect of Trikatu in Subclinical Hypothyroidism
9. Clinical efficacy and safety of Arogyavardhani Vati and Pippalyasava in the management of Non-Alcoholic Fatty Liver Disease (NAFLD)- An open label prospective clinical trial.

### 8.6.2. Activities and achievements of “CCRAS -Drug and New Drug Development Cell”

**Background:** The Ayurvedic medicines are broadly classified into 2 categories viz. i) classical Ayurvedic medicines which are manufactured in accordance with the formulae described in authoritative books of Ayurveda as specified in the First Schedule of Drugs & Cosmetics Act 1940, Rule 1945 and ii) Patent or proprietary Ayurvedic medicines which are manufactured containing ingredients mentioned in authoritative books of Ayurveda as specified in the First Schedule but not administered by parenteral route and also formulation not included in the authoritative books.

The Council undertakes research for validation of Classical Ayurvedic formulations and scientific validation of new formulations/drugs. Under validation of classical Ayurveda formulations, the Council has identified classical Ayurveda formulations for identified disease conditions referring from Ayurvedic pharmacopeia /Ayurvedic Formulary of India, Essential Drug list of ASU medicines (2013), Ministry of AYUSH and other Ayurveda classical texts. These quality assured classical formulations are being validated through Council's institutes engaged in clinical research in a phased manner to generate evidence of their clinical efficacy and safety. Some of the formulations are clinically validated for different disease conditions and some are used in different combinations for the same or different disease conditions.

Under drug development, new formulations/drugs are developed taking leads from Ayurvedic literature or Local Health Traditions through a systematic process of drug development. viz standardization, preclinical safety/toxicity studies and /or biological activity and clinical study as per requirement.

#### Details of the Scheme and Objectives

The CCRAS-DRUG and NEW DRUG DEVELOPMENT Cell was set up during the year 2017-18 with following terms of references:

1. Submission of updated status and preparation of drug supply for IMR and collaborative research projects.
2. Liaisoning with the CCRAS institutes and other organizations/industries regarding formulation, standardization, preclinical (as applicable), preparation and supply.

#### Activities & Achievements

- ❖ Supply orders along with SoP , quality control parameters etc. for 12 classical Ayurveda medicines viz. *Lohasava, Amalaki Churna, Narikela Lavana, Amalkyadi Churna, Avipattikar Churna, Shatavari Guda, Ashokarishta, Pushyanuga Churna, Usheerasava, Anu Taila, Saubhagya Shunthi Paka and Dashmularishta* for 7 clinical research projects under Annual Action Plan 2017-18 /2018-19 were



placed for preparation to M/s IMPCL and the medicines have been supplied to CCRAS participating centres and remaining work is under progress.

- ❖ Under drug development, four quality assured coded Ayurvedic drugs viz. Ayush SR, Ayush PVK gel, Ayush CCT and Ayush Manas were supplied to concerned collaborating /CCRAS institutes for IMR/collaborative clinical research projects. Further, the Cell has undertaken work pertaining to preparation and supply of other 05 drugs viz. Ayush AGT lotion, Ayush AGT cream, Ayush LND tablet, Kuberaksha Vati and Dashamula taila, which is under progress.
- ❖ For the second phase of the project entitled “Feasibility of introducing Ayurveda intervention in Reproductive and Child Health (RCH) in PHCs of selected district (Gadchiroli) of Maharashtra”, procurement related task for 3 drugs viz. Ayush BL oil, Ayush SDM tablet and Ayush PK Avaleha at M/s IMPCL was initiated.

### 8.6.3. CCRAS-Journal Secretariat Cell

The CCRAS-Journal Secretariat was set up by 15<sup>th</sup> May, 2017 with following terms of references:

1. The Secretariat will refer issues related to Journal of Drug Research in Ayurvedic Sciences (JDRAS) and Journal of Research in Ayurvedic Sciences (JRAS) through respective editors/managing secretariats of the Journal from time to time.
2. The secretariat will liason / coordinate with concerned stakeholders for expedition of related work and sustainable publication of the CCRAS Journal.
3. The Secretariat will also put the progress of the Journal from time to time for Monthly/Quarterly/ Annual Report through respective Editor / Managing Secretariat.

#### Activities of CCRAS-Journals Secretariat

1. Promotion of both JDRAS and JRAS has been carried out at different academic institutions of AYUSH and University.
2. Process of E-ISSN of JRAS has been completed and received E-ISSN number i.e. 2581-9895.
3. During the reporting period Council published.
  - a. **Journal of Drug Research in Ayurvedic Science** – Volume 3, Issue 3 (July-September 2018), and Volume 3\_Issue 4 (October-December 2018).
  - b. **Journal of Research in Ayurvedic Sciences** – Volume 2, Issue 4 (October-December 2018).
4. International Editorial Board members have been included in CCRAS Journals (JDRAS and JRAS).
5. For wider dissemination of scientific works in AYUSH systems among the research community, the journals were distributed among the stakeholders including Scientific Advisory Board, Scientific Advisory Group, AYUSH Institutions and made accessible through the wide network of peripheral Institutes of the Council.



6. Copies of CCRAS research journals were provided to International Institutions under collaboration with Ministry of AYUSH.
7. Complimentary copies are being provided for eminent delegates visiting the council.
8. Timely meeting were organized with the publishing venter Ms. Jay Pee Brothers Medical Publisher, New Delhi, for due deliberations over issue related to editorial processing, publication, printing, pricing and distribution of the journal.

#### 8.6.4. Intellectual Property Rights (IPR) and Commercialization

CCRAS, through its drug development program is undertaking development of new formulations/ drugs taking leads from Ayurvedic literature through a systematic process of drug development viz. standardization, preclinical safety & clinical study as per requirement. Based on this, CCRAS has set up “The intellectual Property Rights & Business Development (IPR&BD) Cell” during the year 2017-18 with following terms of references:

1. Co-ordination of all issues related to Intellectual Property Right (IPR) & Patenting of Technologies development by CCRAS through Intra Mural Research (IMR) & Extra Mural Research (EMR).
2. Dissemination of Intellectual Property Rights (IPR) potential & Promotion of commercialization of the products & technologies developed by CCRAS.
3. Periodical training on Intellectual Property Rights & Business Development (IPR&BD) issues.

Till date, 11 technologies have been development and commercialized through National Research Development Corporation (NRDC) for wider public utility.

During the last five years CCRAS has developed and commercialized the following three drugs which are readily available in the market:

1. AYUSH 64 An Anti Malarial Formulation has been commercialized to 3 firms.
2. AYUSH 82 An Anti Diabetic Ayurvedic Formulation has been commercialized to 11 firms.
3. AYUSH SG An Anti-Rheumatoid Arthritis preparation has been commercialized to Six Firms.

#### Achievements during the current year:

1. Preparation of list of Process/Technologies for Commercialization of CCRAS products and fixing one time lumpsum amount and annual royalty for each CCRAS product.
2. Revenue Generation of CCRAS Technologies (out of Premia and Royalty) for user charges of CCRAS.
3. One joint patent filled in between CCRAS and Indian Institute of Technology (IIT), Delhi entitled “A process for producing a medicated thread for the treatment of Ano-rectal Diseases during the reporting period.



4. Commercialization of Ayush–CCT (Ayush Cardiac Care Tea) a Product developed by CCRAS by adapting to standard regulatory norms.
5. Benchmarks for undertaking research/research consultation for already commercialized / marketed Ayurveda Products has been successfully incorporated at Sl.4. of existing CCRAS Research Policy duly approved by Hon'ble MoS (IC) in the capacity as the President of Governing Body of CCRAS and successfully uploaded in the website of CCRAS.
6. The Council has entered a Memorandum of Understanding (MOU) with Invest India, a section 8 company under the Ministry of Commerce and Industry, Govt. of India, located at Vigyan Bhawan Annexe, Maulana Azad Road, New Delhi-110011, on behalf of Accelerating Growth of New India's innovations (AGNII), a project under the leadership of the Principal Scientific Adviser to the Government of India and housed at Invest India for the cooperation in the field of transfer of technology and commercialization of R&D outcomes and other related aspects
7. The Council has successfully submitted the details of products of CCRAS in a prescribed application format of Accelerating Growth of New India's Invitations (AGNII) portal: [www.agnii.gov.in](http://www.agnii.gov.in) so that they can be show cased on the AGNII website.

#### 8.6.5. International Cooperation

The popularity of Ayurveda is increasing day by day resulting created a demand worldwide. There is a growing interest for authentic information of Ayurveda, therefore, the Ministry of AYUSH through CCRAS has signed Memorandum of Understanding with various institutions in foreign countries for deputation of Ayurveda experts to take up teaching, clinical work and for research activities as per institutional requirement to promote and propagate Ayurveda in that country. In addition, the Council is promoting evidence based research of Ayurvedic Medicines in cooperation with foreign institutions under MoUs. Experts from the Council are also participating in international conferences, workshops, exhibitions, trade fairs etc. India for promotion of Ayurveda as a Systems of Medicine.

#### International Tour

- ❖ Dr. A.K. Jain, RO (Ay.) & Dr. C. Ashwin, RO (Ay.) were deputed as team member under the leadership of Shri P.K. Pathak, Additional Secretary, Ministry of AYUSH to participate in the events "The release of the WHO Global Report-2019 on Traditional and Complimentary Medicine" on 20<sup>th</sup> May, 2019 and Workshop on the " Advancements in the contributions of AYUSH systems in supporting India's efforts to achieve Universal Health Coverage (UHC) on 21<sup>st</sup> May, 2019 at India Room, WHO Headquarters, Geneva, Switzerland during 72<sup>nd</sup> World Health Assembly, 2019.
- ❖ Dr. Raman Kaushik, RO (Ay.) was deputed as a member of delegation led by Dr. Anupam, Director, RAV to participate in China International Fair for Trade in Services (CIFTIS), 2019 at Beijing, China from 28<sup>th</sup> May, 2019-1<sup>st</sup> June, 2019.
- ❖ Dr. Shobhit Kumar, RO (Ay.), CCRAS was deputed as a member of delegation led by Sh. P.N. Ranjitkumar, Joint Secretary, Ministry of AYUSH for participating in the 9<sup>th</sup> International Conference on Traditional and Complementary Medicine (INTRACOM) organized by Ministry of Health,



Malaysia in collaboration with UniversitiTunku Abdul Rahman (UTAR) from 03<sup>rd</sup> - 05<sup>th</sup> August, 2019 and 6<sup>th</sup> Bilateral Technical Meeting on Cooperation in the field of Traditional Medicine between India and Malaysia on 6<sup>th</sup> August, 2019 organized by Ministry of Health, Malaysia at Kuala Lumpur, Malaysia.

- ❖ Dr. Rajeshwari Singh, RO (Ay.) was deputed as a member of delegation led by Secretary (AYUSH) to participate in 21<sup>st</sup> International Ayurveda Symposium at Birstein and for interaction meetings with officials of German Govt. and other organisations in Germany from 12<sup>th</sup> -15<sup>th</sup> Sep., 2019.
- ❖ A delegation led by Prof.Vd. K.S. Dhiman, Director General, CCRAS comprising Smt. Shiela Tirkey, Under Secretary, Ministry of AYUSH and Dr. Deepak Londhe, RO (Ay.), CCRAS were deputed by the Ministry of AYUSH, Govt. of India for participation in Symposium on “Healthy Ageing through Ayurveda” under the India-Japan cooperation in the field of Ayurveda organized by Ministry of AYUSH and Embassy of India Tokyo, Japan from 1<sup>st</sup> - 4<sup>th</sup> December, 2019.
- ❖ Dr. Amrish Prakash Dedge, RO (Ay.) was deputed as a member of delegatrion of Ministry of AYUSH to attend 3<sup>rd</sup> meeting of BIMSTEC Task Force for Traditional Medicine (BTFTM) at Kathmandu, Nepal from 4<sup>th</sup> - 5<sup>th</sup> February 2020. The meeting was hosted by Ministry of Family and Population, Government of Nepal.
- ❖ Dr. T. Saketh Ram, RO (Ay.), NIIMH, Hyderabad was deputed as a member of delegation under the leadership of Sh. P. N. Ranjitkumar, Joint Secretary, Ministry of AYUSH from 18<sup>th</sup> -19<sup>th</sup> February, 2020 to participate in International working group meeting at Tokyo, Japan.

#### **MoU's SIGNED BY CCRAS WITH INTERNATIONAL ORGANIZATIONS:**

- Memorandum of Understanding (MoU) between Central Council for Research in Ayurvedic Sciences (CCRAS), Ministry of AYUSH, Govt. of India, New Delhi and Department of Neurology and Complementary Medicine, Lutheran Hospital, Hattingen, signed on 3<sup>rd</sup> April, 2019 on Cooperation in the field of Research and Education in Ayurveda for a duration of five years.

#### **MoU's SIGNED BY CCRAS WITH INDIAN ORGANIZATIONS:**

- Memorandum of Understanding (MoU) between Central Council for Research in Ayurvedic Sciences (CCRAS), Ministry of AYUSH, Govt. of India, New Delhi and Indian Institute of Science Education and Research (IISER), Pune, signed on 6<sup>th</sup> June, 2019 to establish a CCRAS-IISER Animal Unit (CIAU) in NFGFHD, IISER PUNE for aduration of three years.
- Memorandum of Understanding between Invest India for Accelerating Growth of New India's Innovations (AGNII) Project, office of the Principal Scientific Adviser to the Govt. of India and Central Council for Research in Ayurvedic Sciences (CCRAS), Ministry of AYUSH, Government of India, signed on 14<sup>th</sup> August, 2019 for Cooperation in the field of transfer of technology and Commercialization of R&D outcomes and other related aspects.
- Memorandum of Understanding between Central Council for Research in Ayurvedic Sciences (CCRAS), Ministry of AYUSH, Govt. of India, New Delhi and Jawaharlal Nehru University, New Delhi, signed on 20<sup>th</sup> November, 2019 for co-operation in Research & Development and Training



in Ayurveda & traditional Medicine.

- Memorandum of Understanding between Central Council for Research in Ayurvedic Science (CCRAS) and Institute of Liver and Biliary Sciences (ILBS), New Delhi, signed on 20<sup>th</sup> November, 2019 to carry out the collaborative research project entitled 'Evaluation of hepato-protective efficacy and underlying molecular mechanism of Ayurvedic formulations, AYUSH-PKT & AYUSH-GMH in experimental animal models of alcoholic and non-alcoholic fatty liver diseases: A pre-clinical study' as per the terms and conditions and guide lines of CCRAS Research Policy.

#### 8.6.6. Information Technology Cell

Apart from routine activities related with Information Technology matters, the Information Technology Section has been actively involved in coordination and organisation of various activities of this Council. In addition to providing incessant technical support to the scientists of the Council, the section has organized online trainings with objective to upskill the scientists of the Council with new technology initiatives that would enhance their research effectively. Also, in order to streamline and facilitate online activities of the Council, the section has been making efforts to share relevant information with all concerned officer and officials of the Council through circulars, guidelines and letters time to time. Trainings and workshops aiming to enhance IT skills of Council employees were developed and imparted from time to time. The IT section has successfully coordinated for organisation of virtual conferences, webinars and off late the research meetings related to Covid-19.

Additionally, the following activities are also carried out by the section:

1. Updating information on the website of CCRAS.
2. Uploading information/data on Council's website (Advertisements, Tenders, Notices, Results, Quiz, Brochures, Blogs etc.).
3. Management of all web cloud, Virtual Machine (VM) and Virtual Private Network (VPN) related matters in regard to the website of CCRAS.
4. Providing Network Support (as nodal NKN point) to the Councils within the CCCB Complex.
5. Providing assistance regarding website domain and cloud related to various portals of CCRAS.
6. Maintenance of File Tracking System (FTS) application for transparent work flow at CCRAS.
7. Coordination with National Informatics Centre (NIC) for relevant matters on behalf of the Council.
8. Maintenance of Internal Local Area Network (LAN) facility at CCRAS.
9. Handling of communications related to miscellaneous processes including recruitment etc.
10. Supervising the AMC of IT equipment of the Council.
11. Managing safety of IT equipment through antivirus deployment.
12. Disbursement of information/notice to peripheral institutes as and when necessary.



13. Providing necessary IT support to various committees e.g. PIMS.
14. High Quality Scanning of documents for various sections and Scientist's of this Council.
15. Technical support to peripheral institutes for NIC related matters including registration in GeM, creation of NIC/Gov email IDs and uploading of data in CPP Portal etc.
16. Collection of survey reports (Pictorial form) through digital platforms and maintaining at CCRAS HQ.
17. Creation and maintenance of CCRAS directory including contact related information of all Technical officials of CCRAS and updating of the same.
18. Coordination and management of various meetings and webinars of CCRAS, enabling Video Conferencing (VC) Meetings and Webinars. Apart from other virtual activities.

### Achievements

1. Arrangements for Virtual Inauguration of new building of CCRAS' institute RARI Itanagar through Video Conferencing by Shri Shripad Yesso Naik, Minister of AYUSH.
2. Coordination and all technical support in the Webinar on Workshop on Scientific Writing for the Investigators of Research Projects on COVID-19 undertaken by the Ministry of AYUSH & Common Technical Session and Panel Discussion.
3. Technical assistance for virtual meeting of Proposal on Academy for Research & Training in Health Science (ARTH)" under the chairmanship of Secretary, Ministry of AYUSH
4. Coordination for all Technical/Administrative review meetings of the Council through virtual media.
5. Organizing and management of online interviews for recruitments to various peripherals at the Council.
6. Facilitating presentations and technical support for Council's meeting such SAB/SAG/SFC/GB/EC held through Video Conferencing.
7. Coordination and arrangements for the launch of new portal of Ayurveda through [ccras.res.in](http://ccras.res.in) (new domain).

#### 8.6.7. Extra Mural Research (EMR) Cell

**Background:** AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha, Sowa Rigpa and Homoeopathy) systems of medicine are being used for centuries and have continuous traditions of acceptance and practice. There is a need for spreading the knowledge & benefits of AYUSH system of medicines to the large section of the peoples across the globe. This is possible only if the drugs & practices are validated through an exhaustive research process based on standard parameters. In this current genome era evidence for safety and efficacy is being demanded by the users. Though various organizations are actively involved in this herculean task, yet a lot remains to be achieved. The Ministry of AYUSH has taken up a series of programs/interventions wherein to create evidence based support for the efficacy, safety, quality control and consistency of products. The Ministry of AYUSH has also introduced





a scheme for Extra Mural Research to encourage R&D in priority areas based on disease burden in alignment to National Health programme.

## OBJECTIVES

The objectives of Extra Mural Research Scheme are as follows:

- To support Research and development in Extra Mural mode for treatment of prioritized diseases. To Standardize/validate and develop scientific evidence for safety, efficacy and quality of AYUSH drugs & therapies.
- To make scientific exploration of AYUSH system with interdisciplinary approaches.
- To achieve need based outcome in a priority areas.
- To develop the potential of Human Resource in AYUSH system specially to inculcate aptitude and expertise to AYUSH systems.

As per the directives of the M/o AYUSH as well as per the guidelines of the EMR Scheme, the CCRAS is screening all the new proposals related to Ayurveda received from different organizations and also evaluating the progress reports of all the funded projects.

During the reporting period, in response to the advertisement published by the Ministry of AUUSH inviting research proposals especially on Non-Communicable Diseases (NCDs), Council had received 418 new proposals from different research/academic organizations across the country.

All the proposals had been scrutinized thoroughly by the Council and those found suitable forwarded to the ministry for further evaluation. The Council also had provided technical supports to the Investigators whose proposals found technically sound but required some modifications.

As a member of different committees of EMR Scheme at Ministry level i.e. Project Screening Committee (PSC) and Project Approval Committee (PAC) of EMR, the Council had actively participated in the further screening of the proposals forwarded by the council. 02 meetings of PSC and 02 meetings of PAC were held at M/o AYUSH during the reporting period.

The Council had also provided inputs for the Annual Report of the EMR Scheme of the M/o AYUSH and evaluated the progress reports of 25 ongoing projects related to Ayurveda system. Provided the inputs to the Agency appointed by the Ministry for evaluation of the performance of EMR Scheme as a whole. Provided answers on the questions put by the Members of Parliament and coordinated other various issues related to ongoing and new projects time to time.





## VI. INFORMATION, EDUCATION AND COMMUNICATION

**Background of the IEC Cell:** The cell has enabled to enhance the knowledge & awareness, propagation, promotion, popularity, of Ayurveda for achieving and maintaining good health among the people in India and worldwide by conducting various Arogya Fairs/ Exhibitions etc.

### Scheme & Objectives:

- Processing and Co-ordination for the successful conduction for the IEC activities such as National Arogya Mela/ State Arogya Mela, Exhibitions, Workshops/ Seminars/ Brain Storming Sessions in the India arranged by Ministry of AYUSH and other esteemed Government and private organizations.
- Coordination with Ministry of AYUSH for IEC Activities by sending the detailed reports of IEC activities of the Council.
- Cell maintains the updated status of IEC activities of the Council throughout the year.

### Details of IEC Activities of CCRAS are as under:

#### 1. Seminar/Workshop/Conference

- (1) Training on Standardized Prakriti Assessment Scale and AYUR Prakriti Assessment Portal was imparted to the faculty members and PG Scholars of the Department of Rachana Sharira and Department of Kriya Sharira, Chaudhary Brahma Prakash Charak Sansthana, Khera Dabur, New Delhi on 6<sup>th</sup> April, 2019. Total 13 participants attended the training.
- (2) A Training Programme for the Investigators of the Multi-centric Collaborative project -Clinical Evaluation of AYUSH-SL in Chronic Filariasis Lymphoedema was held on 24<sup>th</sup> April, 2019 at CARIDD, Kolkata (Nodal centre of the Project). The objective of the Training was to give orientation to the Investigators on the clinical research protocols, investigations and implementation modalities.
- (3) The Workshop on 'Basic & Applied Aspects of Molecular Medicine' for Scientists of CCRAS was organized by the Council in collaboration with Jawaharlal Nehru University, New Delhi on 25<sup>th</sup> May, 2019 at AYUSH Auditorium, CCRAS Hqrs., New Delhi. The objective of the Workshop was to give an insight to CCRAS Scientists on the Basic & Applied Aspect of Molecular Medicine which would help to explore and interpret the Primary understanding of Ayurveda in light of contemporary science to offer holistic health care. Total 65 participants from CCRAS Hqrs., New Delhi; CARICD, New Delhi and Council officers presently deputed at Ministry of AYUSH attended in the Workshop.



A view of inaugural session of the Workshop on 'Basic & Applied Aspects of Molecular Medicine' for Scientists of CCRAS

- (4) The 2 day National Seminar on 'Conservation of Bio-resources of medicinal value: Current scenario and way forward'; a brainstorming session on 'Setting up of National network on documentation of Local Health Traditions (LHTs) and Ethnomedical Practices (EMPs) & formulation of a National strategy for their validation and IPR Protection' and 'AYUSH Award Ceremony 2018' was organized by CCRAS on 13<sup>th</sup> -14<sup>th</sup> August, 2019 at A.P. Shinde Memorial Hall, NASC Complex, ICAR, Pusa, New Delhi.

The event was inaugurated by Shri Shripad Naik, Hon'ble Minister of State (IC) for Ministry of AYUSH & Minister of State for Defence, Govt. of India on 14<sup>th</sup> August, 2019 and presided over by Vaidya Rajesh Kotecha, Secretary, AYUSH and Shri Pramod Kumar Pathak, Additional Secretary, AYUSH. The two day program was attended by more than 100 participants from different Research Councils, National Medicinal Plant Board, All Indian Institute of Ayurveda etc.

The AYUSH Award of CCRAS, 2018 were presented to 11 selected awardees on 14<sup>th</sup> August, 2019 by Shri Shripad Naik, Hon'ble Minister of State (IC) for AYUSH & Minister of State for Defence in the inaugural session. 4 scientists of CCRAS also received AYUSH Award of CCRAS, 2018 in different categories.



A view of inaugural function of Seminar



Awardees of AYUSH Award of CCRAS 2018

- (5) The 2 day National Seminar on 'Ayurveda and Integrative Medicine and its contemporary relevance & Brainstorming session on AYUSH & Integrative Medicine- Scope and Challenges" was organized by RARIUD, Jammu, CCRAS at Hotel Ramada Conference Hall, Jammu City Center, Jammu from 11th Jan 2020 to 12th Jan 2020. The event was inaugurated by H'ble Dr. Jitendra Singh, Minister of State (IC), Ministry of Development of North Eastern Region and Minister of State for Prime Minister's office. Sh. Shripad Naik, Hon'ble Minister of State (IC) for Ministry of AYUSH & Minister of State for Defence, Govt. of India, New Delhi; Special Guest - Shri Roshan Jaggi, Joint Secretary, Ministry of AYUSH, Prof.(Vd.) K.S. Dhiman, Director General, CCRAS, New Delhi were also grace the occasion.
- (6) The Council has organized an International Conference on Standardisation of Diagnosis and Terminologies in Ayurveda, Unani and Siddha Systems of Medicine - ICoSDiTAUS 2020 on behalf of the Ministry of AYUSH in collaboration with World Health Organization (WHO) from 25 - 26 February 2020 at India Habitat Centre, New Delhi, India. The conference was inaugurated by Dr. Poonam Khetrpal Singh, Regional Director, WHO –SEARO. The conference was attended



by delegates from sixteen countries Sri Lanka, Mauritius, Serbia, Curacao, Cuba, Myanmar, Equatorial Guinea, Qatar, Ghana, Bhutan, Uzbekistan, India, Switzerland, Iran, Jamaica and Japan including health ministers of Curacao and Ghana. Dr. Samira Asma, Assistant Director General, WHO, addressed the conference through video conference. The conference deliberated upon the status of Traditional Medicine in the respective countries, standardisation of Diagnosis and Terminologies in Ayurveda, Unani and Siddha Systems of Medicine as well as inclusion of ASU systems as Module 2 of Chapter 26 of ICD – 11. The participants of the conference also agreed upon the Delhi declaration emphasising the commitment of the countries to Traditional Medicine as a significant area of health care.



Vaidya Rajesh Kotecha, Secretary, Ministry of AYUSH addressing to participants



A view of participants during the conference

- (7) The 2 day International workshop on preservation and promotion of Sowa-Rigpa in Asia was organized by RARI, Gangtok, CCRAS at Chintan Bhawan, Gangtok, Sikkim from 28<sup>th</sup> - 29<sup>th</sup> February, 2020. The event was inaugurated by Dr. Mani Kumar Sharma, Hon'ble Minister of Health Care, Human Services & Family Welfare, Social Justice & Empowerment, Sikkim. Shri. Lok Nath Sharma, Hon'ble Minister of Food Security, Agriculture; Horticulture & Cash crops, Animal Husbandry, Livestock fisheries & Veterinary Services, Information & Public Relations and Printing, Sikkim; Shri Roshan Jaggi, Joint Secretary Ministry of AYUSH; Prof. (Vd.) K.S. Dhiman, Director General, CCRAS, New Delhi and Prof. Anup Thakar, Vice chancellor of Gujarat Ayurveda University were also grace the occasion. This international workshop was attended by the delegates from Mongolia and Nepal. More than 250 participants were attended the workshop.



Lighting of Lamp during inauguration session



Participants of the workshop



- (8) A Workshop on management of Anorectal diseases with special emphasis on Ksharasutra and Agnikarma was organized by Regional Ayurveda Research Institute for Urinary Disorders, Bantalab, Jammu, CCRAS on 29<sup>th</sup> Feb.2020. The event was inaugurated by Dr.V.C. Deep, Asst. Director in charge, RARIUD, Jammu. Ayurvedic doctors from department of Indian System of Medicine and others were participated in the workshop. Total 15 doctors were benefitted out of which 5 were males and 10 were females.
- (9) **International Women's Day Celebration:** CCRAS celebrated International Women's Day (8th March being Sunday) on 5<sup>th</sup> March, 2020 in the AYUSH Auditorium at CCRAS Hqrs., New Delhi. The Theme of the event was #Gender Equality# Gender Neutrality#. All the Women employees of the Council participated in the celebration. The event was inaugurated by Chief Guests Mrs. Lata Lochav, Advocate and Dr. Bharti, Director (Institute), CARICD, Punjabi Bagh, New Delhi. Dr. N. Srikanth, DDG, Sh. Ravi Kumar Ahluwalia, DDA, Dr. S.N. Gaidhani, CVO, CCRAS and Dr. Ravindra Singh, A.D. (Chem.) also graced the occasion. The dignitaries highlighted the achievements and contributions of female employees of CCRAS during their addresses. Various recreational activities like quiz pertaining to achievements of women across the globe, Paintings, Lemon spoon race, Kavya Path, Singing etc. were organized during the event. A plant sapling was given to all the female employees as a token of gratitude by the CCRAS Hqrs., New Delhi.



A view of inaugural session



Women participants in Gender Equality posture

- (10) **Celebration of "Poshan Pakhwada":** As per the directive of Ministry of AYUSH all the Institutes functioning under CCRAS across the country has been celebrated "Poshan Pakhwada" within the time frame 8<sup>th</sup> to 22<sup>nd</sup> March 2020. Under this programme, awareness about the importance of nutrition for maintaining good health especially during pregnancy, lactation and childhood and adolescence were created among general public through public lecture, distribution of IEC materials etc. Health & Nutrition camps also were conducted at village level through various outreach activities viz. SCSP programme and tribal health care programme.
- (11) For wider publicity regarding the provisions of the law pertaining to Sexual Harassment of women at work place Act 2013 (Prevention, Prohibition and Redressal) to strengthen the prospects of women in the field of Research and Development in a health and secure atmosphere, The Council conducted Workshops on the provision of the law pertaining to sexual harassment of women at work place at 6 CCRAS Institutes viz. CARICD, New Delhi; NARIP, Cheruthuruthy; RARIED,



Lucknow; RARISD, Vijayawada, RARIMCH, Nagpur and RARIGID, Guwahati on 7<sup>th</sup> March, 2020; 22<sup>nd</sup> February, 2020, 15<sup>th</sup> February, 2020; 29<sup>th</sup> February, 2020, 22<sup>nd</sup> February, 2020 and 6<sup>th</sup> March, 2020 respectively. All the employees of the respective institutes attended the workshop.

- (12) **Panchkarma Assistant Training Course:** CCRAS has started a One-year self financed training program for Panchkarma Assistant in its two institutions namely Central Ayurveda Research Institute for Cardiovascular Diseases (CARICD), New Delhi and National Ayurveda Research Institute for Panchakarma (NARIP), Cheruthuruthy, where the facilities of Panchkarma in the outdoor / indoor (OPD / IPD) of the hospitals are properly available.

Total 22 candidates have completed the course at National Ayurveda Research Institute for Panchakarma (NARIP), Cheruthuruthy and 09 candidates at Central Ayurveda Research Institute for Cardiovascular Diseases (CARICD), New Delhi. Examination of 1<sup>st</sup> batch of Panchkarma Assistant Training Course (PATC) was successfully conducted and the Result was uploaded at Council's website on 25<sup>th</sup> June, 2019. Total 25 students (9 at CARICD, New Delhi and 16 at NARIP, Cheruthuruthy) have passed the final examination. Re-examination (written & practical) of the 6 candidates who have not passed the examination was also successfully conducted from 16<sup>th</sup> to 20<sup>th</sup> September, 2019 at NARIP, Cheruthuruthy. All 6 students qualified the examination and result was uploaded on the Council's website.

The Advertisement for Second Batch of Panchkarma Assistant Training Course was published on 19<sup>th</sup> May, 2019 to invite applications for the said course scheduled from July, 2019 to June, 2020. Total 21 candidates joined the course at NARIP, Cheruthuruthy and 10 candidates at CARICD, New Delhi. Panchkarma Assistant Training Course is also started at RARIUD, Jammu initially with 10 seats. Advertisement has been published in National & Regional Newspapers and Council's website on 28<sup>th</sup> August, 2019. Total 08 candidates are pursuing the course at RARIUD, Jammu.

- (13) National level Training Programme for ASU&H drug regulators, industry personnel and other stakeholders sponsored by Ministry of AYUSH, Govt. of India was organized by RARIECD, Jaipur at Jaipur from 24<sup>th</sup> to 25<sup>th</sup> June, 2019.
- (14) National level Training Programme for ASU&H Drug Regulators, Industry personnel and other stakeholders from South India sponsored by Ministry of AYUSH, Govt. of India was organized by NIIMH Hyderabad at Hyderabad from 11<sup>th</sup> -12<sup>th</sup> July 2019.
- (15) National level Training Programme for ASU & H drug regulators, industry personnel and other stakeholders sponsored by Ministry of AYUSH, Govt. of India was organized by RARISD, Ahmedabad at seminar hall of National Institute for Occupational Health, Ahmedabad from 25<sup>th</sup> to 26<sup>th</sup> July, 2019.
- (16) Workshop on Panchkarma for Demonstration of Procedures like Upanaha, Patra Pinda Sweda, Nasya, Cupping, Agnikarma and Sira vyadha organized by RARIUD, Jammu on 3<sup>rd</sup> August, 2019 at Jammu.
- (17) National level Training Programme for ASU & H Drug Regulators, Industry Personal and other Stakeholders sponsored by Ministry of AYUSH, Govt. of India organized by CARIDD Kolkata at Kolkata from 8<sup>th</sup> to 9<sup>th</sup> Aug, 2019.



- (18) 4 days training course on Laboratory Management as per ISO/IEC 17025:2017 sponsored by CCRAS was organized by CSRADDI, Chennai from 21<sup>st</sup> to 24<sup>th</sup> August 2019.
- (19) National level Training Program for ASU&H Drug regulators, Industry Personnel and other stakeholders sponsored by Ministry of AYUSH, Govt. of India was organized by RARIED Lucknow from 2<sup>nd</sup> to 3<sup>rd</sup> September, 2019 at Lucknow.
- (20) National level Training program for Drug Testing Laboratories of ASU&H drugs sponsored by M/O AYUSH was organized by ALRCA, Chennai at CSMRADDI, Chennai from 3<sup>rd</sup> to 4<sup>th</sup> October 2019.
- (21) National Seminar on Applied Orthopaedics in Ayurveda was organized by CARIDD, Kolkata and Bangiya Ayurved Abhiyan from 7<sup>th</sup> to 8<sup>th</sup> Dec., 2019 at Kolkata.
- (22) National level Brainstorming session on exploration of therapeutic potential of Ayurveda in the management of Hepatobiliary disorders, formulation of strategy for research and development and collaborative Research was organized from 31<sup>st</sup> January to 1<sup>st</sup> February, 2020 at CARIHD, Bhubaneswar.
- (23) **Training Programme on dissemination of research activities of CCRAS with Special Reference to *Prakriti Assessment Scale and AYUR Prakriti Web Portal***: The Council has imparted 16 training programmes on standardized Prakriti Assessment Scale & AYUR Prakriti Web Portal to trained the faculty/PhD & MD scholars of more than 150 Ayurveda Colleges across the country. The details of these training programmes are as below:
- 12 Faculty members and 20 PhD Scholars of IPGT & RA, Gujarat Ayurveda University were trained at IPGT&RA, Jamnagar on 10<sup>th</sup>-11<sup>th</sup> June, 2019.
  - 28 Faculty members and 2 PhD Scholars of National Institute of Ayurveda, Jaipur were trained at NIA Jaipur on 17<sup>th</sup>-18<sup>th</sup> June, 2019.
  - 33 Participants of 13 Ayurveda Colleges were trained at Dr. S R Rajasthan Ayurveda University Jodhpur on 15<sup>th</sup> – 17<sup>th</sup> January, 2020.
  - 27 Participants of 9 Ayurveda Colleges were trained at All India Institute of Ayurveda, New Delhi on 20<sup>th</sup> – 22<sup>nd</sup> January, 2020.
  - 34 Participants of 11 Ayurveda Colleges were trained at Dayanand Ayurvedic College, Jalandhar, Punjab on 25<sup>th</sup> – 27<sup>th</sup> January, 2020
  - 32 Participants of 11 Ayurveda Colleges were trained at Sri Kalabyraveswara Swamy Ayurvedic Medical College, Bangalore on 27<sup>th</sup> – 29<sup>th</sup> January, 2020.
  - 35 Participants of 10 Ayurveda Colleges were trained at Shri Krishna AYUSH University, Kurukshetra on 31<sup>st</sup> January to 2<sup>nd</sup> February, 2020.
  - 32 Participants of 11 Ayurveda Colleges were trained at Shri Dhanwantry Ayurveda College, Chandigarh on 1<sup>st</sup> to 3<sup>rd</sup> February, 2020
  - 30 Participants of 9 Ayurveda Colleges were trained at Pt. Khushilal Sharma Government (Autonomous) Ayurveda College, Bhopal on 11<sup>th</sup> – 13<sup>th</sup> February, 2020.



- 32 Participants of 10 Ayurveda Colleges were trained at Tilak Ayurved Mahavidyalaya, Pune on 13<sup>th</sup> – 15<sup>th</sup> February, 2020.
- 29 Participants of 10 Ayurveda Colleges were trained at Hon. Annasaheb Dange Ayurveda Medical College, Ashta, Sangli, Maharashtra on 20<sup>th</sup> – 22<sup>nd</sup> February 2020.
- 33 Participants of 13 Ayurveda Colleges were trained at Banaras Hindu University, Faculty of Ayurveda, IMS, Varanasi on 25<sup>th</sup> -27<sup>th</sup> February, 2020.
- 27 Participants of 12 Ayurveda Colleges were trained at Gangasheel Ayurvedic Medical College & Hospital, Bareilly, Uttar Pradesh on 2<sup>nd</sup> – 4<sup>th</sup> March, 2020.
- 29 Participants of 9 Ayurveda Colleges were trained at GS Ayurveda Medical College, Hapur, Uttar Pradesh on 2<sup>nd</sup> – 4<sup>th</sup> March, 2020.
- 37 Participants of 12 Ayurveda Colleges were trained at Vaidyaratnam P.S. Varier Ayurveda College, NH-17, Kottakkal, Distt. Malappuram, (PO) Edarikode – 676501, Kerala on 7<sup>th</sup> – 9<sup>th</sup> March, 2020.
- 31 Participants of 10 Ayurveda Colleges were trained at Patanjali Bhartiya Ayurvigyan Evam Anusandhan Sansthan, Haridwar on 12<sup>th</sup> – 14<sup>th</sup> March, 2020.

## 2. Participation in Seminars/Conferences/Symposia

The CCRAS Scientists were participated and presented research papers in 58 Seminar/ Conferences/ Symposia/Workshops etc. organized by different institutes/organizations across the country during the reporting year. (Details are annexed at **Annexure-VII**)

## 3. Participation in Arogya Fairs/Exhibitions

### Major events:

- (1) Central Ayurveda Research Institute for Cardiovascular Diseases, Punjabi Bagh, New Delhi, participated on the behalf of the Council in the International Health & Wellness Exhibition- The Yogashala Expo 2019 during 10<sup>th</sup> – 12<sup>th</sup> May, 2019 at Pragati Maidan, New Delhi. The event was organized by NAMO Gange Trsut of Ghaziabad, Uttar Pradesh. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.
- (2) Observation of 5th International Day of Yoga: In pursuance of the directives of Ministry of AYUSH, New Delhi, Central Council for Research in Ayurvedic Sciences, Janakpuri, New Delhi observed 5th International Day of Yoga at Swarna Jayanti Park, Rohini, New Delhi, in association with Delhi Development Authority and Art of Living. Shri Hans Raj Hans, M. P. North- West Delhi graced the gathering as chief guest along with Shri Vijender





Gupta, MLA, Rohini. Prof.(Vd.) K. S. Dhiman, Director General, CCRAS, Dr. N. Srikanth, Deputy Director General, CCRAS (Nodal Officer for 5th IDY at Swarn Jyanti Park, Rohini, New Delhi), Dr. Adarsh Kumar, A.D., CCRAS were present at event site. Dignitaries of Delhi Development Authority and volunteers of Art of Living were also present. The participants viewed the live telecast of speech of Hon'ble Prime Minister, Shri Narendra Modi followed by yoga session. More than 5000 people gathered at the event site and participated in the yoga session as per common yoga protocol.

- (3) Central Ayurveda Research Institute for Cardiovascular Disorders, Punjabi Bagh, New Delhi, on the behalf of the Council participated in the "Health Expo- 2019" - A mega Exhibition and Business and Summit organized by Friendz Exhibition & Promotion Pvt. Ltd. at Hotel Solitaire, Dehradun from 18th-20th July, 2019. The Programme was inaugurated by chief guest, Dr. Rajendra Dobhal, Director General, Science and Technology, Uttarakhand State. During the event, display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.
- (4) Central Ayurveda Research Institute for Cancer, Worli, Mumbai, participated on the behalf of the Council in the 6th Annual AYUSH World Expo during 01<sup>st</sup> -3<sup>rd</sup> August, 2019 at Dr. Shyama Prasad Mukherjee Stadium, Goa. The event was organized by Trinity Pvt. Ltd. Mumbai. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event. The Council awarded for Best of India, Biz Award, in the category of Best Union Government Agencies.
- (5) Central Ayurveda Research Institute for Cancer, Worli, Mumbai, participated on the behalf of the Council in the National Level Arogya Fair, during 22<sup>nd</sup> - 25<sup>th</sup> August, 2019 at CIDCO Exhibition Centre, Sector 30, Vashi, Navi Mumbai. The event was organized by Dr. G. D. Pol Foundation, Navi Mumbai. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event. The Clinics and lectures on various health topics were arranged for the local visitors during the event. In clinics of Council, the consultations of Ayurveda as well as Sowa Rigpa were given. The medicines were freely distributed to the needy patients.
- (6) Central Ayurveda Research Institute for Drug Development, Kolkata, participated on the behalf of the Council in the 23<sup>rd</sup> National Health Exhibition during 28<sup>th</sup> - 31<sup>st</sup> August, 2019 at Kolkata. The event was organized by Central Calcutta Science & Cultural Organization for Youth, Kolkata. The event was inaugurated by Prof. Sougata Roy, M.P. (L.S.). During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event. Free medical Health checkup camps were also arranged during the event in which medicines were distributed free of cost to the needy patients.





- (7) Central Ayurveda Research Institute for Cardiovascular Disorders, Punjabi Bagh, New Delhi, participated on the behalf of the Council in the Rise in Haryana 2019- A Mega Exhibition at Hansi, Haryana during 29<sup>th</sup> - 31<sup>st</sup> August, 2019. The event was organized by Tarmeh Events Pvt. Ltd., New Delhi. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.
- (8) Regional Ayurveda Research Institute for Drug Development, Gwalior on the behalf of the Council participated in the 8<sup>th</sup> Bhopal Vigyan Mela during 13<sup>th</sup> -16<sup>th</sup> September, 2019 at BHEL, Dussehra Ground, Bhopal. The event was organized by CSIR- Advanced Materials and Processes Research Institutes, Bhopal. The event was inaugurated by Mr. P.C. Sharma, Cabinet Minister of Science and Technology Department, Law and Legal Affairs Department, Public Relations Department, Department of Civil Aviation, Department of Government of Madhya Pradesh. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.



- (9) Central Ayurveda Research Institute for Drug Development, Kolkata on the behalf of the Council participated in the 7<sup>th</sup> Indian National Exhibition- cum- Fair-2019, during 25<sup>th</sup> –29<sup>th</sup> September, 2019 at Kolkata Metropolitan Development Authority Ground, Patuli, Kolkata. The event was organized by Bengal Human Resource Development Foundation. The event was inaugurated by Sh. Subhaaish Chakraborty, Hon'ble Member of Parliament (L.S.), Government of India. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.
- (10) Central Ayurveda Research Institute for Cardiovascular Disorders, Punjabi Bagh, New Delhi, participated on the behalf of the Council in the 2<sup>nd</sup> UDMA Day from 11<sup>th</sup> 13<sup>th</sup> October, 2019 at New Delhi. The event was organized by Unani Drug Manufacturers Association. The event was inaugurated by Chief Guest Prof. Nazma Akhtar, Vice Chancellor, Jami Millia Islamia in the presence of Sh. Rais Khan Pathan, Member of Central Waqf Council as Guest of Honour, Dr. D. C. Katoch, Advisor, Ayurveda system of medicine, Dr. Mohd. Tahir, Advisor, Inani System of Medicine, Prof. Asim Ali Khan, Director General CRUM. The event display stall was arranged for

the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.

- (11) Regional Ayurveda Research Institute for Gastro Intestinal Disorders, Guwahati, participated on the behalf of the Council in the 11<sup>th</sup> East Himalayan Expo at Shillong, Meghalaya from 16<sup>th</sup> – 22<sup>nd</sup> October, 2019. The event was organized by Indian Trade Promotion Organization. Hon'ble Governor of Meghalaya Sh. Tathagat Roy inaugurated the event. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.



- (12) Central Ayurveda Research Institute for Cancer, Worli, Mumbai, participated on the behalf of the Council in the Vibrant Goa Expo and Summit 2019 during 17<sup>th</sup> -19<sup>th</sup> October, 2019 at Goa. The event was organized by Vibrant Goa Foundation. The event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.
- (13) Regional Ayurveda Research Institute for Nutritional Disorders, Mandi, participated on the behalf of the Council in the Arogya Mela at SAS Nagar, Mohali, during 18<sup>th</sup> -20<sup>th</sup> October, 2019. The event was organized by Directorate of Ayurveda, Punjab. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event. Clinics and Lectures were also organized during the event and medicines were also distributed to needy patients free of cost.
- (14) Central Ayurveda Research Institute for Cardiovascular Disorders, Punjabi Bagh, New Delhi, participated on the behalf of the Council in the 26<sup>th</sup> Year of Perfect Health Mela at Jawahar Lal Nehru Stadium, New Delhi from 18<sup>th</sup> - 20<sup>th</sup> October, 2019. The event was organized by Heart Care Foundation of India, New Delhi. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event. Clinics and Lectures were also organized during the event and medicines were also distributed to needy patients free of cost.
- (15) Central Ayurveda Research Institute for Respiratory Disorders, Patiala, participated on the behalf of the Council in the CII Chandigarh Fair- 2019 held at Parade Ground, Sector -17, Chandigarh from 18<sup>th</sup> - 21<sup>st</sup> October, 2019. The event was organized by Confederation of Indian Industry. Hon'ble



Sh. V. P. Singh Badnore, Administrator, UT Chandigarh inaugurated the event. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event. Free medical checkup camp was also organized during the event in which consultations to the patients were given and medicines were also distributed to needy patients free of cost.

- (16) M.S. Regional Ayurveda Research Institute for Endocrine Disorders, Jaipur, participated on the behalf of the Council in the Arogya Mela at Udaipur, Rajasthan during 19<sup>th</sup> - 22<sup>nd</sup> October, 2019. The event was organized by Directorate of Ayurveda, Rajasthan. Shree Dr. Raghu Sharma, Cabinet Minister of Health and Family Welfare, Government of Rajasthan inaugurated the event. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event. Clinics and Lectures were also organized during the event and medicines were also distributed to needy patients free of cost.
- (17) M.S. Regional Ayurveda Research Institute for Endocrine Disorders, Jaipur on the behalf of the Council, arranged stall at NIA, Jaipur, on the occasion of 4<sup>th</sup> Ayurveda Day during 24<sup>th</sup> - 25<sup>th</sup> October, 2019. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.
- (18) Central Ayurveda Research Institute for Drug Development, Kolkata on behalf of the Council participated in the India International Science Festival- 2019, a mega Science, Technology and Industry Expo from 5<sup>th</sup> -8<sup>th</sup> November, 2019 at Kolkata. The event was organized by Ministry of Science and Technology, Govt. of India, in association with Vijnana Bharti. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.
- (19) Central Ayurveda Research Institute for Cardiovascular Disorder on behalf of the Council Punjabi Bagh, New Delhi, participated in the Swasthya Chetana Evam Jansampark Abhiyaan in the IITF from 14<sup>th</sup> - 27<sup>th</sup> November, 2019 at Pragati Maidan, New Delhi, by nominating 3 Doctors for that event. The event was organized by Ministry of Health and Family Welfare, Govt. of India.
- (20) Regional Ayurveda Research Institute, Ranikhet on the behalf of the Council participated in the Arogya Mela/ Yoga Utsav/ Yoga Shivir/ Exhibition/ Naturopathy Day on 16<sup>th</sup> -18<sup>th</sup> November, 2019 at Tanakpur, Uttarakhand,. The event was organized by Navyoga Suryodaya Seva Samiti. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.
- (21) Regional Ayurveda Research Institute for Metabolic Disorders, Bengaluru on the behalf of the Council participated in the Global Exhibition on Services (GES) by Services export promotion



Council (SEPC) New Delhi from 26<sup>th</sup>–28<sup>th</sup> November, 2019 at Palace Grounds, Bengaluru, Karnataka. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.

- (22) Central Ayurveda Research Institute for Cancer, Worli, Mumbai on the behalf of the Council participated in the State Level Arogya Fair at Panjim, Goa from 30<sup>th</sup> November – 02<sup>nd</sup> December, 2019. The event was organized by The Associated Chambers of Commerce and Industry of India (ASSOCHAM). During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event. Clinics were also organized during the event and medicines were also distributed to needy patients free of cost.
- (23) Regional Ayurveda Research Institute for Urinary Disorders, Jammu on the behalf of the Council participated in the Sanrachana 2019 during 5<sup>th</sup> - 7<sup>th</sup> December, 2019 at Kathua, Jammu & Kashmir. The event was organized by Parichit Foundation. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.
- (24) Regional Ayurveda Research Institute for Mother and Child Health, Nagpur on the behalf of the Council participated in the Chutka Scientific Literacy cum Health and Wellness Festival during 5<sup>th</sup> - 7<sup>th</sup> December, 2019 at Mandla, Madhya Pradesh. The event was organized by Centre for Studies of Popular Science (A research unit of S & T Educators Forum). The event was inaugurated by Sh. Faggan Singh Kulaste, Hon'ble Minister of State for Steel, Government of India in august presence of Dr. Jagdish Chandra Jaitiya, IAS Collector & District Magistrate, Mandla, Ms Tanvi Hooda, IAS Assistant Collector & CEO Zila Panchayat, Mandla. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.
- (25) Regional Ayurveda Research Institute, Itanagar on the behalf of the Council participated in the State Level Arogya Fair at Itanagar, Arunachal Pradesh from 5<sup>th</sup> - 8<sup>th</sup> December, 2019. The event was organized by Directorate of Health Services, Govt. of Arunachal Pradesh, Itanagar. The event was inaugurated by Sh. Alo Libang, Health and Family Welfare Minister, Government of Arunachal Pradesh. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event. In the event clinics of Ayurveda were arranged for the visitors. The medicines were also distributed free of cost to the needy patients.
- (26) Central Ayurveda Research Institute for Drug Development, Kolkata on the behalf of the Council participated in the 13<sup>th</sup> Tsunami Sachatan Vivekmela O Sunadrban Loko Sanskriti Utsab-2019



from 10<sup>th</sup> - 19<sup>th</sup> December, 2019 at South 24 Paraganas, West Bengal. The event was organized by Basanti Border Dipanchal Surakha Samity. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.

- (27) Central Ayurveda Research Institute for Respiratory Disorders, Patiala on the behalf of the Council participated in the Punjab International Trade Expo (PITEX) 2019 on 12<sup>th</sup> - 16<sup>th</sup> December, 2019 at Amritsar. The event was organized by PHD Chamber of Commerce & Industry, Chandigarh. Sh. Sunder Shyam Arora, Hon'ble Minister for Industries of Commerce, Punjab, inaugurated the event. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.
- (28) Dr. Achanta Lakshmi pathi Research Centre for Ayurveda, Chennai and National Research Institute for Sowa Rigpa, Leh on the behalf of the Council participated in the State Level Arogya Fair at Coimbatore, Tamilnadu from 13<sup>th</sup> – 15<sup>th</sup> December, 2019 through PHD Chamber of Commerce and Industry. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event. In the event clinics of Ayurveda and Sowa Rigpa were also arranged for the visitors. The medicines were also distributed free of cost to the needy patients.
- (29) Regional Ayurveda Research Institute for Skin Disorders, Ahmedabad on the behalf of the Council participated in the Exhibition "Destination Gujarat 2019" from 18<sup>th</sup> – 20<sup>th</sup> December, 2019 at Surendernagar, Gujarat. The event was organized by Sansa Foundation. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.
- (30) Regional Ayurveda Research Institute for Eye Disorders, Lucknow on the behalf of the Council participated in the National Level Arogya Fair at Varanasi, Uttar Pradesh from 19<sup>th</sup> to 22<sup>nd</sup> December, 2019, through Federation of Indian Chamber of Commerce and Industry (FICCI). During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event. In the event clinics and lectures of Ayurveda were arranged for the visitors. The medicines were also distributed free of cost to the needy patients.
- (31) Central Ayurveda Research Institute for Drug Development, Kolkata on the behalf of the Council participated in the 24<sup>th</sup> Sunadrban Kristi Mela O Loko Sanskriti Utsab-2019, West Bengal during 20<sup>th</sup> -29<sup>th</sup> December, 2019 at South 24 Paraganas, West Bengal. The event was organized by Kultali Milon Tirtha Society. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.





- (32) Captain Srinivasa Murthy Regional Ayurveda Drug Development Institute, Chennai on the behalf of the Council participated in the 71<sup>st</sup> Indian Pharmaceutical Congress during 20<sup>th</sup> - 22<sup>nd</sup> December, 2019 at Chennai. The event was organized by Indian Pharmaceutical Congress Association (IPCA). During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.
- (33) Regional Ayurveda Research Institute for Metabolic Disorders, Bangalore on behalf of the Council participated in the 107<sup>th</sup> Indian Science Congress- Pride of India Expo 2020, at Bangalore during 3<sup>rd</sup> -7<sup>th</sup> January 2020. The event was organized by MM Active Sci- Tech Communication. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council.
- (34) Central Ayurveda Research Institute for Drug Development, Kolkata on behalf of the Council participated in the 43<sup>rd</sup> Rural Exhibition- cum- Fair "Sundarban Mela 2020, from 3<sup>rd</sup> - 12<sup>th</sup> January 2020 at 24 Pragana, West Bengal. The event was organized by Bandhu Mahal. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity, were the activities of the Council.
- (35) Regional Ayurveda Research Institute for Eye Disorders, Lucknow, Regional Ayurveda Research Institute for Drug Development, Gwalior and Regional Ayurveda Research Institute, Jhansi on the behalf of the Council participated in the Mahakumbh Mela from 14<sup>th</sup> January to 13<sup>th</sup> February 2020 at Allahabad. The event was organized by Utthan Centre for Sustainable Development & Poverty Alleviation. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event. Consultations at clinics to visitors were given with free distribution of medicines to the needy patients.
- (36) Central Ayurveda Research Institute for Cancer, Worli, Mumbai on the behalf of the Council participated in the Global Agriculture Festival-2020 at Nashik on 23<sup>rd</sup> January, 2020. The event was organized by Shri Swami Samarth Krishi Vikas va Sanshodhan Charitable Trust, Nashik. During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.
- (37) Regional Ayurveda Research Institute for Infectious Diseases, Patna on the behalf of the Council participated in the Swadeshi Mela from 25<sup>th</sup> January, 2020 to 3<sup>rd</sup> February, 2020 at Ballia, Uttar Pradesh. The event was organized by Social Unity for Reforms and Alternative Justice (SURAJ). During the event display stall was arranged for the visitors in which Council's Publications and Council's Activities were displayed and along with it, free distribution of brochures to the visitors for publicity were the activities of the Council during event.



- (38) National Ayurveda Research Institute Panchakarma, Cheruthuruthy on the behalf of the Council participated in the International event organized by Services Export Promotion Council (SEPC) titled “2<sup>nd</sup> Edition of India Heals” International Reserve Buyer Seller Meet for Indian Healthcare Services, Hotel Grant Hayatt, Kochi, Kerala from 30<sup>th</sup> January 2020 to 2<sup>nd</sup> February 2020. During the event display stall was arranged for the visitors in which Council’s Publications and Council’s Activities were displayed.
- (39) Regional Ayurveda Research Institute, Utrakhnad on the behalf of the council participated in the “National Level Arogya Fair” from 12<sup>th</sup> to 16<sup>th</sup> Feb 2020 at Parade Ground, Dehradun, Uttarakhand through PPD Chamber of Commerce and Industry. The event was organized by Directorate of Ayurveda and Unani services, Govt. of Utrakhnad. During the event display stall was arranged for the visitors in which Council’s Publication and Council’s Activities were displayed. Free distribution of brochures to the visitors for publicity was the activities of the Council.
- (40) As per the directives of Ministry of AYUSH, Central Ayurveda Research Institute for Cardiovascular Diseases, Punjabi Bagh, New Delhi on the behalf of the council participated in the “Rise in Uttar Pradesh 2020 from 14<sup>th</sup> to 16<sup>th</sup> February, 2020 at H.R.I.T. College, Ghaziabad, Uttar Pradesh. During the event display stall was arranged for the visitors in which Council’s Publication and Council’s Activities were displayed. Free distribution of brochures to the visitors for publicity was the activities of the Council.
- (41) Central Ayurveda Research Institute for Cardiovascular Diseases, Punjabi Bagh, and New Delhi on the behalf of the council participated in 7<sup>th</sup> International Congress of Society Ethno-pharmacology during 15<sup>th</sup> - 17<sup>th</sup> February, 2020 at School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi. During the event display stall was arranged for the visitors in which Council’s Publication and Council’s Activities were displayed. Free distribution of brochures to the visitors for publicity was the activities of the Council.
- (42) Regional Ayurveda Research Institute (RARI), Ranikhet, Uttarakhand on behalf of CCRAS had participated in “International Yoga Festival” organised by Uttarakhand Tourism in association with Garhwal Mandal Vikas Nigam Ltd. at Rishikesh, Uttarakhand from 1st to 7th March, 2020. Shri Adityanath Yogi, Hon’ble Chief Minister of Uttar Pradesh, inaugurated the “International Yoga Festival” on 1st March 2020. Shri Trivendra Singh Rawat, Hon’ble Chief Minister of Uttarakhand, Shri Satpal Maharaj, Tourism Minister, Uttarakhand, Swami Avdeshanand Ji, Gaur Gopal Das Ji and Grandmaster Akshar also graced the occasion. During the event, Council’s publications and activities were displayed in the form of translates, short films, IEC material along with free distribution of brochures to the visitors for publicity were the





activities of the Council. 25 raw drug samples were exhibited in the stall and their therapeutic indications were also explained to the visitors.

- (43) Regional Ayurveda Research Institute for Gastro-Intestinal Disorders (RARIGID) Guwahati on behalf of CCRAS has participated in “State level Arogya Fair” organised by Directorate of AYUSH (Mizoram) in collaboration with Govt. of Mizoram at Ramhlun Indoor Stadium, Aizwal, Mizoram from 5<sup>th</sup> to 7<sup>th</sup> March 2020, During the event, Council’s publications and activities were displayed; free distribution of brochures to the visitors for publicity and organisation of clinics along with free distribution of medicines to the needy patients were the activities of the Council.
- (44) Regional Ayurveda Research Institute for Metabolic Disorders, on the behalf of the council and Tarunya Shikshana Seva Trust organized “National Level Arogya Fair” from 11<sup>th</sup> - 15<sup>th</sup> March, 2020 at Central University Ground, Bengaluru, Karnataka and State AYUSH directorate, Govt. of Karnataka. During the event display stall was arranged for the visitors in which Council’s Publication and Council’s Activities were displayed. Free distribution of brochures to the visitors for publicity was the activities of the Council.





## VII. SOWA - RIGPA

National Research Institute for Sowa-Rigpa has been working with dedication for research and development of Sowa-Rigpa system of medicine. Major activities undertaken by the Institute are Clinical Research, Tribal Health Care Research Programme, Project on Trans-Himalayan Medicinal Plants Garden, Health Care Services through OPD etc. The brief summary of activities and achievements of the Institute during the reporting period 2019-20 is as under:

### **Tribal Health Care Research Project**

Survey cum medical camp was conducted in Leh and Khalsi Blocks of Leh. In this project, information regarding living conditions, dietary regimen, educational status and prevalence of disease in the region have been documented. During the reporting year, 20 villages were covered and 117 visits have been made. A total of 9300 populations are surveyed and 3,774 patients attended during the medical camp organized by the team. Out of which, 1713 were male and 2061 were female patients. 6 LHTs/Folk claims have been collected and documented. The most common prevalent diseases in the regions are Arthritis, Gastrointestinal disorders, Bronchitis, Bronchial Asthma, Neuritis and Hypertension etc.

### **Project on cultivation of Trans-Himalayan Model Herbal garden Igoo-Phey**

During the reporting year, several projects on cultivation of medicinal plants have been performed successfully at Trans-Himalayan herbal garden. A small solar water pump was also installed for water lifting to meet the increasing demand of water supply at Herbal garden. Construction of polycarbonate green house of 60X20 feet specification and four trenches of 10x30 feet were also completed. The major project at herbal garden is "Cultivation studies of some endangered and commercially viable medicinal plants of Trans Himalayas and production of quality germplasm" under NMPB scheme. Total nine plants species are selected for the study under the project *i.e. Hippophae rhamnoides, Inula racemosa, Dactylorhiza hatagirea, Rheum webbianum, Carum carvi, Hysocymus niger, Ephedra gerardiana, Saussureal appa, Commiphora wightii*. IMR Project on Development of Agro-Techniques of high altitude endangered medicinal plants of trans-Himalayas is also going on. Another important project at herbal garden is joint project with Himalayan Forest Research Institute, Shimla "Conservation status, germplasm collection and resource augmentation of priority medicinal plant species in the cold desert of Ladakh" under NMPB scheme.

### **Project for Promotion of Sowa-Rigpa in Leh District of Jammu and Kashmir State for Public Health Under "Public Health Initiative" Scheme:**

National Research Institute for Sowa-Rigpa, Leh in collaboration with J&K health department, LAHDC, Leh under the central sector scheme for Grant-in-aid for promotion of AYUSH Intervention in public health initiatives during 2014-2015 (Plan) has taken this project. The main purpose of the projects is to improve public health security in the remote areas of Leh district by strengthening Sowa-Rigpa. During this year several medical camps, public awareness camps, workshops and training etc. were organized for Sowa Rigpa practitioners of Leh district. The manufacturing unit of Ladakh Amchi Sabha



is playing a vital role for fulfilling the medicine requirement of Health Department, NGO's State National Health Mission and National Research Institute for Sowa-Rigpa, Leh. During the reporting year, 97 Amchis were supported to make proper space for consultation, displaying medicine and maintaining neat & clean setup of clinic.

### **Sowa-Rigpa Health Care Clinic (Tribal) at Zanskar Kargil:**

Sowa-Rigpa Health Care Clinic at Zanskar has been setup in June 2017 by National Research Institute for Sowa-Rigpa Leh at Padum, Zanskar with funding by CCRAS New Delhi under TSP. During the reporting year, total 5653 patients had attended the Sowa-Rigpa Clinic out of which 2243 were male and 3410 were female patients. The most prevalent diseases are Gastro-intestinal disorders, Skin diseases, Arthritis, Hypertension, Anemia, Lung problem, Neuritis, Joint-pains, and Lower back pain.

### **Out Patient Department:**

The National Research Institute for Sowa-Rigpa has been running an OPD of Sowa-Rigpa for the public. During the year, total 9320 patients had visited the Clinic, out of which 3594 Male and 5726 are Female and undergone Sowa-Rigpa treatment in the OPD.

**Inscription of Sowa-Rigpa as Intangible Cultural Heritage in UNESCO:** The Indian Nomination for inscription of Sowa-Rigpa as Intangible Cultural Heritage in UNESCO was enlisted this year in 14<sup>th</sup> meeting of UNESCO, ICH in Bogota, Colombia. Dr. Padma Gurmet, had also participated in the 14<sup>th</sup> meeting in Bogota, Colombia as an Indian Observer from 9<sup>th</sup> -14<sup>th</sup> December 2019. The case for inscription is referred with some amendment.

### **National Seminar on "Importance of Trans-Himalayan Medicinal plants in AYUSH systems"**

National Seminar on "Importance of Trans-Himalayan Medicinal plants in AYUSH systems" from 17<sup>th</sup> to 19<sup>th</sup> October 2019 in the Conference Hall of National Research Institute for Sowa Rigpa, Leh, inaugurated by Chief Guest Konchok Stanzin EC education LAHDC Leh The seminar was attended by around 100 participants including Scientist, Research Scholar, Students, Environmentalist, Conversationalist, Traditional Healers, experts from different Institutes and stakeholders of medicinal plant. The seminar is funded by National Medicinal Plants Board, Ministry of AYUSH, Govt. of India.

### **Participation in major events:**

During the reporting year this Institute has participated in AROGYA Fair on National Level at CIDCO Exhibition Centre, Sector 30, Vashi, Navi Mumbai from 22<sup>nd</sup> to 25<sup>th</sup> August, 2019. Ladakh Kissan Jawan Vigayan Mela, organized by DIHAR, DRDO Leh on 29<sup>th</sup> and 30<sup>th</sup> August 2019 was also attended. Other events attended are State Level AROGYA Fair at Codissia Trad Fair Complex, Avinashi Rd Coimbatore, Tamil Nadu on 13<sup>th</sup> -15<sup>th</sup> December 2019, National Level AROGYA Fair at Varanasi Uttar Pradesh from 19<sup>th</sup> -20<sup>th</sup> December 2019, National Level AROGYA Fair at Parade ground Deharadun, Uttarakhand from 12<sup>th</sup> to 16<sup>th</sup> February 202 and International Workshop on Preservation and Promotion of Sowa-Rigpa in Sikkim Gangtok during 28<sup>th</sup> -29<sup>th</sup> Feb., 2020. During the reporting year this Institute also conducted medical camps at different villages of Ladakh.



## Annexure – I

## SANCTION STRENGTH / VACANCY POSITION AS ON 31.03.2020

S. No.	Post Name	Sanctioned	In Position	Vacancy position
<b>TECHNICAL GROUP 'A'</b>				
1.	Director General	1	1	0
2.	Dy. Director General	1	1	0
3.	Director Institute (Ay.)	5	3	2
4.	Asstt. Director (Ayurveda)	28	25	3
5.	Asstt. Director (Bio-Chem)	4	4	0
6.	Asstt. Director (Path)	5	1	4
7.	Asstt. Director (P'nosy)	2	1	1
8.	Asstt. Director (Pharmaceutical Science)	1	1	0
9.	Asstt. Director (P'logy)	4	3	1
10.	Asstt. Director (Chem)	4	4	0
11.	Asstt. Director (Medicine)	2	0	2
12.	Asstt. Director (Bot)	1	1	0
13.	Research Officer (Ay.)	202	182	20
14.	*Research Officer (Bio-Chem)	13	3	10
15.	Research Officer (AGRI)	1	0	1
16.	Research Officer (Bot)	17	14	3
17.	Research Officer (Chem)	12	4	8
18.	Research Officer (Homoeopathy)	1	1	0
19.	Research Officer (Medicine)	6	0	6
20.	Research Officer (Museum)	1	0	1
21.	Research Officer (P'nosy)	6	5	1
22.	Research Officer (P'logoy)	9	7	2
23.	Research Officer (Path)	21	0	21
24.	Research Officer (T.M.) Sowa Rigpa	2	1	1
25.	Research Officer (Plant Bio-Tech/Plant Bio-Chemistry)	1	0	1
26.	Research Officer (Unani)	1	1	0
27.	Research Officer (Animal / Exp. Pathology)	3	1	2
28.	Research Officer (Pharmacy)	5	0	5
29.	Statistical Officer	2	2	0
30.	Research Officer (Pub.)	1	1	0
31.	Research Officer (Psychiatry)	1	1	0
32.	Research Officer (Micro-Biology)	4	0	4
33.	Research Officer (Pharmaceutical Technology)	2	0	2
34.	Research Officer (Molecular Biology))	2	0	2



35.	Research Officer (IT)	1	0	1
36.	Research Officer (Toxicology)	2	0	2
37.	Asstt Matron	4	3	1
	<b>Total</b>	<b>378</b>	<b>271</b>	<b>107</b>
<b>TECHNICAL GROUP 'B'</b>				
1.	Asstt. Res. Officer (Bot)	6	1	5
2.	Asstt. Res. Officer (Bio-Chemistry))	1	0	1
3.	Asstt. Res. Officer (Chem)	9	0	9
4.	Asstt. Res. Officer (Curator)	1	1	0
5.	Asstt. Res. Officer (Clinical Psychology)	2	0	2
6.	Asstt. Res. Officer (Farm Manager)	1	0	1
7.	Asstt. Res. Officer (Plant Bio-Tech. / Bio-Chemistry)	3	0	3
8.	Asstt. Res. Officer (P'nosy)	7	0	7
9.	Asstt. Res. Officer (Phsio-therapy)	2	1	1
10.	Asstt. Res. Officer (Plant Path)	1	0	1
11.	Asstt. Res. Officer (P'logy)	16	0	16
12.	Asstt. Res. Officer (Pharmacy)	1	0	1
13.	Sister Incharge	22	21	1
14.	Staff Nurse	75	10	65
	<b>Total</b>	<b>147</b>	<b>33</b>	<b>114</b>
<b>TECHNICAL GROUP 'C'</b>				
1.	Social Worker	9	3	6
2.	Garden Supervisor	6	0	6
3.	Artist (Sr.)	1	0	1
4.	Pharmacist (Gr. I)	64	35	29
5.	Pharmacist (Sowa-Rigpa)	1	0	1
6.	R.A. (Bio-Chemistry)	2	0	2
7.	R.A. (Botany)	26	0	26
8.	R.A. (Chemistry)	26	1	25
9.	R.A. (Plant Pathology)	1	0	1
10.	R.A. (P'logy)	3	0	3
11.	R.A. (Org. Chemistry)	1	0	1
12.	R.A. (Farm musk deer)	1	1	0
13.	R.A. (Garden Supervisor)	1	0	1
14.	R.A. (Curator)	3	0	3
15.	R.A. (Garden)	3	0	3
16.	R.A. (Pharmacy)	4	0	4
17.	R.A. (Sanskrit)	1	0	1
18.	R.A. (Sowa Rigpa)	3	1	2
19.	Radiographer	5	1	4



20.	Laboratory Technician	105	46	59
21.	Electrician	4	0	4
22.	Machine Operator (Pharmacy)	1	0	1
23.	Panchkarma Technician	12	6	6
24.	Herb Asstt/Curator	2	1	1
25.	Field Asstt	1	0	1
26.	Panchkarma Therapist	1	0	1
27.	Lab Assistant	11	7	4
28.	Darm Room Asstt.	6	3	3
29.	Jr. Proof Reader	1	0	1
30.	Field Collector	6	1	5
31.	Artist (Jr.)	1	0	1
32.	Pharmacist (Diploma Holder)	1	1	0
33.	Lab Attendant	97	36	61
34.	<b>Total</b>	<b>410</b>	<b>143</b>	<b>267</b>
<b>NON-TECHNICAL POSTS</b>				
<b>GROUP 'A'</b>				
1.	Dy. Director (Admn.)	1		0
2.	Asstt. Director (Coord.)	1		0
3.	Library & Information Officer	1		1
4.	Admn. Officer	6		1
5.	Hindi Officer	1		1
	<b>Total</b>	<b>10</b>		<b>3</b>
<b>NON-TECHNICAL GROUP 'B'</b>				
1.	Accounts Officer	1		1
2.	Sr. P.S. to Director General(Hqrs)	1		0
3.	Accountant	1		0
4.	Office Supdt	7		0
5.	S.S.A. (Stat)/Statistical Investigator	1		0
6.	Acctt-IA	1		0
7.	Private Secretary / Stenographer	7		4
8.	Translator (Hindi Asstt)	7		1
9.	Statistical Asstt	11		11
10.	Assistant	35		12
	<b>Total</b>	<b>72</b>		<b>29</b>
<b>NON-TECHNICAL GROUP 'C'</b>				
1.	Library Information Assistant (LIA)	8		5
2.	Stenographer Gr - 1	13		10
3.	Photographer	6		5
4.	Security In-charge	5		5



5.	Offset Machine Operator	1		1
6.	Stenographer Grade -II	14		13
7.	U.D.C.	107		80
8.	(1) Driver Ordinary grade (2) Driver grade-II (3) Driver grade-I (4) Driver Special Grade	36		25
9.	L.D.C.	104		81
10.	Library Clerk	1		0
11.	Gestetner Operator (Reprographer)	6		5
12.	Field Attendant	35		28
13.	Pancharma Attendant	42		35
14.	Sr. Library Attendant / SLA (Museum)	6		4
15.	Pharmacy Attendant	14		13
16.	Server	1		1
17.	Dresser	11		11
18.	Female Attendant	8		7
19.	Attendant (Survey )	15		14
20.	Machine Room Attendant	1		1
21.	Lift Operator	1		1
22.	Mounter	1		1
23.	Daftray	3		3
24.	Cook	26		20
25.	Ward Boy/Attdt (M)	56		34
26.	Ward Attendant /Aya (F)	54		37
27.	Safaiwala	91		64
28.	Mali	10		8
29.	Pharm Attdt/Labourer	48		25
30.	Khalasi	2		2
31.	Animal Attdt	12		9
32.	Attendant	36		26
33.	Chowkidar/Guard/Watchman	65		49
34.	Peon	88		27
35.	Kitchen Servant	31		22
36.	Dhobi	4		3
37.	Animal Attendant cum Sweeper	4		3
38.	<b>Total</b>	<b>966</b>		<b>678</b>
	<b>Grand Total</b>	<b>1983</b>		<b>1198</b>



## Annexure-II

## Research Articles

## Details of research publication in Journals

S. No.	Name of the Author	Title of paper	Name of Journals/ Bulletin	Date of Publication
<b>A. Clinical Research</b>				
1.	Bharati P.L., Agrawal P. & Prakash O.	A case Study on the management of dry gangrene by Kaishore Guggulu, Sanjivani Vati and Dashanga Lepa	AYU, 40(1) 2019:48-52. DOI:10.4103/ayu.AYU_244_18 January-March 2019: 48-52	Nov., 2019
2.	Ekta, Sharma K.K., Bhatnagar S., Chaudhary K., Bora G.K. & Vyas K.	A clinical study on triphala kwatha gandusha to prevent dantamulgata roga w.s.r.to periodontal disease as oral manifestaions in diabeties mellitus	Journal of Ayurveda XIII-1, 2019;5-17 Jan- Mar 2019	Jan., 2020
3.	Ekta, Choudhary K. & Prasad M.	A study on dantamulgata roga w.s.r.to periodontal diseases as oral manifestation in madhumeha (Diabetes mellitus)	IAMJ,2019, Volume 7, Issue 10, pp 1681-1687	Oct. 2019
4.	Kumar N.U., Sridhar M.G., Srilatha K. & Habeebullah S.	Adiponectin levels in patients with endometrial carcinoma and abnormal uterine bleeding.	Int J Clin Biochem Res; 6(4): 509-513.Doi; 10.18231/j.ijcbr.2019.106	Dec., 2019
5.	Krishna Kumar V	Ayurvedic Management of Dry Eye - A Case Study	International Ayurvedic Medical Journal: Volume 7, Issue 4, pp 671-674	April-2019
6.	Binitha P., Panda A.K., Krishna Rao S. & Indu S. & Rao M.M.	Ayurvedic management of Idiopathic Granulomatous Mastitis (sthanavidradhi)-A case study	Indian J Case Reports Vol 5   Issue 6   Nov - Dec 2019; pp. 566-568; DOI <a href="https://doi.org/10.32677/IJCR.2019.v05.i06.020">https://doi.org/10.32677/IJCR.2019.v05.i06.020</a>	Dec., 2019
7.	Doddamani S.H., Shubhashree M.N., Giri S.K., Naik R. & Bharali B.K.	Ayurvedic management of necrozoospermia - A case report.	AYU (An International Quarterly Journal of Research in Ayurveda). 2019; 40:44-7. Vol-40/issue1/January- March 2019	November 2019
8.	Sinimol T.P., Surendran E.S. & Meghna P.P.	Ayurvedic Management of Plaque psoriasis – a case study.	International Journal of Ayurveda and Pharma Research, Vol 7(11): 41-46	Dec., 2019
9.	Binitha P., Anu M.S. & Sujith S.	Ayurvedic management of Unexplained infertility-A case study	International Journal of Ayurveda and Pharma Research, Vol.- 7, Issue – 10; pp-56-58	October, 2019
10.	Das B., Sharma B.S., Ravte R.K., Venkateswarlu G., Panda P., Das D., Doddamani S.H., Dua P., Khanduri S., Rana R., Singhal R. & Srikanth N.	Clinical Efficacy and Safety of Brahma Rasayana in Apparently Healthy Elderly Persons: A Prospective Multicenter Open-label Study	Journal of Research in Ayurvedic Sciences, October-December 2018; 2(4):217-224 DOI: 10.5005/jp-journals-10064-0061	June, 2019



11.	Kale K., Bharati P.L., Panda A.K., Yadav B., Jameela S., Suryawanshi M.N., Prakash O., Ratha K.K., Dua P., Sharma B.S., Khanduri S., Rana R., Singhal R., Bharti & Srikanth N.	Clinical Efficacy and Safety of Kushmandaka Rasayana in the Management of Chronic Bronchitis: A Prospective Open Label Multicenter Study	Journal of Research in Ayurvedic Sciences, October-December 2018;2(4):225-232	June, 2019
12.	Barik L., Debnath S.K., Sahu D.S. & Hazra J.	Clinical Evaluation of Apamarga Prati-Sharaniya (Teekshna) Ksha Haritaki Churna in the Management of Arsha (Hemorrhoids)	International Journal of Ayurveda and Pharma Research; Vol 8, Issue 1: January 2020; pp 69-73	Feb., 2020
13.	Makhija D., Baruah D., Radhakrishnan P., Deep V.C., Bharti & Ota S., et al	Clinical evaluation of <i>Yogaraj Guggulu</i> , <i>Gandharvahasta Taila</i> and <i>Dhanwantara Taila</i> in the Management of Osteoarthritis Knee	Journal of Research in Ayurvedic Sciences, October-December 2018;2(4):209-216 ISSN: 2456-5601, eISSN: 2581-9895	June, 2019
14.	Debnath S.K., Barik L.D., Sahu D.S. & Hazra J.	Clinical Evaluation on Amavata (Rheumatoid Arthritis) Management with Amavatari Ras and Brihatsaindyabadi taila	International Journal of Ayurvedic and Herbal Medicine, 10 (1), 3724-27, 2020.	Feb., 2020
15.	Surendran E.S. & Deep V.C.	Conservative management of young age onset pelvic organ prolapse through Ayurvedic management-A Case report	Journal of Research in Ayurvedic Sciences (JRAS) ISSN 2456-5601, Oct-Dec 2018, Vol.-2, number- 4: 254-258	June, 2019
16.	Bhuyan G.C. Das B., Panda P. & Rao M.M.	Dengue and its management through Ayurveda	International Ayurvedic Medical Journal Vol- 8, Issue 2; pp 2775-2779	February 2020
17.	Sharma R., Shahi V.K., Khanduri S., Goyal A., Chaudhary S., Rana R.K., Singhal R., Srikanth N. & Dhiman K.S.	Effect of Ayurveda intervention, lifestyle modification and Yoga in pre-diabetic and type 2 diabetes under the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS)–AYUSH integration project	AYU: Volume 40: issue:1: pg.8-15; January–March 2019 doi: 10.4103/ayu.AYU_105_19	Nov.,2019
18.	Balakrishnan P., Sudhakar D. & Makhija P.	Effect of Tiktaka ghrita snehapana & nasya in Allergic rhinitis – a case report	Aryavaidyan Vol XXXII, No 4, May-July 2019 pp 5-12	Oct., 2019
19.	Mangal A.	Efficacy of an Ayurvedic intervention in the management of Polycystic Ovarian Syndrome (PCOS): A case report	International Journal of Ayurveda and Pharma Research (IJAPR) 8 (1):64-66.	Jan., 2020
20.	Das J.R., Bharati P.L. & Suryawanshi M.N.	Efficacy of Mashabalakwatha in Avabahuka (Frozen Shoulder) - A Clinical Study	IAMJ: Volume 4, Issue 2, pp-2140-2148, December 2019-January 2020	Feb. 2020
21.	Tewari D. & Tewari V.	Evaluation of Clinical Efficacy of an Ayurvedic Compound in Hyperthyroidism: A Clinical Study.	International Journal of Ayurveda and Pharmaceutical Chemistry. Vol. 11 Issue 2; pp 219-228	Sep., 2019





22.	Singh S.B.	Evaluation of the effect of Pranayam and Agastya harikatki on Pranhahasrotasa: a comparative clinical study	International Journal of Engineering Applied Sciences and Technology, Vol.4, Issue – 5, page 323-328	Sept., 2019
23.	Mata S. & Rajput S.	Geographic Tongue: A Case Report	International Journal of Research in Medical Sciences and Technology (IJRMST) 2019, Vol. No.8, Jul-Dec.p.386-389 e-ISSN: 2455-5134, p-ISSN: 2455-9059	Jul-Dec 2019
24.	Tavhare S., Acharya R., Reddy R.G. & Dhiman K.S.	Management of chronic pain with Jalaprasakshalana (water-wash) Shodhita (Processed) Bhanga (Cannabis sativa L.) in cancer patients with deprived quality of life: An open-label single arm clinical trial.	International Quarterly Journal of Research in Ayurveda.	Nov.,2019
25.	Thakare P.A., Sahu S.K. & Sinha A.K.	Management of Gambhir Vatarakta with Shaman Chikitsa: A Case Study.	World Journal of Pharmaceutical Research Volume 9, Issue 1	Dec. - Jan., 2020
26.	Singh N.K., Sengar A.S. & Khuntia B.B.	Management of Garbhastravi Vandhya (Repeated Abortion) with Ayurvedic Intervention: A Case Report	Journal of Research in Ayurvedic Sciences, October-December 2018; 2(4):247-253.	June, 2019
27.	Sree Deepthi G.N, Sinimol T.P. & Surendran E.S.	Management of genital warts through Ayurveda- A case report	International Journal of Ayurveda and Pharma Research,7(3),39-41	March, 2019
28.	Giri S.K. & Patnaik S.	Management of Jalodar vis-à-vis ascites with special reference to Jalodarairasa as virecana yoga	Aryavaidyan Vol.XXXII (3): February-April 2019, 31-39	Aug., 2019
29.	Patel K.	Management of Ksheena Shukra (Oligozoospermia) Ayurvedic Prospect- A Case Study	IAMJ, Vol. 7, Issue 6 Pages 984 – 989	June, 2019
30.	Panda A.K., Ratha K.K., Aswani P.S. & Bhuyan G.C.	Management of Resistant Hypertension in a non-dialysis Chronic Kidney Disease Patient through Panchakarma- A case Report	International Journal of Research in Ayurveda and Pharmacy, 2019; 10 (2):69-72	March-April, 2019
31.	Patil R.P., Thakar A.B., Baghel M.S. & Patil P.D.	Management of Rheumatoid Interstitial Lung Disease with Panchakarma: A Case Study	AyuCaRe, Journal of Ayurveda Case Reports, Volume 2, Issue 1, January-March 2019, 1(2):17-22	May, 2019
32.	Shah A., Mohod P., Sharma G.K. & Deep V.C.	Mutrashmari (Urolithiasis): A Case successfully treated with Gokshuradi Guggulu	IJAPR, ISSN 2322-0902 (P) Page 76-78, Vol 8; Issue 3	March, 2020
33.	Surendran E.S. & Shankar P.	Rehabilitation of residual neurological deficit caused by traumatic brain injury through Ayurvedic treatment protocol- a retrospective case report	Annals of Ayurvedic medicine Vol 8, Issue 1-2, Jan- June 2019, page no 42-50.	June, 2019
34.	Shubhashree M.N., Doddamani S.H. Bhavya B.M. & Bharali B.K.	Successful management of uterine fibroids by Ayurvedic treatment.	International Journal of Complementary & Alternative Medicine 2019;12(6):257-260	Dec., 2019



35.	Sujith S. & Binitha P.	The combined effect of Varabhrihatyadi kashaya and sarapunkha lepa in chronic Tonslitis in children	International journal of Ayurveda and pharma research, Vol 7, Issue 7: pp.1-16, July 2019; ISSN: 2322-0902(P), ISSN: 2322-0910(O)	Sept., 2019
36.	Hemlata,Uma & Thakur R.	To Evaluate the Efficacy of Mukhakantikara Cream and Microderma abrasion with Aliminium oxide crystal externally in the patients of Vyanga	International Journal of Innovative Science, Engineering & Technology (IJSET), 2019;6(6):75-85	June, 2019
<b>B. Health Care Research and Ethno-medicine</b>				
37.	Rao V., Shubhashree M.N., Doddamani S.H, Shiddamallayya M. & Rao R.	Little Known Medicinal Plants Used in Traditional Healthcare	Life Science Edge; 5(1): 68-71	Sept., 2019
38.	Shiddamallayya N., Bora D., Mandal T.K., Anku G., Borah T., Rath C., Susmitha B., Tripathi A.K., Mangal A.K. & Srikanth N.	Local Health Traditions (LHTs)/ Ethnomedical Practices (EMPs) for Sikkim: A survey Report;	<i>Journal of Drug Research in Ayurvedic Sciences</i> ; October - December 2018; 3(3):141-150.	August, 2019
<b>C. Dravya Guna, Medico-Botanical Survey &amp; Cultivation</b>				
39.	Sharma N., et al	Aspects of Good agricultural Practices with References To Endangered Species a Guggul (Commiphora Wightii Arn. Bhandari	World Journal of Pharmaceutical and Medical , Research, Vol.5- May 2019 Issue WJ.PMR, 2019; 5(5) 57-64	May, 2019
40.	Gajarmal A.A., Mane S. & Rath S.	Ayurveda herbs in the flora of Punjab (India) with special reference to Bhavprakasha Nighantu – A review.	The Journal of Phyopharmacology 2020, Vol 9, Issue 1: 67-75. DOI: 10.31254/phyto.2020.9111.	March, 2020
41.	Das D., Maheswar T., Prameela Devi K. & Asha S.	Common Medicinal Plants Used For The Treatment Of Diabetes Mellitus In Ayurveda, Siddha And Unani System Of Medicine (Asu) In India: A Review	International Ayurveda Medical Journal, Volume 7 Issue 12; pp 2201-2208	Dec., 2019
42.	Reddy R.G., Sangvikar S., Potbhare B., Sharma S., Shinde P. & Wakode V.	Contribution of Acharya Nagarjuna in Susruta Samhita: A reiew.	International Journal of Ayurveda and Pharma Research, Vol 8   Issue 3; pp 79-83	March, 2020
43.	Nirawane R.B., Gurav A.M., Murthy S.N., Prasad G.P., Mangal A.K. & Srikanth N.	Effect of Gibberellic Acid Treatment on Seed Germination of <i>Solanum virginianum</i> Linn.: An Important Medicinal Plant of Dashmoola.	Journal of Drug Research in Ayurvedic Sciences October-December 2018;3(4):195-205	Nov., 2019.
44.	Das D., Maheswar T., Prameela Devi K. & Asha S.	Ethnomedical Review of the plant Coccinia Indica (Bimbi) and its utilization in India	International Ayurvedic Medical Journal, Vol 7, Issue 8; pp 1399-1402	Aug., 2019



45.	Singh S., Kumar V., Datta S., Wani A.B., Dhanjal D.S., Romero R. & Singh J.	Glyphosate uptake, translocation, resistance emergence in crops, analytical monitoring, toxicity and degradation: a review	Environmental Chemistry Letters, 2020, 1-40.	Feb., 2020
46.	Kabra A., Martins N., Sharma R., Kabra R. & Baghel U.S.	Myrica esculenta Buch.-Ham. ex D. Don: A Natural Source for Health Promotion and Disease Prevention	Plants 2019, 8(6), 149.	May, 2019
47.	Singh S., Kumar V., Kapoor D., Kumar S., Singh S., Dhanjal D.S., Datta S., Samuel J., Dey P., Wang S., Prasad R., Singh J.	Revealing on hydrogen sulfide and nitric oxide signals co-ordination for plant growth under stress conditions	Physiologia plantarum, 2019, 158, 188-215.	July, 2019
48.	Naik R., Borkar S.D., Bhat S. & Acharya R.N.	Śākadravya (Vegetables) as Pathya in Metabolic Disorders—A Review from Classical Texts of Āyurveda with Current Evidences	Journal of Drug Research in Ayurvedic Sciences July-September 2018;3(3):181-193	August, 2019
<b>D. Pharmaceutical and Pharmacognistical Research</b>				
49.	Tewari V. & Tewari D.	A Pharmaceutical & Analytical Study of Punarnava Mandura	International Ayurvedic Medical Journal, Volume 3, Issue 4, pp 1745-1750, April – May, 2019 ( <a href="http://www.iamj.in">www.iamj.in</a> ).	May, 2019
50.	Prasad A, B., Agarwal S., Mohammad A., Baheti S. & Dighe D.	Antimicrobial Study of Vyadhividhwansana Rasa (An Herbomineral Preparation): In Vitro Study	International Journal of Ayurveda and Pharma Research, Vol 8, Issue 1, pp. 30-36	Jan., 2020
51.	Kumar V., Kapoor D., Singh S., Romero R., Prasad R. & Singh J.	Antioxidant enzymes regulation in plants in reference to reactive oxygen species (ROS) and reactive nitrogen species (RNS)	Plant Gene, 2019, 19, 100182	Sept., 2019
52.	Charde V., Patel R., Patel K., Charde V., Murthy S.N.	Comparative in Vitro experimental study on Apple (Malus domestica Borkh.) before and washing with Ushna Jal (Lukewarm water), LavanaJala (5% NaCl solution) and HaridraJalaw.s.r to pesticide residue.	Aayurpharm, Int J Ayur Alli Sci. Vol. 7, No. 9 (2018) Pages 129 – 142.	April, 2019
53.	Meena A K., Rekha P. & Ilavarasan R.	Determination of heavy metal contents in herbal plant leaves collected from different locations of Chennai city	IP International Journal of Comprehensive and Advanced Pharmacology; 4(2): 53-55	Aug., 2019
54.	Jyostna kumari T., Pratap G.P., Prasad S.B., Murthy P.H.C. & Prasad G.P.	Development of quality standard of Ksheerabala oil: An Ayurvedic Formulation.	International Journal of Pharmaceutical Quality Assurance 10(4): 567-570.	Dec., 2019.
55.	Mane S.S. & Gajarmal A.A.	Distinct Role of Pharmacognostical Study in the Drug Development and Standardization	International Journal of Ayurveda and Pharmaceutical Chemistry (IJAPC) Vol 12, Issue 1, 76-88	Jan., 2020



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149.	Debnath S.K., Barik L., Sahu D.S. & Hazra J.	Review on Nidana (Etiology) of Amavata Rheumatoid Arthritis	International Journal of Ayurvedic Herbal Medicine, 9 (6), 3674-78, 2019	Dec., 2019
150.	Venkateshwarlu B., Muralikrishna C., Midhuna Mohan K., Anumol K. & Babu G.	Review on Wound healing therapeutic regimens in Ayurveda	International Journal of Ayurveda and Pharma Research, Vol 8, Issue 1	Jan., 2020
151.	Hetalben A.	Role of Pradhana Sharira and Manas Prakriti (Bodily and Mental Constitution) in the Manifestation of Sthaulya (Obesity): A Cross-Sectional Survey Study	International Journal of Yoga - Philosophy, Psychology and Parapsychology, Volume 7   Issue 2   July-December 2019 Print ISSN # 2347-5633; online ISSN # 2348-5108 Published by Wolters Kluwer – Medknow	Oct., 2019
152.	Vishwakarma P.K., Sharma D., Verma R.K., Rai A.K. & Tiwari R.P.	Role of Snehana in the Management of Protein Energy Malnutrition in Children.	International Ayurvedic Medical Journal, 7(4):2019, P.589-593.	April, 2019
153.	Potbhare B., Reddy R.G., Thakre P. & Sangvikar S.	Samrat Ashoka's Inscriptions and Ayurveda: A Review.	International Journal of Ayurveda and Pharma Research.	Sept., 2019
154.	Mohod P., Shah A., Deep V.C. & Mohod S.	Short review on Pain (Vedana) by Sushruta	IJAPR, ISSN 2322-0902 (P) Page 55-58, Vol 8; Issue 3	March, 2020
155.	Kumar V.	Spectrophotometric Interaction of Carbofuran on Food Grains	Journal of the Gujarat Research Society 21 (8), 841-850	Dec., 2019



156.	Gopod S.P., Anumol K., Midhuna Mohan K., Murali Krishna C. & Babu G.	The review of Garbhini Shotha (Oedema in Pregnancy) in Ayurveda	AYUSHDHARA November - December 2019; Vol 6 , Issue 6	Jan., 2020
157.	Gajarmal A.A. & and Rath S.	Therapeutic Evaluation of Rasayana Karma of Chaturthamalaka Rasayana	International Ayurvedic Medical journal, 7(5), pp 792-800	May, 2019
158.	Kumar V., Sidhu G.S., Singh S., Dhanjal D.S., Datta S. & Singh J.	Toxicity, monitoring and biodegradation of organophosphate pesticides: A review	Critical Reviews in Environmental Science and Technology, 2019, 49, 1135-1185.	Aug., 2019
159.	Sharma R., Kuca K., Kabra A., Rao M.M. & Prajapati P.K.	Traditional Ayurvedic and herbal remedies for Alzheimer's disease: From Bench to Bedside	Expert Review of Neurotherapeutics, 2019; 19 (5)359-374.	May, 2019
160.	Mane S. & Gajarmal A.A.	Updated info on Shankha Vati w.s.r. to the Turangaratnamala (a text on treatment of horse)	International Ayurvedic Medical Journal, Volume 7, Issue 12, pp 2297-2302	Dec., 2019

\*Not reported in previous year

### Details of Conference Proceedings, Souvenirs etc.

S. No.	Name of the Author	Title of paper	Name of Conference, Proceedings, Souvenirs	Date of Publication
<b>A. Clinical Research</b>				
1.	Sharma S. Bhagat P. & Reddy R.G.	Assessment of Therapeutic Efficacy of Vamana Followed By Virechana and Shamana Therapy in the Management of Kitibha Kushtha (Psoriasis) - A Case Study.	Souvenir of National Conference on Dermatology in Ayurveda.	Jan., 2020
2.	Panda A.K.	Ayurveda treatment outcome of chronic liver disease	National Conference on Insights into the management of chronic liver disease through Ayurveda	22 <sup>nd</sup> Sep., 2019
3.	Bhavya B.M.	Clinical application of real world evidence based setting a new insight into research in Ayurveda w.r.t Shalaky Tantra.	International conference update Shalaky Tantra 2019.	Dec., 2019
4.	Panda A.K.	Clinical success stories of organ specific auto immune diseases w.r.t. liver and Kidney	International Seminar on Integrated approach to Auto immune disorders	4 <sup>th</sup> Aug., 2019
5.	Pradeepkumar P.P.	Male infertility a chapter in Handbook on Ayurveda Gynaecology Published by First edition 2019 Page no 43-46	AMAI, Vanitha clinic state level training programme 2018-19	Nov., 2019
6.	Deep V.C.	Nidana Parivarjanam Chikitsa	Aaravam 2019, Souvenir, Nadankalamskarikasamiti, Thrissur	Dec., 19



<b>B. Health care Research and Ethno-medicine</b>				
7.	Shubhashree M.N. Shantha T.R., Kishore Kumar R., Rama Rao V. Venkateshwarlu G. & Sridhar B.N.	A Glimpse of Ethanobotanical Practices Regarding Puerperal Care in Urban Community, Bangalore	Souvenir- Karma Siddhi- International conference on Bio-purification Therapies, Ethno medicine and food diversity in Panchakarma Organized by SDM College of Ayurveda Udupi on 14 <sup>th</sup> -15 <sup>th</sup> February 2020. Page no 111-115	Feb., 2020
8.	Khanduri S., Sharma B.S., Sunita, Singh R., Mangal A.K., Gaidhani S.N., Srikanth N. & Dhiman K.S.	Drug Development from ethno-medical claims and local health traditions-CCRAS initiatives	JH/SFEC2020/OP64;	Feb., 2020
9.	Bora D.	Protection of Ethno-medicinal plants of Assam through Constitutional provisions and IPR Laws with the help of advanced experimental ethnobotanic approach".	National Seminar on "Intellectual Property Law" held at BRM Govt. Law College, Guwahati	12 <sup>th</sup> -13 <sup>th</sup> Feb., 2020
<b>C. Dravya Guna, Medico-Botanical Survey &amp; Cultivation</b>				
10.	Naik R.	An Insight into Āyurvedic and Contemporary views on Traditional Collection Practices of Medicinal Plants	Karma Siddhi-International conference on Bio-purification Therapies, Ethno medicine and food diversity in Panchakarma Organized by SDM College of Ayurveda Udupi. Page no 111-115	14 <sup>th</sup> -15 <sup>th</sup> Feb., 2020
11.	Ratha K.K.	Conservation of Medicinal Plants-A matter of Concern for Ayurveda System of medicine	National Seminar on Indigenous Knowledge & Conservation of Threatened Medicinal Plants at Bhubaneswar	30 <sup>th</sup> & 31 <sup>st</sup> August, 2019
12.	Ratha K.K.	Contribution of Astanga Sangraha to Dravyaguna	National Seminar on Indigenous Knowledge & Conservation of Threatened Medicinal Plants at Bhubaneswar	30 <sup>th</sup> & 31 <sup>st</sup> August, 2019
13.	Rama Rao V., Shubhashree M.N., Naik R., Shiddamallayya Vinaya Rao	Little known medicinal plants used in Traditional Healthcare	Souvenir- Biorujivith 2019 , Organized by Garden city University Bangalore, Page No: 245	September 2019
<b>D. Pharmaceutical and Pharmacognostical Research</b>				
14.	Panda P.	Bhesaja kala with special reference to Astanga Sangraha	All India Yoga-Ayurveda seminar	19 <sup>th</sup> Oct., 2019



E. Pharmacological Research				
15.	Sahu D.S., Upadhyay S.N., Bora M. & Lalrinpuia.	Acute Dermal Toxicity and Wound Healing Activity of <i>Mikania micrantha</i> ointment in rats.	Souvenir, 6 <sup>th</sup> Convention Society for Ethnopharmacology, India & National Seminar on Translational Research of Traditionally used Indian Medicinal Plants with special reference to <i>Tinospora cordifolia</i>	7 <sup>th</sup> to 8 <sup>th</sup> Sep., 2019.
16.	Ratha K.K.	Pharmacological basis of Ayurvedic Anti-diabetic herbs	International Conference ASTHAA-2019	9 <sup>th</sup> -10 <sup>th</sup> Nov.,19
17.	Bora M., Lalrinpuia, Upadhyay S.N., Dixit A.K., Sinha B.M., Mukherjee K. & Rao M.M.	Preclinical Safety and Toxicity Studies of [Guduchi ( <i>Tinospora cordifolia</i> Willd. Miers)]	Souvenir, 6 <sup>th</sup> Convention Society for Ethnopharmacology, India & National Seminar on Translational Research of Traditionally used Indian Medicinal Plants with special reference to <i>Tinospora cordifolia</i>	7 <sup>th</sup> to 8 <sup>th</sup> Sep., 2019
F. Literary & Miscellaneous				
18.	Nair P. P.	Ayurveda our treasure, tradition and heritage	The New Indian Express Science section	31 <sup>st</sup> Oct., 2019
19.	Deep V.C. & Shah A.B.	Pharmacovigilance of Panchakarma with reference to Poorvakarma	National Conference on Pharmacovigilance	Nov., 19

### Details of Research publications in Books/ Booklets/ Technical reports

S. No.	Contributor	Contribution & Title of the Book/ booklets etc.	Publisher	Date of Publication
1.	Narasimhaji Ch.V.	13 monographs on single raw drugs used in Indian Medicinal plants	Quality Standards of Indian Medicinal Plants –ICMR, Vol-17, 2019	Oct., 2019
2.	Kumari M.	Apana Vata in Health & Disease 978-93-88299-35-0	Chaukhambha Prakashan, Varanasi- 221001	2019-20
3.	Singh S., Kumar V., Romero R. Sharma K. & Singh J.	Applications of Nanoparticles in Wastewater Treatment. In: Prasad R., Kumar V., Kumar M., Choudhary D. (eds)	Nanobiotechnology in Bioformulations. Nanotechnology in the Life Sciences. Springer, Cham, 2019, 395-418.	July, 2019
4.	Khanduri S.	Ayurveda Intervention (AyushQOL-2C) in Improving quality of Life in Local Non Metastatic Breast Cancer as adjuvant to Radiotherapy & Chemotherapy–(A Report of Double Blind Randomized Placebo controlled clinical Study)	Central Council for Research in Ayurvedic Sciences Ministry of AYUSH, Government of India, New Delhi – 2019	2019
5.	Rao B.C.S., Khanduri S. et.al.	Ayurveda and integrative Medicine: A Compendium of selected research papers.	CCRAS	2019



6.	Rao B.C.S., Yadav B., Sophia <i>et al</i>	Ayurveda based clinical methods for examination of skin Diseases (Twak Vikara)	CCRAS	2019
7.	Dhiman K.S.; Srikanth N.; Mangal A.K.; Sharma N., Narsimhaji Ch. V. Murthy S.N., Ilavarsan R., Rath C., Jindal H. & Prabhu R.	Ayurveda Based Seasonal Collection Practices for Selected Medicinal Plants A Scientific Appraisal; Technical Report, Vol.-1; ISBN: 978-81-941489-4-4.	published by CCRAS, Ministry of AYUSH, Government of India, New Delhi, 2019,	
8.	Chincholikar M.B. & Khanduri S. <i>et.al.</i>	Ayurveda for Longevity – A Compendium of Select Research Publications	Published by CCRAS	Oct., 2019
9.	Hetalben A.	Basics of Research Methodology & Medical Statistics (ISBN: 978-81-7702-456-2)	Book Publication Publisher: Pratibha Prakashan, 7259/23, Ajendra market, Prem Nagar, Shakti Nagar, Delhi-110007	May, 2019
10.	Balakrishnan P.	Billion Steps: A Path Towards Strength and Prosperity	Youth as Nation Builders ISBN No:978-81-936791-4-2	2019
11.	Narasimhaji Ch. V., Meena A.K., Rekha P., Ilavarasan R. & Srikanth N.	Book chapter on Cassia angustifolia M.Vahl Pennel -Senna	Medicinal plant used in Indian system of medicine August 2019	Aug., 2019
12.	Kumar V., Singh S., Datta S., Singh S., Dhanjal D.S., Garg R., Kaur P., Sharma K. & Singh J.	Challenges and Future Perspectives of Nanotoxicology. Siddhardha B., Dyavaiah M., Kasinathan K. (eds)	Model Organisms to Study Biological Activities and Toxicity of Nanoparticles. Springer, Singapore 2020. 451-466. DOI:10.1007/978-981-15-1702-0_22	March, 2020
13.	Narayan R.	Chikitsa Prabhakar of Shri Prabhakar Ogale – English Translation	CCRAS	2019-20
14.	Kumar V., Singh S., Singh D., Datta S., Kumar S., Singh S.B. & Singh J.	Current Trends in Mycobacterium tuberculosis Pathogenesis and Drug Resistance. In: Siddhardha B., Dyavaiah M., Syed A. (eds)	Model Organisms for Microbial Pathogenesis, Biofilm Formation and Antimicrobial Drug Discovery. Springer, Singapore. 2020, 301-322. DOI:10.1007/978-981-15-1695-5_16	March, 2020
15.	Khanduri S.	Evidence Based Clinical Efficacy and Safety of Ayurveda Medicines - Compendium of Select Research Publications: Vol.1	CCRAS, New Delhi	2019





16.	Khanduri S.	Glimpses of CCRAS Contributions (50 Glorious years): Vol. VI – (Pharmacology Research and Safety Studies)	CCRAS New Delhi	2019
17.	Narayan R. & Sridevi V.	Glimpses of CCRAS Contributions (50 Glorious Years): Vol. VII- Medico-Historical Studies and`Literary Research	CCRAS New Delhi	2019
18.	Kumar V., Singh S., Singh S., Dhanjal D.S., Datta S. & Singh J.	Global Scenario of Plant– Microbiome for Sustainable Agriculture: Current Advancements and Future Challenges. In: Yadav A., Singh J., Rastegari A., Yadav N. (eds)	Plant Microbiomes for Sustainable Agriculture. Sustainable Development and Biodiversity, vol 25. Springer, Cham. 2020, 425-443. DOI:10.1007/978-3-030-38453-1_14	March, 2020
19.	Meena A. K., Rekha P. & Ilavarasan R.	Guggul (Commiphora wightii (Arn.) Bhandari)	Medicinal Plants in India Importance and Cultivation, Jaya Publishing House, First Edition Volume-I, Chapter 11, 203-221	2019
20.	Chincholikar M.B.	Health related Demography in Ahmedabad District- Gujarat Swasthya Rakshan Programme (2016 –2017): Technical Report Research Oriented Public Health Care Services (SRP Series-1)	CCRAS New Delhi	Dec., 2019
21.	Mahajan B. & Chincholikar M.B.	Local Health Traditions (LHTs) and Ethno Medical Practices(EMPs)- CCRAS Contribution & Experiences	CCRAS New Delhi	Aug., 2019
22.	Dhiman K.S., Srikanth N., Mangal A.K., Sridevi V. Khanduri S., Rath C., Mahajan B. & Chincholikar M.	Medicinal Plants for Longevity – Evidence Based Rasayana Approach of Ayurveda ISBN: 978-81-941489-8-2.	CCRAS New Delhi	Oct., 2019
23.	Datta S., Singh S., Kumar V., Dhanjal D.S., Sidhu G.K., Amin D.S., Kumar S., Singh J. & Singh J.	Microbial Endophytes Prospects for Sustainable Agriculture. Endophytic bacteria in xenobiotic degradation	Woodhead Publishing Series in Food Science, Technology and Nutrition, 2020, 125-156.	Jan., 2020
24.	Kumar V., Singh S., Singh S., Kumar S., Dhanjal D.S., Romero R., Datta S., Bhadrecha P. & Singh J.	Microbial Remediation for Wastewater Treatment. In: Arora P. (eds)	Microbial Technology for Health and Environment. Microorganisms for Sustainability, vol 22. Springer, Singapore. 2020. 57-71. DOI:10.1007/978-981-15-2679-4_3	March, 2020





25.	Sharma S.	Pandu Roga (effect of punarnavadi mandura on iron deficiency anemia)	Ayurved Sanskrit Hindi Pustak Bhandar, Kishanpol Bazar, Jaipur, 978-81-943694-5-5	2019-20
26.	Kumar V., Kumar S., Singh S., Datta S., Dhanjal D.S., Sharma P. & Singh J.	Pathogenesis and Antibiotic Resistance of Staphylococcus aureus. In: Siddhardha B., Dyavaiah M., Syed A. (eds)	Model Organisms for Microbial Pathogenesis, Biofilm Formation and Antimicrobial Drug Discovery. Springer, Singapore. 2020, 99-115. DOI:10.1007/978-981-15-1695-5_7	March, 2020
27.	Ota S.	Quality & Safety of selected Rasakalpa (Metal & mineral based preparations-Technical Report, Vol-1	CCRAS New Delhi	2019-20
28.	Ota S.	Quality & Safety of selected Rasakalpa (Metal & mineral based preparations-Technical Report, Vol-2	CCRAS New Delhi	2019
29.	Khanduri S.	Quality and Safety of Select Rasakalpa (Arogyavardhini Vati, Mahayogaraja Guggulu, Vasant Kusumakar Rasa and Mahalakshmi Vilas Rasa): Vol.1	CCRAS New Delhi	2019
30.	Khanduri S.	Quality and Safety of Select Rasakalpa (Hridayarnava Rasa): Vol. 3	CCRAS New Delhi	2019
31.	Khanduri S.	Quality and Safety of Select Rasakalpa (Naga Bhasma): Vol. 5	CCRAS New Delhi	2019
32.	Khanduri S.	Quality and Safety of Select Rasakalpa (Rasamanikya, Makaradhwaja, Kajjali and Rasa Sindur): Vol. 2	CCRAS New Delhi	2019
33.	Khanduri S.	Quality and Safety of Select Rasakalpa (Tamra Bhasma): Vol. 4	CCRAS New Delhi	2019
34.	Kumar V., Sharma K., Singh S., Singh S., Datta S., Dhanjal D.S., Kaur P. & Singh J.	Saccharomyces cerevisiae as Model Organism to Study Biological Activities of Nanoparticles. In: Siddhardha B., Dyavaiah M., Kasinathan K. (eds)	Model Organisms to Study Biological Activities and Toxicity of Nanoparticles. Springer, Singapore. 2020, 101-115. DOI:10.1007/978-981-15-1702-0_6	March, 2020
35.	Gaidhani S.N. & Gautam M.K.	Safety studies Contributors: Quality & Safety of selected Rasakalpa (Metal & Mineral based Ayurvedic formulations) Arogyavardhini vati, Mahayograj guggul, Vasantakusumakara ras, Mahalaxmi vilas ras - Volume 1	CCRAS New Delhi	2019



36.	Gaidhani S.N. & Gautam M.K.	Safety studies Contributors: Quality & Safety of selected Rasakalpa (Metal & Mineral based Ayurvedic formulations) Rasamanikya, Makardhwaja, Kajjali, Rasa sindura - Volume 2	CCRAS New Delhi	2019
37.	Gaidhani S.N., Bora M. & Gautam M.K.	Safety studies Contributors: Quality & Safety of selected Rasakalpa (Metal & Mineral based Ayurvedic formulations) Hridayarnava rasa- Volume 3	CCRAS New Delhi	2019
38.	Gaidhani S.N., Bora M. & Gautam M.K	Safety studies Contributors: Quality & Safety of selected Rasakalpa (Metal & Mineral based Ayurvedic formulations) Tamra Bhasma- Volume 4	CCRAS New Delhi	2019
39.	Gaidhani S.N., Bora M. & Gautam M.K	Safety studies Contributors: Quality & Safety of selected Rasakalpa (Metal & Mineral based Ayurvedic formulations) Naga Bhasma- Volume 5	CCRAS New Delhi	2019
40.	Meena A. K., Rekha P. & Ilavarasan R.	Sarpagandha ( <i>Rauwolfia serpentina</i> (L.) Benth. Ex Kurz.)	Medicinal Plants in India Importance and Cultivation Jaya Publishing House, First Edition, Volume-I, Chapter 26, 446-465.	2019
41.	Dwivedi G.R., Sisodia B.S. & Shikha	Secondary Metabolites: Metabolomics for Secondary Metabolites	New and Future Developments in Microbial Biotechnology and Bioengineering (Elsevier)	June, 2019
42.	Dhiman K.S., Srikanth N., Mangal A.K., Gurmet P., Rath C., Stobgais T., Yangdol R., Lamo T., Sridevi V., Singh R., Chincholikar M., Mahajon B., Jameela S., Tripathi A.K. & Jindal H.	Select Flora of Medicinal Importance in Sowa-Rigpa and Ayurveda [Introductory Note & Pictorial Exposition] ISBN: 978-81-943932-1-4.	CCRAS New Delhi	Feb., 2020
43.	Narasimhaji Ch. V., Meena A.K., Rekha P. & Ilavarasan R.	Senna ( <i>Cassia angustifolia</i> M.Vahl Pennel)	Medicinal Plants in India Importance and Cultivation Jaya Publishing House, First Edition, Volume-II, Chapter 7, 81-91	2019



44.	Rama Rao V., Doddamani S.H., Shubhashree M.N., Naik R., Shiddamallayya, & Kishore Kumar R.	Some important medicinal plants of Karnataka used in Ethnomedicine	Abstract book published by International Congress of Society for Ethnopharmacology, India, Organized by Jamia Hamdard, New Delhi	Feb., 2020
45.	Sharma N., et al	Technical Report To establish the best procurement time for certain herbs by analysing the seasonal variation in bioactive secondary metabolite with quantitative HPLC".	Ministry of AYUSH	Nov., 2019
46.	Balakrishnan P.	The principles of Roganutpadaniya- their application to preventive medicine	ISBN No: 978-93-84050-38-2	2019
47.	Sisodia B.S., Kumar V., Singh S., Singh S., Datta S. & Singh J.	Zebra Fish Infection Model: From Pathogenesis to Therapeutics. In: Siddhardha B., Dyavaiah M., Syed A. (eds)	Model Organisms for Microbial Pathogenesis, Biofilm Formation and Antimicrobial Drug Discovery. Springer, Singapore. 2020, 429-440. DOI:10.1007/978-981-15-1695-5_22	March, 2020
48.	Lale S.K.	अभिधानपदीपिका एवं शिवकोश निघंटु		31 <sup>st</sup> Jan., 2020

**Tribal Health Care Research Programme**

**Institute wise outcome of Tribal health care research programme**

S. No.	Name of villages Covered	Population covered				No. of patients treated													
		SC		Others		Total		New				Follow up				Total			
		ST	Others	ST	Others	ST	Others	Total	SC	Others	ST	Others	Total	SC	Others	ST	Others	Total	
<b>I. CARHID, Bhubaneswar</b>																			
1.	Badapichhulia	00	1307	00	1307	00	231	00	231	00	434	00	434	00	665	00	665	00	665
2.	Jharbeda	00	1583	03	1586	00	219	00	219	00	399	00	399	00	618	00	618	00	618
3.	Basantpura	04	1667	14	1685	00	213	00	213	00	391	00	391	00	604	00	604	00	604
4.	Nudurpada	00	730	04	734	00	198	00	198	00	369	00	369	00	567	00	567	00	567
5.	Kapasapada	20	902	00	922	00	189	00	189	00	345	00	345	00	534	00	534	00	534
6.	Langalakanti	07	519	10	536	00	176	00	176	00	311	00	311	00	487	00	487	00	487
7.	Tikira	00	855	04	859	00	192	00	192	00	344	00	344	00	536	00	536	00	536
8.	Toranipokhari	00	743	38	781	00	199	04	203	00	368	00	368	00	567	04	571	00	571
9.	<b>Total</b>	<b>31</b>	<b>8306</b>	<b>73</b>	<b>8410</b>	<b>00</b>	<b>1617</b>	<b>04</b>	<b>1621</b>	<b>00</b>	<b>2961</b>	<b>00</b>	<b>2961</b>	<b>00</b>	<b>4578</b>	<b>04</b>	<b>4582</b>	<b>00</b>	<b>4582</b>
<b>II. RARIECD, Jaipur</b>																			
1.	Bhoyan	00	337	00	337	00	100	00	100	00	22	00	22	00	122	00	122	00	122
2.	Naya padariya	00	844	00	844	00	170	00	170	00	38	00	38	00	208	00	208	00	208
3.	Chirola bada	00	952	00	952	00	217	00	217	00	63	00	63	00	280	00	280	00	280
4.	Hameerapura bada	00	1028	00	1028	00	227	00	227	00	68	00	68	00	295	00	295	00	295
5.	Ghatigada	00	1657	00	1657	00	166	00	166	00	162	00	162	00	328	00	328	00	328
6.	Kundi	00	1217	00	1217	00	109	00	109	00	87	00	87	00	196	00	196	00	196
7.	Jhamburi	00	1068	00	1068	00	96	00	96	00	66	00	66	00	162	00	162	00	162
8.	<b>Total</b>	<b>00</b>	<b>7103</b>	<b>00</b>	<b>7103</b>	<b>00</b>	<b>1085</b>	<b>00</b>	<b>1085</b>	<b>00</b>	<b>506</b>	<b>00</b>	<b>506</b>	<b>00</b>	<b>1591</b>	<b>00</b>	<b>1591</b>	<b>00</b>	<b>1591</b>
<b>III. RARIDD, Gwalior</b>																			
1.	Bhilo Ki Khedi	00	1180	00	1180	00	370	12	382	00	209	00	209	00	579	12	591	00	591
2.	Kunda	00	1129	00	1129	00	506	00	506	00	168	00	168	00	674	00	674	00	674
3.	Bhamat	00	612	00	612	00	264	00	264	00	145	00	145	00	409	00	409	00	409



4.	Dungra punja	00	709	00	709	00	709	00	709	00	252	00	252	00	118	00	118	00	118	00	370	00	370	00	370	
5.	lingpani	00	678	00	678	00	678	00	678	00	343	00	343	00	126	00	126	00	126	00	469	00	469	00	469	
6.	Ukarpar	00	777	00	777	00	777	00	777	00	248	00	248	00	121	00	121	00	121	00	369	00	369	00	369	
7.	Karanyr Ryt.	00	646	00	646	00	646	00	646	00	164	00	164	00	110	00	110	00	110	00	274	00	274	00	274	
8.	Atari	00	495	00	495	00	495	00	495	00	189	00	189	00	110	00	110	00	110	00	299	00	299	00	299	
9.	Khapa	00	454	00	454	00	454	00	454	00	227	00	227	00	83	00	83	00	83	00	310	00	310	00	310	
10.	Sagar	00	393	00	393	00	393	00	393	00	211	00	211	00	79	00	79	00	79	00	290	00	290	00	290	
	<b>Total</b>	<b>00</b>	<b>7073</b>	<b>00</b>	<b>7073</b>	<b>00</b>	<b>7073</b>	<b>00</b>	<b>7073</b>	<b>00</b>	<b>2774</b>	<b>12</b>	<b>2786</b>	<b>00</b>	<b>1269</b>	<b>00</b>	<b>1269</b>	<b>00</b>	<b>1269</b>	<b>00</b>	<b>4043</b>	<b>12</b>	<b>4055</b>	<b>00</b>	<b>4055</b>	
<b>IV. RARISD, Vijayawada</b>																										
1.	Thonam	00	1955	48	2003	06	564	59	629	00	134	08	142	06	698	67	771									
2.	Mavudi	00	1170	11	1181	06	273	16	295	00	144	07	151	06	417	23	446									
3.	Kottiparuvu	42	1304	29	1375	18	336	17	371	02	115	02	119	20	451	19	490									
4.	Diguva mendangi	00	581	04	585	00	160	12	172	00	93	05	98	00	253	17	270									
5.	Mokhasadandigam	09	484	38	531	00	155	10	165	00	100	00	100	00	255	10	265									
6.	Kurukutti	120	2858	14	2992	46	498	50	594	06	83	06	95	52	581	56	689									
	<b>Total</b>	<b>171</b>	<b>8352</b>	<b>144</b>	<b>8667</b>	<b>76</b>	<b>1986</b>	<b>164</b>	<b>2226</b>	<b>08</b>	<b>669</b>	<b>28</b>	<b>705</b>	<b>84</b>	<b>2655</b>	<b>192</b>	<b>2931</b>									
<b>V. RARIMCH, Nagpur</b>																										
1.	Tekari Alias Vaneri	02	809	113	924	31	305	61	397	54	502	89	645	85	807	150	1042									
2.	Nachanbhatti	89	933	55	1077	132	310	30	472	211	507	62	780	343	817	92	1252									
3.	Mohadi	230	1884	158	2272	153	463	118	734	257	561	146	964	410	1024	264	1698									
4.	Jamsala	231	1190	42	1463	96	300	46	442	129	419	52	600	225	719	98	1042									
5.	Yergaon	00	474	00	474	05	295	30	330	09	556	30	595	14	851	60	925									
6.	Lonkhairi Tukum	00	549	00	549	91	431	112	634	116	574	135	825	207	1005	247	1459									
7.	Murmadi	00	807	00	807	74	445	232	751	102	718	299	1119	176	1163	531	1870									
8.	Kalamgaon	00	1058	00	1058	56	522	152	730	60	740	251	1051	116	1262	403	1781									
9.	Virwha	00	504	00	504	39	213	25	277	36	234	18	288	75	447	43	565									
	<b>Total</b>	<b>552</b>	<b>8208</b>	<b>368</b>	<b>9128</b>	<b>677</b>	<b>3284</b>	<b>806</b>	<b>4767</b>	<b>974</b>	<b>4811</b>	<b>1082</b>	<b>6867</b>	<b>1651</b>	<b>8095</b>	<b>1888</b>	<b>11634</b>									
<b>VI. RARIMD, Bangalore</b>																										
1.	Adlapura	150	793	126	1069	31	178	28	237	31	180	23	234	62	358	51	471									
2.	Ballapura	101	821	121	1043	28	227	21	276	39	158	22	219	67	385	43	495									
3.	Nelahal	134	985	224	1343	24	219	34	277	25	129	29	183	49	348	63	460									
4.	Chikkaseebi	143	804	145	1092	30	225	28	283	31	138	12	181	61	363	40	464									



5.	Mustalagummi	183	897	240	1320	43	313	39	395	31	148	31	210	74	461	70	605
6.	Guntakolammanahalli	139	976	150	1265	24	354	22	400	40	208	33	281	64	562	55	681
7.	Pelurahatti	60	839	209	1108	22	249	13	284	21	152	25	198	43	401	38	482
8.	Megalahalli	127	921	164	1212	26	271	27	324	30	139	23	192	56	410	50	516
9.	<b>Total</b>	<b>1037</b>	<b>7036</b>	<b>1379</b>	<b>9452</b>	<b>228</b>	<b>2036</b>	<b>212</b>	<b>2476</b>	<b>248</b>	<b>1252</b>	<b>198</b>	<b>1698</b>	<b>476</b>	<b>3288</b>	<b>410</b>	<b>4174</b>
<b>VII. RARIID, Patna</b>																	
1.	Santpur	00	1610	21	1631	00	569	05	574	00	400	05	405	00	969	10	979
2.	Soharia	10	1642	00	1652	02	576	00	578	02	409	00	411	04	985	00	989
3.	Parisauni	17	1333	08	1358	04	445	02	451	02	527	02	531	06	972	04	982
4.	Jharharwa	11	1404	15	1430	02	488	06	496	04	471	06	481	06	959	12	977
5.	Daruabari	08	1718	09	1735	01	571	01	573	00	361	00	361	01	932	01	934
6.	<b>Total</b>	<b>46</b>	<b>7707</b>	<b>53</b>	<b>7806</b>	<b>09</b>	<b>2649</b>	<b>14</b>	<b>2672</b>	<b>08</b>	<b>2168</b>	<b>13</b>	<b>2189</b>	<b>17</b>	<b>4817</b>	<b>27</b>	<b>4861</b>
<b>VIII. RARIGID Guwahati</b>																	
1.	Pukhuripara	00	1004	03	1007	01	226	01	228	00	184	01	185	01	410	02	413
2.	No.2 Sakhati	43	2373	14	2430	60	301	81	442	40	257	124	421	100	558	205	863
3.	Dhonguri	07	3169	16	3192	11	442	22	475	15	334	54	403	26	776	76	878
4.	Kahua	00	976	00	976	00	233	02	235	00	248	00	248	00	481	02	483
5.	<b>Total</b>	<b>50</b>	<b>7522</b>	<b>33</b>	<b>7605</b>	<b>72</b>	<b>1202</b>	<b>106</b>	<b>1380</b>	<b>55</b>	<b>1023</b>	<b>179</b>	<b>1257</b>	<b>127</b>	<b>2225</b>	<b>285</b>	<b>2637</b>
<b>IX. RARI, Gangtok</b>																	
1.	West Pendam	271	9627	406	10304	271	1985	406	2662	138	931	216	1285	409	2916	622	3947
2.	Middle Begha	03	229	19	251	03	45	19	67	01	38	16	55	04	83	35	122
3.	Upper Begha	07	264	29	300	07	50	29	86	03	43	18	64	10	93	47	150
4.	Tarkuthang	02	240	21	263	02	50	21	73	01	43	17	61	03	93	38	134
5.	Upper Mangmoo	16	278	32	326	16	57	32	105	06	36	19	61	22	93	51	166
6.	Lower Mangmoo	02	213	22	237	02	55	22	79	03	35	13	51	05	90	35	130
7.	Dentam	09	289	29	327	09	56	29	94	10	52	13	75	19	108	42	169
8.	Mangthang	01	234	21	256	01	50	21	72	00	47	13	60	01	97	34	132
9.	Gangyep	01	353	09	363	01	67	9	77	00	51	02	53	01	118	11	130
10.	Upper Lasso	21	317	16	354	21	54	16	91	16	62	10	88	37	116	26	179
11.	Nerdang	05	180	22	207	05	31	22	58	00	31	08	39	05	62	30	97
12.	Upper Lingchom	07	62	11	80	07	11	11	29	00	00	00	00	07	11	11	29
13.	Middle Lingchom	05	63	09	77	05	12	09	26	00	00	00	00	05	12	09	26



14.	Lower Lingchom	11	89	09	109	11	16	09	36	00	00	00	00	00	00	00	11	16	09	36	
15.	Lower Tikija	02	88	05	95	02	19	05	26	00	00	00	00	00	00	00	02	19	05	26	
	<b>Total</b>	<b>363</b>	<b>12526</b>	<b>660</b>	<b>13549</b>	<b>363</b>	<b>2558</b>	<b>660</b>	<b>3581</b>	<b>178</b>	<b>1369</b>	<b>345</b>	<b>1892</b>	<b>541</b>	<b>3927</b>	<b>1005</b>	<b>5473</b>				
<b>X. RARIUD, Jammu</b>																					
1.	Mehari Gujjaran	00	1011	00	1011	00	423	38	461	00	224	17	241	00	647	55	702				
2.	KoteDhara	00	1096	64	1160	00	442	59	501	00	237	32	269	00	679	91	770				
3.	Palam	00	1070	69	1139	00	415	176	591	00	181	63	244	00	596	239	835				
4.	Charran	00	1556	94	1650	00	535	35	570	00	210	11	221	00	745	46	791				
5.	Sawani	00	1136	47	1183	00	430	120	550	00	212	48	260	00	642	168	810				
6.	GurdhanBala	00	1799	44	1843	00	549	50	599	00	215	18	233	00	764	68	832				
7.	Nagrotasaldhar	00	809	91	900	00	359	114	473	00	164	50	214	00	523	164	687				
	<b>Total</b>	<b>00</b>	<b>8477</b>	<b>409</b>	<b>8886</b>	<b>00</b>	<b>3153</b>	<b>592</b>	<b>3745</b>	<b>00</b>	<b>1443</b>	<b>239</b>	<b>1682</b>	<b>00</b>	<b>4596</b>	<b>831</b>	<b>5427</b>				
<b>XI. ALRCA Chennai</b>																					
1.	Aathipadi	0	665	0	665	0	189	0	189	0	50	0	50	0	239	0	239				
2.	Semmam Patti	0	390	0	390	0	139	0	139	0	62	0	62	0	201	0	201				
3.	Beemara Patti	0	505	0	505	0	195	0	195	0	49	0	49	0	244	0	244				
4.	Pudur Chekkadi	0	424	0	424	0	130	0	130	0	36	0	36	0	166	0	166				
5.	Puliyam Patti	0	523	0	523	0	160	0	160	0	35	0	35	0	195	0	195				
6.	KalNattoor	0	407	0	407	0	116	0	116	0	43	0	43	0	159	0	159				
7.	Aruvankadu	0	396	0	396	0	130	0	130	0	31	0	31	0	161	0	161				
8.	Jambodai	0	252	0	252	0	83	0	83	0	40	0	40	0	123	0	123				
9.	Neerkunni	0	104	0	104	0	33	0	33	0	44	0	44	0	77	0	77				
10.	Udayar Kuppam	0	308	0	308	0	73	0	73	0	60	0	60	0	133	0	133				
11.	Malayanoor Chekkadi	0	456	0	456	0	142	0	142	0	48	0	48	0	190	0	190				
12.	Navakkollai	0	498	0	498	0	157	0	157	0	48	0	48	0	205	0	205				
13.	Keelvanakampadi	0	178	0	178	0	55	0	55	0	38	0	38	0	93	0	93				
14.	Kalathumedu	0	131	0	131	0	30	0	30	0	36	0	36	0	66	0	66				
15.	Thesurpalayam	0	183	0	183	0	36	0	36	0	26	0	26	0	62	0	62				
16.	Periyakal	0	193	0	193	0	55	0	55	0	45	0	45	0	100	0	100				
17.	K.R.Palayam Kanjanoor	0	226	0	226	0	90	0	90	0	84	0	84	0	174	0	174				
18.	Kaliyanam pund	0	145	0	145	0	56	0	56	0	62	0	62	0	118	0	118				
19.	Vengamur	0	322	0	322	0	96	0	96	0	84	0	84	0	180	0	180				



20.	Kadayam	0	131	0	131	0	53	0	53	0	74	0	74	0	127	0	127	
21.	Koralur	0	199	0	199	0	102	0	102	0	94	0	94	0	196	0	196	
22.	Nallam Palayam	0	137	0	137	0	70	0	70	0	62	0	62	0	132	0	132	
23.	Vanur	0	146	0	146	0	66	0	66	0	14	0	14	0	80	0	80	
24.	Parankani	0	85	0	85	0	39	0	39	0	34	0	34	0	73	0	73	
25.	Thiruvakarai	0	135	0	135	0	64	0	64	0	37	0	37	0	101	0	101	
26.	Uppu Vellore	0	118	0	118	0	57	0	57	0	38	0	38	0	95	0	95	
27.	Killiyannur	0	109	0	109	0	58	0	58	0	39	0	39	0	97	0	97	
	<b>Total</b>	<b>00</b>	<b>7366</b>	<b>00</b>	<b>7366</b>	<b>00</b>	<b>2474</b>	<b>00</b>	<b>2474</b>	<b>00</b>	<b>1313</b>	<b>00</b>	<b>1313</b>	<b>00</b>	<b>3787</b>	<b>00</b>	<b>3787</b>	
<b>XII. RARC, Port Blair</b>																		
1.	Alurong	00	317	00	317	00	52	00	52	00	00	00	00	00	52	00	52	
2.	Bengali	00	408	00	408	00	28	00	28	00	00	00	00	00	28	00	28	
3.	Campbell Bay	00	413	00	413	00	76	07	83	00	00	00	00	00	76	07	83	
4.	Chakkargaon	00	378	00	378	00	71	00	71	00	00	00	00	00	71	00	71	
5.	Changua	00	236	00	236	00	37	00	37	00	00	00	00	00	37	00	37	
6.	Chukmachi	00	265	00	265	00	35	00	35	00	00	00	00	00	35	00	35	
7.	Enam	00	266	00	266	00	35	00	35	00	00	00	00	00	35	00	35	
8.	Hitui	00	249	00	249	00	35	00	35	00	00	00	00	00	35	00	35	
9.	Kadamtala	00	25	00	25	00	00	00	0	00	00	00	00	00	00	00	00	
10.	Kakana	00	347	00	347	00	38	00	38	00	00	00	00	00	38	00	38	
11.	Kalasi	00	347	00	347	00	41	00	41	00	00	00	00	00	41	00	41	
12.	Kamorta	00	00	00	00	00	31	00	31	00	00	00	00	00	31	00	31	
13.	Laxsi	00	154	00	154	00	27	00	27	00	00	00	00	00	27	00	27	
14.	Malaka	00	375	00	375	00	22	00	22	00	00	00	00	00	22	00	22	
15.	Minyuk	00	272	00	272	00	21	00	21	00	00	00	00	00	21	00	21	
16.	Munak	00	369	00	369	00	33	00	33	00	00	00	00	00	33	00	33	
17.	Pilpilow	00	484	00	484	00	86	00	86	00	00	00	00	00	86	00	86	
18.	Raihion	00	306	00	306	00	47	00	47	00	00	00	00	00	47	00	47	
19.	Tahaila	00	481	00	481	00	49	00	49	00	00	00	00	00	49	00	49	
20.	Tapoiming	00	860	00	860	00	84	00	84	00	00	00	00	00	84	00	84	
21.	Tapong	00	274	00	274	00	40	00	40	00	00	00	00	00	40	00	40	
22.	Upper Katchal	00	151	00	151	00	18	00	18	00	00	00	00	00	18	00	18	







<b>XIV. RARISD, Ahmedabad</b>																	
1.	Kali Talai	00	991	00	991	00	262	00	262	00	156	00	156	00	418	00	418
2.	Bhambhori	00	958	00	958	00	311	00	311	00	170	00	170	00	481	00	481
3.	Bhutodi	00	1573	00	1573	00	414	00	414	00	153	00	153	00	567	00	567
4.	Junapani	00	1139	00	1139	00	356	00	356	00	183	00	183	00	539	00	539
5.	Salapada	00	1008	00	1008	00	319	00	319	00	197	00	197	00	516	00	516
6.	Nasirpur	00	904	00	904	00	342	00	342	00	110	00	110	00	452	00	452
	<b>Total</b>	<b>00</b>	<b>6573</b>	<b>00</b>	<b>6573</b>	<b>00</b>	<b>2004</b>	<b>00</b>	<b>2004</b>	<b>00</b>	<b>969</b>	<b>00</b>	<b>969</b>	<b>00</b>	<b>2973</b>	<b>00</b>	<b>2973</b>
<b>XV. RARC, Agartala</b>																	
1.	Barjala Binapani	07	1206	12	1225	05	97	12	114	02	91	04	97	07	188	16	211
2.	Kaiyachanbari	00	901	00	901	00	126	00	126	00	94	00	94	00	220	00	220
3.	Rangmala	01	1063	04	1068	01	117	04	122	01	91	00	92	02	208	04	214
4.	Sutarmura	01	897	12	910	00	127	11	138	00	64	14	78	00	191	25	216
	<b>Total</b>	<b>09</b>	<b>4067</b>	<b>28</b>	<b>4104</b>	<b>06</b>	<b>467</b>	<b>27</b>	<b>500</b>	<b>03</b>	<b>340</b>	<b>18</b>	<b>361</b>	<b>09</b>	<b>807</b>	<b>45</b>	<b>861</b>
	<b>Grand Total</b>	<b>2259</b>	<b>121005</b>	<b>3147</b>	<b>126411</b>	<b>1431</b>	<b>30187</b>	<b>2604</b>	<b>34222</b>	<b>1474</b>	<b>21946</b>	<b>2102</b>	<b>25522</b>	<b>2905</b>	<b>52133</b>	<b>4706</b>	<b>59744</b>



## Annexure-IV

## Ayurveda Mobile Health Care Programme under Scheduled Castes Sub Plan

## Institute wise status of Ayurveda Mobile Health Care Programme (SCSP)

S. No.	Name of the Institute	Name of Villages covered	No. of tour conducted	Population covered				Patient treated											
				SC	ST	Other	Total	New			Old			Total					
								SC	ST	Other	Total	SC	ST	Other	Total	SC	ST	Other	Total
1.	CARICD, New Delhi	Bhalswa Dairy	45	2035	06	00	2041	587	03	243	833	339	00	88	427	926	03	331	1260
		Nangloi J.J. Colony	42	2064	57	00	2121	608	26	133	767	253	05	54	312	861	31	187	1079
		Wazirpur J.J. Conony	43	1923	00	00	1923	540	02	173	715	262	00	80	342	802	02	253	1057
		Indrapuri	38	1748	05	00	1753	526	05	83	614	203	01	33	237	729	06	116	851
		Ranjeet Nagar (New)	47	1996	04	00	2000	483	03	239	725	300	00	187	487	783	03	426	1212
		Shadipur	08	230	09	00	239	70	04	63	137	09	01	27	37	79	05	90	174
		<b>Total</b>	<b>223</b>	<b>9996</b>	<b>81</b>	<b>00</b>	<b>10077</b>	<b>2814</b>	<b>43</b>	<b>934</b>	<b>3791</b>	<b>1366</b>	<b>07</b>	<b>469</b>	<b>1842</b>	<b>4180</b>	<b>50</b>	<b>1403</b>	<b>5633</b>
2.	NARIP, Cheruthuruthy	Vellinezhi	45	1548	00	108	1656	332	00	63	395	523	00	65	588	855	00	128	983
		Pattithara	50	2253	00	65	2318	487	00	41	528	854	00	62	916	1341	00	103	1444
		Kavassery	47	2262	00	94	2356	443	00	61	504	447	00	38	485	890	00	99	989
		Paruthur	49	2263	00	43	2306	578	00	37	615	931	00	44	975	1509	00	81	1590
		Koppam	49	1746	00	42	1788	431	00	24	455	714	00	63	777	1145	00	87	1232
		<b>Total</b>	<b>240</b>	<b>10072</b>	<b>00</b>	<b>352</b>	<b>10424</b>	<b>2271</b>	<b>00</b>	<b>226</b>	<b>2497</b>	<b>3469</b>	<b>00</b>	<b>272</b>	<b>3741</b>	<b>5740</b>	<b>00</b>	<b>498</b>	<b>6238</b>
3.	CARIHD, Bhubaneswar	Pampalo	18	753	00	00	753	298	00	00	298	330	00	00	330	628	00	00	628
		Biswanathpur	20	743	00	00	743	283	00	00	283	453	00	00	453	736	00	00	736
		Garedipanchan	27	1225	00	00	1225	496	00	00	496	704	00	00	704	1200	00	00	1200
		Sarat	19	790	00	00	790	347	00	00	347	482	00	00	482	829	00	00	829
		Srirampur	22	735	00	00	735	322	00	00	322	463	00	00	463	785	00	00	785
		Guapur	28	1194	00	00	1194	464	00	00	464	644	00	00	644	1108	00	00	1108
		Rajas	28	1228	00	00	1228	500	00	00	500	720	00	00	720	1220	00	00	1220
		Abhayamukhi	28	1297	00	00	1297	481	00	00	481	655	00	00	655	1136	00	00	1136
Nariso	32	1549	00	00	1549	611	00	00	611	814	00	00	814	1425	00	00	1425		
Marthapur	19	726	00	00	726	295	00	00	295	414	00	00	414	709	00	00	709		
<b>Total</b>	<b>10</b>	<b>10240</b>	<b>00</b>	<b>00</b>	<b>10240</b>	<b>4097</b>	<b>00</b>	<b>00</b>	<b>4097</b>	<b>5679</b>	<b>00</b>	<b>00</b>	<b>5679</b>	<b>9776</b>	<b>00</b>	<b>00</b>	<b>9776</b>		



4.	CARIDD, Kolkata	Kadampukur	27	1075	00	04	1079	117	00	07	124	143	00	00	260	00	07	267		
		Shikharpur	49	1945	00	183	2128	287	00	63	350	441	182	00	00	728	00	245	973	
		Akandakeshari	46	1883	00	23	1906	288	00	03	291	424	12	00	00	712	00	15	727	
		Jothbim	09	186	06	12	204	17	01	03	21	31	02	01	02	48	02	05	55	
		Hathgachha	12	136	00	00	136	10	00	00	10	27	00	00	00	37	00	00	37	
		Mausal	39	2213	00	00	2213	385	00	00	385	619	00	00	00	1004	00	00	1004	
		Deara	34	1715	00	00	1715	263	00	01	264	317	00	00	00	580	00	01	581	
		Athgarha	20	879	01	00	880	174	01	00	175	223	08	00	00	397	09	00	406	
		<b>Total</b>	<b>08</b>	<b>10032</b>	<b>07</b>	<b>222</b>	<b>10261</b>	<b>1541</b>	<b>02</b>	<b>77</b>	<b>1620</b>	<b>2225</b>	<b>09</b>	<b>196</b>	<b>09</b>	<b>3766</b>	<b>11</b>	<b>273</b>	<b>4050</b>	
		5.	CARIRD, Patiala	Marauri,Patiala	50	2676	00	00	2676	1247	00	109	1356	2041	00	276	3288	00	385	3673
Alampur,Patiala	24			746	00	56	802	258	00	33	291	370	00	54	628	00	87	715		
Gopalpur,Patiala	24			1590	00	00	1590	377	00	35	412	387	00	62	764	00	97	861		
Sural Kalan, Patiala	23			1487	00	26	1513	566	00	25	591	489	00	30	1055	00	55	1110		
Urduan,	24			1193	00	00	1193	490	00	39	529	864	00	94	1354	00	133	1487		
Kapurgarh, Fatehgarh Sahib	47			1317	00	08	1325	589	00	46	635	812	00	80	1401	00	126	1527		
Turan, Fatehgarh Sahib	47			1626	00	04	1630	618	00	23	641	998	00	48	1616	00	71	1687		
<b>Total</b>	<b>07</b>			<b>10635</b>	<b>00</b>	<b>94</b>	<b>10729</b>	<b>4145</b>	<b>00</b>	<b>310</b>	<b>4455</b>	<b>5961</b>	<b>00</b>	<b>644</b>	<b>10106</b>	<b>00</b>	<b>954</b>	<b>11060</b>		
6.	RARIED, Lucknow			Parvar Paschm	43	2041	00	00	2041	429	00	195	624	901	00	459	1330	00	654	1984
				Chalk Prithvipur	44	1642	00	00	1642	502	00	114	616	1161	00	258	1663	00	372	2035
		Kharkuwa	46	2400	00	00	2400	699	00	237	936	1382	00	454	2081	00	691	2772		
		Sirsa	47	2145	00	00	2145	519	00	162	681	1188	00	359	1707	00	521	2228		
		Dona	43	1833	00	00	1833	452	00	167	619	1001	00	338	1453	00	505	1958		
		<b>Total</b>	<b>05</b>	<b>10061</b>	<b>00</b>	<b>00</b>	<b>10061</b>	<b>2601</b>	<b>00</b>	<b>875</b>	<b>3476</b>	<b>5633</b>	<b>00</b>	<b>1868</b>	<b>8234</b>	<b>00</b>	<b>2743</b>	<b>10977</b>		
		7.	CARIC, Mumbai	Worli dairy	42	1531	40	129	1700	272	07	126	405	176	07	93	448	14	219	681
				Babasaheb Ambedkar	44	1259	14	171	1444	191	05	231	427	209	00	248	400	05	479	884
				Labour camp matunga	43	1627	32	99	1758	212	00	106	318	216	00	77	428	00	183	611
				Worli koliwada	46	1404	20	189	1613	235	03	221	459	163	01	193	398	04	414	816
BDD chawls worli	52			2226	02	86	2314	279	00	103	382	229	03	74	508	03	177	688		
<b>Total</b>	<b>05</b>			<b>8047</b>	<b>108</b>	<b>674</b>	<b>8829</b>	<b>1189</b>	<b>15</b>	<b>787</b>	<b>1991</b>	<b>993</b>	<b>11</b>	<b>685</b>	<b>2182</b>	<b>26</b>	<b>1472</b>	<b>3680</b>		



8.	RARIECD Jaipur	Kookas	23	1197	00	00	1197	379	01	07	387	294	00	06	300	673	01	13	687
		Maan pura	47	2291	00	00	2291	852	01	14	867	682	01	05	688	1534	02	19	1555
		Raisar	48	1822	00	00	1822	972	06	20	998	734	01	04	739	1706	07	24	1737
		Goner	45	1835	00	00	1835	769	15	31	815	620	06	18	644	1389	21	49	1459
		Udaipuria	44	1582	00	08	1590	843	01	13	857	759	01	08	768	1602	02	21	1625
		Harota	25	1265	00	00	1265	505	06	15	526	530	02	09	541	1035	08	24	1067
	<b>Total</b>	<b>06</b>	<b>232</b>	<b>9992</b>	<b>00</b>	<b>08</b>	<b>10000</b>	<b>4320</b>	<b>30</b>	<b>100</b>	<b>4450</b>	<b>3619</b>	<b>11</b>	<b>50</b>	<b>3680</b>	<b>7939</b>	<b>41</b>	<b>150</b>	<b>8130</b>
9.	RARIDD, Gwalior	Chharenta, Gohad	23	1168	00	00	1168	265	00	70	335	170	00	46	216	435	00	116	551
		Chhimak, dabra block	23	1067	00	00	1067	198	00	54	252	117	00	46	163	315	00	100	415
		Gurri, Morar block	24	1050	00	00	1050	249	02	32	283	102	00	01	103	351	02	33	386
		Paar,Ghatigoan , Bari	24	1026	00	00	1026	247	01	46	294	142	00	19	161	389	01	65	455
		Ekhara, Gohad block	22	772	00	00	772	181	00	32	213	127	00	22	149	308	00	54	362
		Jourasi,Dabra block	23	802	00	00	802	237	03	188	428	164	00	186	350	401	03	374	778
		Gijoura, Dabra block	25	1043	00	00	1043	353	00	06	359	389	00	08	397	742	00	14	756
		Lehcure, Gohad block	26	1460	00	00	1460	500	00	03	503	508	00	10	518	1008	00	13	1021
		TudilaGohad block	24	1212	00	00	1212	344	00	04	348	456	00	06	462	800	00	10	810
		Supavali, Morar block	22	906	00	00	906	336	00	26	362	347	00	32	379	683	00	58	741
	<b>Total</b>	<b>10</b>	<b>236</b>	<b>10506</b>	<b>00</b>	<b>00</b>	<b>10506</b>	<b>2910</b>	<b>06</b>	<b>461</b>	<b>3377</b>	<b>2522</b>	<b>00</b>	<b>376</b>	<b>2898</b>	<b>5432</b>	<b>06</b>	<b>837</b>	<b>6275</b>
10.	RARISD, Vijayawada	Edupugallu	49	1931	00	00	1931	215	00	00	215	611	00	00	611	826	00	00	826
		Totlavalluru	49	1969	00	00	1969	264	00	01	265	554	00	00	554	818	00	01	819
		Kalavapamula	48	2040	04	00	2044	382	01	00	383	1035	00	00	1035	1417	01	00	1418
		Vanukuru	48	2092	00	00	2092	373	00	00	373	660	00	00	660	1033	00	00	1033
		Katuru	46	2021	00	00	2021	343	00	00	343	686	00	00	686	1029	00	00	1029
	<b>Total</b>	<b>05</b>	<b>240</b>	<b>10053</b>	<b>04</b>	<b>00</b>	<b>10057</b>	<b>1577</b>	<b>01</b>	<b>01</b>	<b>1579</b>	<b>3546</b>	<b>00</b>	<b>00</b>	<b>3546</b>	<b>5123</b>	<b>01</b>	<b>01</b>	<b>5125</b>



11.	RARIMCH, Nagpur	Bhaneagan	47	1900	35	52	1987	310	28	279	617	486	59	385	930	796	87	664	1547		
		Davalamethi	52	2793	40	45	2878	472	23	128	623	818	41	183	1042	1290	64	311	1665		
		Chanakapur	48	1737	43	116	1896	311	39	236	586	413	51	436	900	724	90	672	1486		
		Sonabanagar	23	1033	109	33	1175	208	31	111	350	313	40	133	486	521	71	244	836		
		Sillori	22	808	08	24	840	207	10	47	264	218	18	63	299	425	28	110	563		
		Waki	13	466	00	00	466	102	08	188	298	159	12	208	379	261	20	396	677		
		Nimkheda	26	848	17	00	865	206	72	339	617	599	145	785	1529	805	217	1124	2146		
		Rampuri	12	494	00	00	494	93	01	77	171	111	01	111	223	204	02	188	394		
		<b>08</b>	<b>243</b>	<b>10079</b>	<b>252</b>	<b>270</b>	<b>10601</b>	<b>1909</b>	<b>212</b>	<b>1405</b>	<b>3526</b>	<b>3117</b>	<b>367</b>	<b>2304</b>	<b>5788</b>	<b>5026</b>	<b>579</b>	<b>3709</b>	<b>9314</b>		
		<b>Total</b>																			
		12.	RARILSD, Trivandrum	Athiyanoor	53	2632	00	54	2686	766	00	48	814	1024	00	47	1071	1790	00	95	1885
Balaramapuam	53			2127	00	113	2240	637	00	54	691	683	00	46	729	1320	00	100	1420		
Katinamkulam	06			178	00	16	194	59	00	00	59	23	00	00	00	23	82	00	00	82	
Mangalapuram	41			1777	00	73	1850	399	00	48	447	354	00	37	391	753	00	85	838		
Peringamala	40			1550	56	138	1744	560	28	128	716	603	15	92	710	1163	43	220	1426		
Thirupuram	47			1747	00	57	1804	543	00	27	570	636	00	44	680	1179	00	71	1250		
<b>6</b>	<b>240</b>			<b>10011</b>	<b>56</b>	<b>451</b>	<b>10518</b>	<b>2964</b>	<b>28</b>	<b>305</b>	<b>3297</b>	<b>3323</b>	<b>15</b>	<b>266</b>	<b>3604</b>	<b>6287</b>	<b>43</b>	<b>571</b>	<b>6901</b>		
<b>Total</b>																					
13.	RARIID, Patna			Lakhna	50	2127	06	46	2179	440	00	10	450	1105	00	19	1124	1545	00	29	1574
				Hinduni	44	1580	00	21	1601	316	00	03	319	788	00	10	798	1104	00	13	1117
				Suittha	47	1899	00	65	1964	422	00	10	432	974	00	07	981	1396	00	17	1413
		Sirpalpur	28	1298	00	40	1338	285	00	22	307	744	00	65	809	1029	00	87	1116		
		Mahuli	24	1236	00	13	1249	264	00	03	267	681	00	07	688	945	00	10	955		
		Daruyapur	24	968	00	19	987	219	00	03	222	398	00	02	400	617	00	05	622		
		Nima	23	1028	00	08	1036	199	00	02	201	335	00	01	336	534	00	03	537		
		<b>7</b>	<b>240</b>	<b>10136</b>	<b>06</b>	<b>212</b>	<b>10354</b>	<b>2145</b>	<b>00</b>	<b>53</b>	<b>2198</b>	<b>5025</b>	<b>00</b>	<b>111</b>	<b>5136</b>	<b>7170</b>	<b>00</b>	<b>164</b>	<b>7334</b>		
		<b>Total</b>																			
		14.	RARIGID, Guwahati	Sanititol	51	2277	00	25	2302	574	00	05	579	345	00	4	349	919	00	09	928
				Nij Hajo	47	2316	00	06	2322	551	00	05	556	263	00	01	264	814	00	06	820
Pub Maloibari	48			2255	06	38	2299	566	01	09	576	290	00	05	295	856	01	14	871		
Bongolagarh	26			1197	00	00	1197	238	00	00	238	145	00	00	145	383	00	00	383		
Gaon Dimoria	40			1792	00	00	1792	449	00	00	449	223	00	00	223	672	00	00	672		
No 1 Oujari	28			1465	00	00	1465	316	00	00	316	132	00	00	132	448	00	00	448		
<b>6</b>	<b>240</b>			<b>11302</b>	<b>06</b>	<b>69</b>	<b>11377</b>	<b>2694</b>	<b>01</b>	<b>19</b>	<b>2714</b>	<b>1398</b>	<b>00</b>	<b>10</b>	<b>1408</b>	<b>4092</b>	<b>01</b>	<b>29</b>	<b>4122</b>		
<b>Total</b>																					



15.	RARI, Gangtok	Gangtok SD	86	3368	510	699	4577	971	108	147	1226	773	92	140	1005	1744	200	287	2231
		Gangtok Municipal Corporation	45	4426	213	215	4854	396	46	49	491	398	47	46	491	794	93	95	982
		Rangpo NP	19	744	58	88	890	274	14	24	312	190	11	19	220	464	25	43	532
		Pakyong	21	1562	50	85	1697	196	15	23	234	212	15	20	247	408	30	43	481
		Rongli SD+32 Mile Singtam	20	441	74	105	620	245	17	22	284	198	17	18	233	443	34	40	517
		Rhenock CT+Pangtham	19	336	76	67	479	277	20	19	316	195	14	18	227	472	34	37	543
	<b>Total</b>	<b>6</b>	<b>210</b>	<b>10877</b>	<b>981</b>	<b>1259</b>	<b>13117</b>	<b>2359</b>	<b>220</b>	<b>284</b>	<b>2863</b>	<b>1966</b>	<b>196</b>	<b>261</b>	<b>2423</b>	<b>4325</b>	<b>416</b>	<b>545</b>	<b>5286</b>
16.	RARIUD, Jammu	Chak roi	60	3857	00	25	3882	1092	06	71	1169	396	00	15	411	1488	06	86	1580
		Rangpur	40	1749	00	10	1759	623	00	27	650	298	00	01	299	921	00	28	949
		Chak bukhawar	27	1128	00	09	1137	380	05	06	391	230	00	01	231	610	05	07	622
		Chak aslam	27	1216	00	09	1225	404	04	06	414	237	04	04	245	641	08	10	659
		Malikpur	43	2193	00	40	2233	710	13	40	763	285	00	14	299	995	13	54	1062
		Gagian	16	913	00	00	913	250	03	23	276	95	00	02	97	345	03	25	373
		Baga zina	15	915	00	00	915	292	06	12	310	103	00	00	103	395	06	12	413
	<b>Total</b>	<b>7</b>	<b>228</b>	<b>11971</b>	<b>00</b>	<b>93</b>	<b>12064</b>	<b>3751</b>	<b>37</b>	<b>185</b>	<b>3973</b>	<b>1644</b>	<b>4</b>	<b>37</b>	<b>1685</b>	<b>5395</b>	<b>41</b>	<b>222</b>	<b>5658</b>
17.	RARIND, Mandi	Sanyarad	24	1020	00	00	1020	112	00	54	166	73	00	43	116	185	00	97	282
		Nalshar	23	1063	00	00	1063	83	01	79	163	95	00	109	204	178	01	188	367
		Nagwain	27	1294	00	00	1294	171	03	128	302	198	04	218	420	369	07	346	722
		Mazhwar	23	856	00	00	856	105	00	154	259	71	00	141	212	176	00	295	471
		Kanaid	24	1622	00	00	1622	245	00	75	320	283	00	111	394	528	00	186	714
		Nagdhhar	20	752	00	00	752	79	21	70	170	66	37	47	150	145	58	117	320
		Janed	23	761	00	00	761	85	01	140	226	105	03	153	261	190	04	293	487
		Chhaprahan	22	633	00	00	633	73	00	93	166	60	00	158	218	133	00	251	384
		Bharaun	23	1039	00	00	1039	92	07	47	146	42	00	125	167	134	07	172	313
		Sakroha	26	1429	00	00	1429	98	04	60	162	172	01	130	303	270	05	190	465
	<b>Total</b>	<b>10</b>	<b>235</b>	<b>10469</b>	<b>00</b>	<b>00</b>	<b>10469</b>	<b>1143</b>	<b>37</b>	<b>900</b>	<b>2080</b>	<b>1165</b>	<b>45</b>	<b>1235</b>	<b>2445</b>	<b>2308</b>	<b>82</b>	<b>2135</b>	<b>4525</b>



18.	RARISD, Ahmedabad	Amaraiwadi	48	2109	06	21	2136	703	12	96	811	720	04	101	825	1423	16	197	1636
		Naroda muthiya	42	1619	00	17	1636	420	03	193	616	360	01	196	557	780	04	389	1173
		Naav vadaj	45	2276	01	48	2325	642	04	147	793	784	08	299	1091	1426	12	446	1884
		Kankariya	52	2139	12	27	2178	894	13	182	1089	1208	21	281	1510	2102	34	463	2599
		Ghataodiya	50	1870	06	27	1903	308	07	140	455	210	02	181	393	518	09	321	848
	<b>Total</b>	<b>05</b>	<b>237</b>	<b>10013</b>	<b>25</b>	<b>140</b>	<b>10178</b>	<b>2967</b>	<b>39</b>	<b>758</b>	<b>3764</b>	<b>3282</b>	<b>36</b>	<b>1058</b>	<b>4376</b>	<b>6249</b>	<b>75</b>	<b>1816</b>	<b>8140</b>
19.	ACAMH&NS, Bangalore	K.R Market	51	2135	00	30	2165	665	00	13	678	324	00	09	333	989	00	22	1011
		Rayapuram	51	2036	00	23	2059	520	00	19	539	285	00	10	295	805	00	29	834
		Chelavadiyalya	46	1958	00	14	1972	521	00	07	528	266	00	04	270	787	00	11	798
		Subhash Nagar	49	1895	01	05	1901	521	01	02	524	307	00	00	307	828	01	02	831
		Sarvagnanagar	43	1985	00	12	1997	548	00	05	553	280	00	01	281	828	00	06	834
	<b>Total</b>	<b>05</b>	<b>240</b>	<b>10009</b>	<b>01</b>	<b>84</b>	<b>10094</b>	<b>2775</b>	<b>01</b>	<b>46</b>	<b>2822</b>	<b>1462</b>	<b>00</b>	<b>24</b>	<b>1486</b>	<b>4237</b>	<b>01</b>	<b>70</b>	<b>4308</b>
20.	ALRCA, Chennai	Tambaram	36	1410	00	12	1422	349	00	03	352	259	00	00	259	608	00	03	611
		Pammal	31	1334	00	60	1394	342	00	32	374	203	00	10	213	545	00	42	587
		Thaiyur	29	964	00	00	964	203	00	00	203	181	00	00	181	384	00	00	384
		Paiyanur	26	1016	00	00	1016	251	00	00	251	182	00	00	182	433	00	00	433
		Kayar	24	1011	00	05	1016	285	00	06	291	158	00	02	160	443	00	08	451
		Kannagi Nagar	34	1677	00	17	1694	487	00	10	497	231	00	00	231	718	00	10	728
		K. K. Nagar	27	1168	00	52	1220	307	00	22	329	175	00	06	181	482	00	28	510
		G. D. Naidu Nagar	30	1497	00	36	1533	387	00	16	403	208	00	03	211	595	00	19	614
	<b>Total</b>	<b>08</b>	<b>237</b>	<b>10077</b>	<b>00</b>	<b>182</b>	<b>10259</b>	<b>2611</b>	<b>00</b>	<b>89</b>	<b>2700</b>	<b>1597</b>	<b>00</b>	<b>21</b>	<b>1618</b>	<b>4208</b>	<b>00</b>	<b>110</b>	<b>4318</b>
	Grand Total	135	4687	204578	1527	4110	210215	52783	672	7815	61270	58992	701	9887	69580	111775	1373	17702	130850





## Annexure - V

## Reproductive &amp; Child Health Care Programme under Scheduled Castes Sub Plan

## Institute wise status of work done under RCH (SCSP) in 2019-20

S. No.	Name of the Institute	Name of Villages covered	No. of visits made	SC Population Surveyed	Patient treated						Total ANC visits	Total Investigations	Total Awareness Activities	
					Women			Child						Total
					SC	ST	Other	SC	ST	Other				
1.	CARICD, Delhi	Sultan puri	47	1963	989	0	34	229	0	12	1264	59	218	26
		Mangolpuri	45	1689	889	0	22	212	0	8	1131	45	237	24
		Shahabad dairy	44	1490	688	0	37	130	0	9	864	68	194	24
		Madipur	47	1590	541	0	6	139	0	1	687	74	162	26
		Pandav nagar	49	1756	735	0	20	159	0	8	922	65	186	28
		Total	232	8488	3842	0	119	869	0	38	4868	311	997	128
2.	NARIP Cheruthuthy`	Ambalappara	47	913	578	0	178	177	0	11	944	18	417	29
		Ananganady	45	1171	544	0	88	341	0	1	974	14	427	32
		Chalavara	44	875	750	0	26	296	0	4	1076	10	434	34
		Shoranur	46	928	635	0	92	183	0	7	917	16	539	32
		Nellaya	45	1010	682	0	125	385	0	20	1212	8	508	35
		Total	227	4897	3189	0	509	1382	0	43	5123	66	2325	162
3.	CARIHD, Bhuaneshwar	Chandaka	47	1039	312	00	00	65	00	00	377	01	55	03
		Dadha	47	987	333	00	00	39	00	00	372	00	26	05
		Dhaulti	49	993	382	00	00	49	00	00	431	00	45	02
		Kalarahanga	48	979	373	00	00	60	00	00	433	00	35	03
		Basuaghai	43	1043	308	00	00	59	00	00	367	02	23	05
		Total	234	5041	1708	00	00	272	00	00	1980	03	184	18
4.	CARIDD, Kolkata	Nayabad	45	1034	275	0	0	33	0	0	308	5	163	19
		Dharmatala	43	1078	347	0	2	45	0	0	394	10	214	21
		Tardah karpasati	44	1004	332	10	0	80	2	0	424	6	138	21
		Beonta	47	1056	465	0	6	57	0	0	528	3	219	21
		Kulberia	43	945	333	0	0	53	0	1	387	1	204	25
		Total	222	5117	1752	10	8	268	2	1	2041	25	938	107



5.	CARIID, Patiala	Bathoi Khurd	50	991	1069	0	95	190	0	55	1409	56	375	12		
		MardanHeri	26	883	429	0	30	80	0	15	554	18	90	02		
		Tarain	25	818	565	0	38	100	0	24	727	28	225	10		
		Jansua	47	1558	1144	0	63	200	0	20	1427	78	351	16		
		Kauli	50	1169	1021	0	68	122	0	46	1257	48	321	17		
		Sanour	51	1115	997	0	117	140	0	42	1296	36	321	10		
		Total	249	6534	5225	00	411	832	00	202	1409	264	1683	67		
		Hullas Khera	46	1105	766	0	186	193	0	22	1167	16	157	12		
		Bhadoi	27	739	364	0	66	69	0	7	506	6	68	05		
		Shiv Puri	49	1263	859	0	145	185	0	13	1202	25	232	13		
6.	RARIED Lucknow	Kalli Paschim	48	1328	762	0	216	146	0	37	1161	19	226	13		
		Gaunda Maujjam/Ratna Pur	71	973	908	0	631	95	0	64	1698	17	223	21		
		Total	241	5408	3659	0	1244	688	0	143	5734	83	906	64		
		Siddharth Nagar, Bandra	40	1866	209	0	201	44	0	47	501	9	152	10		
		Ahinsa Nagar , Bandra	40	1845	187	0	74	35	0	24	320	5	116	09		
		Jijamata nagar, Worli	44	1919	247	0	112	43	0	11	413	13	153	10		
		Tulsiwadi Tardeo	28	1381	178	0	21	29	0	0	228	7	128	08		
		Siddharth Nagar, Worli/ /Premnagar	63	3483	391	0	178	73	0	41	683	16	142	15		
		Total	215	10494	1211	0	584	224	0	123	2142	50	691	52		
		7.	CARIC Mumbai	Regaro ka Mohalla,Sanganer	45	2447	798	08	81	122	0	19	1028	09	97	05
Boltya,Benar Road	44			2008	628	10	154	125	0	26	943	27	117	04		
Jhalana Dungari, Malviya Nagar	53			2682	764	1	30	271	18	6	1090	30	90	4		
Sitawari,Jhotwara,	46			2497	831	32	68	164	0	14	1109	06	131	05		
Ashokpura,Sodala	37			2026	587	45	58	72	01	22	785	19	165	04		
Total	225			11660	3608	96	391	754	19	87	4955	91	600	22		
8.	RARIED Jaipur			Bathoi Khurd	50	991	1069	0	95	190	0	55	1409	56	375	12
				MardanHeri	26	883	429	0	30	80	0	15	554	18	90	02
				Tarain	25	818	565	0	38	100	0	24	727	28	225	10
				Jansua	47	1558	1144	0	63	200	0	20	1427	78	351	16
		Kauli	50	1169	1021	0	68	122	0	46	1257	48	321	17		
		Sanour	51	1115	997	0	117	140	0	42	1296	36	321	10		
		Total	249	6534	5225	00	411	832	00	202	1409	264	1683	67		
		Hullas Khera	46	1105	766	0	186	193	0	22	1167	16	157	12		
		Bhadoi	27	739	364	0	66	69	0	7	506	6	68	05		
		Shiv Puri	49	1263	859	0	145	185	0	13	1202	25	232	13		



9.	RARIDD Gwalior	Adupura, morar	50	1096	462	6	50	147	1	27	693	24	165	09		
		Kalyani, dabra	48	1371	420	20	115	118	6	55	734	22	115	13		
		Badi akawai,	49	1213	522	1	25	110	0	4	662	13	134	23		
		Bijoli, morar	48	1035	630	0	52	174	0	1	857	20	146	20		
		Chak mahroli,	48	1254	513	0	28	156	0	5	702	18	105	20		
		Total	243	5969	2547	27	270	705	7	92	3648	97	665	85		
		Velageru	46	1125	368	0	150	93	0	8	619	5	145	14		
		Mustabada	52	995	408	4	97	63	0	2	574	3	147	15		
		Surampalli	49	1118	357	3	170	57	0	3	590	11	199	12		
		Velvadam	47	982	376	0	171	53	0	3	603	13	156	10		
Vellaturu	47	1068	398	6	112	89	2	24	631	7	196	13				
Total	241	5288	1907	13	700	355	2	40	3017	39	843	64				
11.	RARIMCH Nagpur	Kandri	42	1211	595	217	357	118	35	116	1438	21	645	12		
		Patansawangi	43	1254	511	88	564	109	20	120	1412	21	826	14		
		Walani	43	1521	462	44	632	129	09	132	1408	31	742	14		
		Godhani	43	1495	464	74	303	122	55	100	1118	20	631	16		
		Sillewada	46	1577	529	38	537	83	05	56	1248	05	690	16		
		Total	217	7058	2561	461	2393	561	124	524	6624	98	3534	72		
		Maranalloor	50	976	691	0	27	45	0	11	774	6	78	11		
		Venganoor	49	1051	1014	5	49	33	0	4	1105	9	68	16		
		Poovachal	44	1432	1384	0	103	28	0	8	1523	14	209	16		
		Neyyattinkara	46	895	533	0	63	33	0	0	629	5	88	09		
12.	RARILSRD Trivandrum	Vilappil	51	1190	679	3	128	34	0	12	856	9	72	11		
		Total	240	5544	4301	8	370	173	0	35	4887	43	515	63		
		Chipura	46	1629	635	0	27	160	0	8	830	29	412	41		
		Mahamda	45	936	641	0	2	131	0	2	776	16	342	42		
		Kandap	45	2097	1076	0	73	192	0	7	1348	31	505	42		
		Gopalpur	45	1873	621	0	39	150	0	6	816	27	330	42		
		Mirchi	45	1819	695	0	25	170	0	4	894	35	358	42		
		Total	226	8354	3668	0	166	803	0	2	4639	138	1947	209		
		13.	RARIID Patna	Adupura, morar	50	1096	462	6	50	147	1	27	693	24	165	09
				Kalyani, dabra	48	1371	420	20	115	118	6	55	734	22	115	13
Badi akawai,	49			1213	522	1	25	110	0	4	662	13	134	23		
Bijoli, morar	48			1035	630	0	52	174	0	1	857	20	146	20		
Chak mahroli,	48			1254	513	0	28	156	0	5	702	18	105	20		
Total	243			5969	2547	27	270	705	7	92	3648	97	665	85		
Velageru	46			1125	368	0	150	93	0	8	619	5	145	14		
Mustabada	52			995	408	4	97	63	0	2	574	3	147	15		
Surampalli	49			1118	357	3	170	57	0	3	590	11	199	12		
Velvadam	47			982	376	0	171	53	0	3	603	13	156	10		
Vellaturu	47	1068	398	6	112	89	2	24	631	7	196	13				
Total	241	5288	1907	13	700	355	2	40	3017	39	843	64				
Kandri	42	1211	595	217	357	118	35	116	1438	21	645	12				
Patansawangi	43	1254	511	88	564	109	20	120	1412	21	826	14				
Walani	43	1521	462	44	632	129	09	132	1408	31	742	14				
Godhani	43	1495	464	74	303	122	55	100	1118	20	631	16				
Sillewada	46	1577	529	38	537	83	05	56	1248	05	690	16				
Total	217	7058	2561	461	2393	561	124	524	6624	98	3534	72				
Maranalloor	50	976	691	0	27	45	0	11	774	6	78	11				
Venganoor	49	1051	1014	5	49	33	0	4	1105	9	68	16				
Poovachal	44	1432	1384	0	103	28	0	8	1523	14	209	16				
Neyyattinkara	46	895	533	0	63	33	0	0	629	5	88	09				
Vilappil	51	1190	679	3	128	34	0	12	856	9	72	11				
Total	240	5544	4301	8	370	173	0	35	4887	43	515	63				
Chipura	46	1629	635	0	27	160	0	8	830	29	412	41				
Mahamda	45	936	641	0	2	131	0	2	776	16	342	42				
Kandap	45	2097	1076	0	73	192	0	7	1348	31	505	42				
Gopalpur	45	1873	621	0	39	150	0	6	816	27	330	42				
Mirchi	45	1819	695	0	25	170	0	4	894	35	358	42				
Total	226	8354	3668	0	166	803	0	2	4639	138	1947	209				



14.	RARIGID Guwahati	Dihingsatra	47	1093	367	0	9	80	0	2	458	9	109	21
		Kuttingpahar	35	588	210	0	17	130	0	7	364	14	68	18
		Monikarneswar	41	655	276	0	3	72	0	0	351	07	133	18
		Majortol	50	1017	481	0	1	85	0	1	568	05	154	19
		Borkuchi colony	67	1961	632	0	8	224	0	4	868	22	178	19
		Total	240	5314	1966	0	38	591	0	14	2609	57	642	95
15.	RARIUD JAMMU	Badyal quazian	43	1368	638	3	0	165	0	1	807	25	203	43
		Bala Chak	43	1331	543	1	9	170	0	0	723	23	170	42
		Phinder	41	1521	587	6	14	138	3	0	748	22	186	41
		Jindlehar	41	1495	556	1	22	203	5	5	792	20	166	41
		Chohala	41	1361	546	3	8	146	0	1	704	12	169	41
		Total	209	7076	2870	14	53	822	8	7	3774	102	894	208
16.	RARIND, Mandi	Kummi	47	969	956	0	55	197	0	20	1228	12	232	15
		Tandu	43	970	819	0	208	157	0	27	1211	13	276	15
		Chailchowk	44	942	839	0	89	211	0	21	1160	12	197	12
		Shivabadar	45	1050	954	0	115	155	0	20	1244	12	262	14
		Behna	45	1072	801	6	144	159	0	17	1127	07	232	16
		Total	224	5003	4369	6	611	879	0	105	5970	56	1199	72
17.	RARISD Ahmedabad	Ranip	49	3441	684	3	151	93	0	46	977	12	159	14
		Bapunagar	46	3534	721	7	23	92	0	1	844	12	184	11
		Sajipur	46	3327	935	4	109	88	2	8	1146	6	351	13
		Saraspur	49	3650	781	1	133	87	0	20	1022	2	180	15
		Chandkheda	50	3744	1193	7	117	98	0	10	1425	17	424	16
		Total	240	17696	4314	22	533	458	2	85	5414	49	1298	69



18. ACAMH&NS Bangalore	Rayapuram	14	576	20	1	4	1	0	0	26	3	3	3
	Sudhamnagar	13	566	61	3	16	13	0	3	96	7	1	1
	Chalavadipalya	17	694	12	0	1	3	0	1	17	7	5	1
	Subhashnagar	17	614	33	1	11	3	0	2	50	4	8	1
	Sarvajnanagar	15	590	32	1	8	6	0	2	49	7	2	2
	Austin town	35	815	196	0	1	51	0	0	248	5	27	4
	KS garden	36	889	229	0	7	60	0	0	296	8	55	3
	Murphy town	35	801	218	1	1	46	0	1	267	13	36	7
	MV garden	28	667	132	0	2	30	0	1	165	4	21	2
	LR nagar	30	728	212	0	7	46	0	0	265	11	43	4
	Total	240	6940	1145	7	58	259	0	10	1479	69	201	28
19. ALRCA Chennai	Tirusulam	46	1159	425	0	6	183	0	2	616	29	504	22
	Velachery	44	1336	422	0	47	272	0	18	759	17	486	19
	Alandur	43	1135	467	0	31	158	0	4	660	13	546	13
	Venkatapuram	43	1135	434	0	27	138	0	2	601	10	511	12
	Sembakkam	41	912	374	0	40	138	0	6	558	07	410	15
	Total	217	5677	2122	0	151	889	0	32	3194	76	2457	81
	Grand Total	4382	137558	55964	664	8609	11784	164	1583	73507	1717	22519	1666



## Ayurvedic Health Centres under NE Plan

## Details on beneficiaries at Ayurvedic Health Centres in North East States under NE Plan

S. No.	Name of Institute	Name of Ayurvedic Health Centre	Out Patient Department (OPD)						Grand Total		
			New Patient		Old Patient		Total Patient				
			M	F	M	F	M	F			
1.	RARIGID, Guwahati	Kamrup (R)	3093	4181	466	604	3559	4785	8344		
		Nalbari	1903	2277	260	419	2163	2696	4859		
		Morigaon	1314	1485	1171	1198	2485	2683	5168		
		Darang	2002	2314	268	337	2270	2651	4921		
		Barpeta	984	1839	864	1558	1848	3397	5245		
		Sonitpur	1425	1655	2001	2144	3426	3799	7225		
		Golaghat	1073	1241	839	900	1912	2141	4053		
		Goalpara	1391	1719	681	1069	2072	2788	4860		
		Raha	2118	2414	542	656	2660	3070	5730		
		Jorhat	1636	1486	996	832	2632	2318	4950		
		Dhubri	647	807	1374	1802	2021	2609	4630		
		Hojai	2140	3986	703	1652	2843	5638	8481		
		Bongaigaon	1214	1218	1086	948	2300	2166	4466		
		KarbiAnglong	937	1206	434	687	1371	1893	3264		
		Biswanath	841	1462	603	1198	1444	2660	4104		
		<b>Total</b>	<b>22718</b>	<b>29290</b>	<b>12288</b>	<b>16004</b>	<b>35006</b>	<b>45294</b>	<b>80300</b>		
2.	RARI, Gangtok	Geyzing	1436	1016	1654	1087	3090	2103	5193		
		Jorethang	749	664	1810	1808	2559	2472	5031		
		Mangan	681	561	1929	1660	2610	2221	4831		
		Rangpo, Majhitar	1657	1150	1738	1227	3395	2377	5772		
		Soreng	926	769	1564	1061	2490	1830	4320		
		Pakyong	751	804	1262	1403	2013	2207	4220		
				<b>Total</b>	<b>6200</b>	<b>4964</b>	<b>9957</b>	<b>8246</b>	<b>16157</b>	<b>13210</b>	<b>29367</b>
		3.	RARI, Itanagar	Tezu	1447	1269	642	577	2089	1846	3935
Pasighat	915			958	586	750	1501	1708	3209		
Namsai	1440			951	743	686	2183	1637	3820		
Dirang	857			822	767	689	1624	1511	3135		
Seppa	1486			1480	541	515	2027	1995	4022		
Likabali	712			842	709	839	1421	1681	3102		
Doimukh	1767			1112	828	544	2595	1656	4251		
Mechuka	1027			856	762	692	1789	1548	3337		
Ziro	760			949	679	1010	1439	1959	3398		
				<b>Total</b>	<b>10411</b>	<b>9239</b>	<b>6257</b>	<b>6302</b>	<b>16668</b>	<b>15541</b>	<b>32209</b>
<b>Grand Total</b>			<b>39329</b>	<b>43493</b>	<b>28502</b>	<b>30552</b>	<b>67831</b>	<b>74045</b>	<b>141876</b>		



## ANNEXURE –VII

## Details of participation in Seminars/Conferences/Symposia etc.

S. No.	Name of the Participant	Title of paper Presented	Name of conference/ seminar workshop/ symposia	Name of Organizer And Venue	Period
1.	Jamadagni S.B., Wanjari M.M., Jamadagni P.S., Pawar S.D., Prasad G.P. & Gaidhani S.N.	A case of mammary gland fibroadenoma in a Wistar rat.	9 <sup>th</sup> International Conference of LASA India on “Laboratory Animals In Biomedical Research - The Way Forward”	IISER, Pune and NCCS ,Pune	22 <sup>nd</sup> - 23 <sup>rd</sup> Nov., 2019.
2.	Sinimol T. P.	Adulteration of herbal raw drugs- a big menace for ayurvedic system of medicine	Current Trends and Advances in Biological Sciences (CTAB – 2020)	Post graduate Dept. of Botany and Biotechnology, Bishop Moore college, Mavelikkara sponsored by CSIR	6 <sup>th</sup> Feb., 2020
3.	Deshmukh S.	An experimental study to evaluate the effect of Nitya Sevaniya and Nitya Asevaniya food items on albino rats	Workshop “Dietetics and Ayurveda	IPGT & RA, Jamnagar	20 <sup>th</sup> – 21 <sup>st</sup> July, 2019
4.	Naik R.	An Insight into Āyurvedic and Contemporary views on Traditional Collection Practices of Medicinal Plants	Karma Siddhi- International conference on Bio-purification Therapies, Ethno medicine and food diversity in Panchakarma	SDM College of Ayurveda, Udupi	14 <sup>th</sup> Feb., 2020
5.	Kusuma G.	An Introduction to Ayurveda (Ayurved – Ek Parichay) in hindi	Workshop organized by Town Official Language Implementation Committee.	CSMRADDI, Chennai.	20 <sup>th</sup> Feb., 2020
6.	Arunadevi R.	Animal Identification procedure, sexing of Laboratory animals, Handling and restraining of laboratory animals Rat and Mice	Workshop on Basic Research Techniques and Practices of Laboratory Animal Care	National Institute of Siddha.	26 <sup>th</sup> Feb., 2020
7.	Kolhe R.	Application of Information Technology: An Aid For Research.	2 <sup>nd</sup> Teachers association, National Seminar on Research.	Rajiv Gandhi E-learning Academy Auditorium, Parvati Industries Estate, Pune – 09.	18 <sup>th</sup> Aug., 2019
8.	Nariyal V.	Ayurveda and palliative care: Scopes and Oppurtunities.	Seminar on Integrative approach for Management of cancer	All India Institute of Ayurveda, New Delhi.	12 <sup>th</sup> -13 <sup>th</sup> Feb., 2020



9.	Sinimol T. P.	Ayurvedic management of lumbar spondylolisthesis –A case report	International Conference on Homeopathy & Phytomedicine	St.Thomas college, Kottayam	21 <sup>st</sup> -22 <sup>nd</sup> Jan., 2020
10.	Balakrishnan P.	Clinical research perspectives in the management of Nasagatarogas.	AyuSalaka-1	AVP Research foundation, Coimbatore.	15 <sup>th</sup> - 16 <sup>th</sup> Nov.,2019
11.	Nartunai.G. Susikumar S Ilavarasan R	Comparative Pharmacognostical Studies to Authenticate and Differentiate the Stem Barks of Cinnamomum zeylanicum Blume and Cinnamomum cassia (L.) J. Presl and its Market Scenario	71 <sup>st</sup> Indian Pharmaceutical congress	Indian Pharmaceutical Congress Association/ Sri Ramachandra University, Chennai.	20 <sup>th</sup> - 22 <sup>nd</sup> Dec., 2019
12.	Das M.	Comparative Phytochemical screening and HPTLC fingerprint profile of Tinospora cordifolia (Wild) Maers (Guduchi) - leaf and stem	6 <sup>th</sup> Convention of Society for Ethnopharmacology & National Symposium on Translational Research of Traditionally used Indian medicinal plants with special reference to Tinospora cordifolia	School of Natural Products studies, Jadavpur University	7 <sup>th</sup> -8 <sup>th</sup> Sep, 2019
13.	Naik R., Shubhashree M.N. & George S.	Concerns of Pharmacovigilance and Drug safety in Ayurveda- A Review	AYUSH SURAKSHA” National Seminar on Pharmacovigilance	Institute for Post Graduate teaching and Research in Ayurveda, Gujarat Ayurved University, Jamnagar	8 <sup>th</sup> – 10 <sup>th</sup> Nov., 2019
14.	Srinivasan M.	Curcumin, a natural protector against whole-body radiation-induced hepatic damage and histological alterations in experimental mice	9 <sup>th</sup> International Conference Of LASA India on “Laboratory Animals In Biomedical Research - The Way Forward”	IISER, Pune and NCCS ,Pune	22 <sup>nd</sup> -23 <sup>rd</sup> Nov., 2019
15.	Bharsakale S., Chougule S., Gaidhani S.N., Sangvikar S. & Pawar S.	Deciphering the anticancer potential and the mechanism of action of Cissampelos pareira (L.) Poir., (Patha) extract on human and animal derived cancer cell lines using proteomic as a tools.	National Seminar on Integrative approach for management of cancer.	AIIA, New Delhi.	12 <sup>th</sup> -13 <sup>th</sup> Feb., 2020





16.	Balakrishnan P.	Diagnostic Research towards a case of defective vision	Jyothirgamaya	Department of Salakya Tantra, Sree Narayana Institute of Ayurvedic Studies and Research, Puthur, Kollam, Kerala	13 <sup>th</sup> Dec., 2019
17.	Rajput S.	Efficacy of Ayurvedic treatment for Kikkisa: A systematic review and meta-analysis	International Conference on beauty: Skin, hair and personality enrichment with Ayurveda	NIA, Jaipur	15 <sup>th</sup> – 16 <sup>th</sup> Nov., 2019
18.	Vyas K.	Environmental pharmacovigilance an emerging branch of science	Seminar on Pharmacovigilance	IPGT & RA Jamnagar	8 <sup>th</sup> - 10 <sup>th</sup> Nov., 2019
19.	Kusuma G.	Ethno-medicinal survey of plants used by Irula tribal of Kancheepuram District, Tamilnadu in poisonous bites	7th International Congress of Society for Ethno-pharmacology organised by Bioactive Natural Product Laboratory (BNPL)	School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi. in association with Society for Ethno-pharmacology, Kolkata	15 <sup>th</sup> – 17 <sup>th</sup> Feb., 2020
20.	Chougule S., Bharsakale S., Gaidhani S.N., Sangvikar S. & Pawar S.	Exploring the mechanism of action of Balanites aegyptiaca (L.) Del, (Ingudi) extract on human and animal derived cancer cell lines using cell based assays and proteomic tools.	National Seminar on Integrative approach for management of cancer.	AIIA, New Delhi.	12 <sup>th</sup> - 13 <sup>th</sup> Feb., 2020.
21.	Mata S.	Geographic tongue-A case report	International Conference on beauty: Skin, hair and personality enrichment with Ayurveda	NIA, Jaipur	15 <sup>th</sup> - 16 <sup>th</sup> Nov., 2019
22.	Sharma N.	Good Harvesting practices and uses of Medicinal plants of Bundelkhand region	Promotion of Medicinal plants in Bundelkhand region A Training programme for the farmers	Rani Lakshmi Bai Central Agricultural University, Jhansi, Sponsored by Department of Science and Technology Uttar Pradesh.	30 <sup>th</sup> Jan., 2020
23.	Shiddamallaya	Harvesting and sustainable use of Medicinal plants in NE India	National workshop on "Harvesting and sustainable use of medicinal plants, herbal remedies use by the traditional medicinal practitioners of different ethnic communities of North east India".	North Eastern Institute of Folk Medicine, Pasighat	12 <sup>th</sup> Feb., 2020



24.	Saketh Ram T.	History of Ayurveda”	Orientation Training Programme (OTP) of Ayurveda for Non-AYUSH doctors and scientists” at The Interactive Research School for Health Affairs (IRSHA)	Bharati Vidyapeeth Deemed to be University, Pune	27 <sup>th</sup> Jan., 2020.
25.	Sinimol T. P.	Important plants in Ayurveda having anti diabetic action	International Conference on Homeopathy & Phytomedicine	St.Thomas college, Kottayam	21 <sup>st</sup> & 22 <sup>nd</sup> Jan., 2020
26.	Surendran E.S.	Kashayam extract sachet-preservative free patient friendly alternative dosage form of the traditional kashaya	Current Trends and Advances in Biological Sciences (CTAB – 2020)	Post graduate Dept. of Botany and Biotechnology, Bishop Moore college, Mavelikkara sponsored by CSIR	6 <sup>th</sup> Feb., 2020
27.	Lale S.K.	Lecture on Promotion of medicinal plant in Bundelkhand region	Workshop on Promotion of medicinal plant in Bundelkhand region	Rani Laxmi Bai Central Agriculture University, Jhansi (UP.)	24 <sup>th</sup> Aug. 2019.
28.	Mohod P.	Management of Anorectal Diseases with special emphasis on Ksharasutra and Agnikarma	Ksharasutra Workshop	RARIUD Jammu	29 <sup>th</sup> Feb., 2020
29.	Patil R.	Management of Guillain-Barre syndrome post weakness with Panchakarma: A case study.”	World AYUSH Expo 2019 and Arogyam (Vagbhata Hall-Panchakarma)	Ministry of AYUSH, AIIA, CCIM, MUHS, Dr.G.D.Pol Foundation, and D.Y.Patil University, at CIDCO Exhibition Navi Mumbai	22 <sup>nd</sup> – 23 <sup>rd</sup> Aug., 2019
30.	Mahajon b. Panja A.K., Manga A.K. & Srikanth N.	Mustiyoga Chikitsa: Traditional Ayurvedic Practice of Bengal	7 <sup>th</sup> International Congress of Society for Ethnopharmacology’ (SFEC 2020)	Organized by Society for Ethno pharmacology’ (SFEC 2020) at Jamia Hamdard, New Delhi.	15 <sup>th</sup> -17 <sup>th</sup> Feb., 2020
31.	Ilavarasan R.	NABL Accreditation Process	Two days Training program for Drug Testing Laboratories for Ayurveda, Siddha , Unani and homeopathy drugs	Ministry of AYUSH, Government of India at CSMRADDI	4 <sup>th</sup> Oct., 2019
32.	Balakrishnan P.	Need and strata of Ayurveda research on glaucoma	SUNETRA 2020	The Association of Shalaki (TAS) & Sreedhareeyam Ayurvedic Research and Development Institute	7 <sup>th</sup> Feb., 2020



33.	Hazra K. & Rao M. M.	Optimized Extractive Protocol for the Protoberberine Alkaloids as per Ayurveda	6 <sup>th</sup> Convention of Society for Ethnopharmacology & National Symposium, "Translational Research of Traditionally used Indian medicinal plants with special reference to <i>Tinospora cordifolia</i> "	School of Natural Products studies, Jadavpur University	7 <sup>th</sup> -8 <sup>th</sup> Sep., 2019
34.	Kolhe R.	Perspective of Ayurveda on use of medicinal plants to avoid possible risk in Garbhini.	National conference on Pharmacovigilance 2019	Gujarat Ayurvedic University, Jamnagar, Gujarat	8 <sup>th</sup> -10 <sup>th</sup> Nov., 2019.
35.	Bolleddu R.	Pharmacognostical and physicochemical studies of <i>Tinospora cordifolia</i> ,	6 <sup>th</sup> Convention of Society for Ethnopharmacology & National Symposium, "Translational Research of Traditionally used Indian medicinal plants with special reference to <i>Tinospora cordifolia</i> "	School of Natural Products studies, Jadavpur University	7 <sup>th</sup> -8 <sup>th</sup> Sep., 2019
36.	Naik R.	Pharmacovigilance in Ayurveda- Need, Challenges and Way forward	Pharmacovigilance Awareness Programme	JSS Ayurveda College, Mysore	16 <sup>th</sup> March, 2020
37.	Selvam N.T.	Plagiarism and Science Writing	National Workshop on 'Research Publishing and Plagiarism Control'	Kerala Agricultural University, Thrissur, Kerala	Dec., 2019
38.	Bora M., Lalrinpuia, Upadhyay S.N., Dixit A.K., B.Maiti Sinha, Mukherjee K. & Rao M.M.	Preclinical Safety and Toxicity Studies of [Guduchi ( <i>Tinospora cordifolia</i> Willd. Miers)]	6 <sup>th</sup> Convention of Society for Ethnopharmacology & National Symposium "Translational Research of Traditionally used Indian medicinal plants with special reference to <i>Tinospora cordifolia</i> "	School of Natural Products studies, Jadavpur University	7 <sup>th</sup> -8 <sup>th</sup> Sep., 2019



39.	Mandal T.K.	Prevention and control of Non Communicable Disease through Ayurveda	India International Science Festival (IISF) 2019 in Wellness Conclave, Kolkata	Dept. of Science and Technology, Govt. of India with collaboration of Vijnana Bharati	5 <sup>th</sup> - 8 <sup>th</sup> Nov., 2019
40.	Ilavarasan R.	Quality Control of ASU Drugs – A Case Study.	One day seminar on Quality Control of ASU Drugs	State Licensing Authority conducted at CSMRADDI	5 <sup>th</sup> Oct., 2019
41.	Chincholikar M., , Mangal A.K. , Gaidhani S.N. & Srikanth N.	Regenerative Medicine and Geriatric Health Care-Potential leads from Ayurveda for Translational Research	7 <sup>th</sup> International Congress of Society for Ethnopharmacology' (SFEC 2020)	Organized by Society for Ethno pharmacology' (SFEC 2020) at Jamia Hamdard, New Delhi	15 <sup>th</sup> -17 <sup>th</sup> Feb., 2020
42.	Rai A.K.	Research in Ayurveda – Current Scenario and Way Forward	National Ayurvedic Seminar "AAROGYAM"	Uttarakhand Ayurved University, Gurukul Campus, Haridwar, Uttarakhand	14 <sup>th</sup> – 15 <sup>th</sup> Dec., 2019
43.	Gundeti M.S.	Research on Ksharakarma Subcutaneous intralesional injection for management of Warts	One-month Certificate course of 'Ksharasutra Therapy in Anorectal Diseases	Institute of Contemporary Ayurved Research and Education (I-CARE) in the premises of R.A. Podar Ayurveda College, Worli, Mumbai at Samitee Hall, M. A. PodarHospital, Worli, Mumbai - 400 018	22 <sup>nd</sup> Jan., 2020
44.	Ghuse R.	Role of Orchids in Ayurvedic Medicines.	National Level Training Programme on Commercial cultivation of Orchids	ICAR-NRC for Orchids, Pakyong, East Sikkim	27 <sup>th</sup> Sep., 2019
45.	Hetalben A.	Sattvavajaya Chikista: An Ayurvedic Approach for treatment of Mental Ailments	Mental Health 2019 International Conference	Senate hall, Gujarat University, Ahmedabad 380009 Gujarat Organised by: Holistic Healing Foundation of India	10 <sup>th</sup> -11 <sup>th</sup> Oct., 2019
46.	Rama Rao V.	Some important medicinal plants of Karnataka used in Ethnomedicine	7 <sup>th</sup> International Congress of the Society for Ethnopharmacology (SFEC 2020)	Bioactive Natural Product Laboratory, School of Pharmaceutical Education and Research, Jamia Hamdard, New Delhi	15 <sup>th</sup> to 17 <sup>th</sup> Feb., 2020



47.	Saketh Ram T.	Study of Samhita: From Hermitage to Electronic Age” and “NAMASTE Portal, NIIMH Experience”	International Conference, Ayush For Future Health Challenges Strengthening Trans-Disciplinary Research	Organized by AYUSH Center of Excellence, Ramkumar Rathi Patanjali Yoga Chair, Savitribai Phule Pune University, Pune, India at NCCS, SPPU, Pune	28 <sup>th</sup> -29 <sup>th</sup> Nov., 2019
48.	Arunadevi R., Ilavarasan R., Gaidhani S.N., Thomas S. &, Chitra S.	Study on Toxicity Profile of Ayurvedic Formulation Sanjivani vati	World Conference on the Pharmacology of Natural Products & 51st Annual Conference of Indian Pharmacological Society	ICMR- National Institute of Nutrition, Hyderabad	5 <sup>th</sup> - 7 <sup>th</sup> Dec., 2019
49.	Gundeti M.S.	Systematic Review with Meta-Analysis	National Level Arogya Fair	Vashi, Navi Mumbai.	23 <sup>rd</sup> Aug., 2019
50.	Dedge A.P.	Systemic Reviews & Meta-Analysis in Ayurveda	Workshop on Research Methodology in Ayurveda World AYUSH Expo 2019 and AROGYA	Ministry of AYUSH, Govt. of India	22 <sup>nd</sup> -23 <sup>rd</sup> Aug., 2019
51.	Sridevi V.	Theme presentation on ‘Setting up of National network on documentation of Local Health Traditions (LHTs) and Ethnomedical practices EMPs)’	Brainstorming session on setting up of National network on documentation of Local Health Traditions (LHTs) and Ethnomedical practices EMPs) & formulation of a National strategy for their Validation and IPR protection	CCRAS at New Delhi	14 <sup>th</sup> Aug., 2019
52.	Sumedhan V.	Therapeutic actions of a Semi poisonous drug DATURA METEL L.in ayurveda	Current Trends and Advances in Biological Sciences (CTAB – 2020)	Post graduate Dept. of Botany and Biotechnology, Bishop Moore college, Mavelikkara sponsored by CSIR	5 <sup>th</sup> Feb., 2020
53.	Balakrishnan P.	Tiktakaghrtasnehapana and nasya in the management of Allergic rhinitis: a research oriented in depth critical review based on a case report.	Update Salakya Tantra 2019	The Association of Shalakies (TAS) & TilakMahaVidhyalaya, Pune	28 <sup>th</sup> - 29 <sup>th</sup> Dec., 2019



54.	Dutta S.	<i>Tinospora cordifolia</i> (Guduchi) and its adulterant plant <i>Daemia extensa</i> (Visanika): A comparative pharmacognostical study and HPTLC profiling of Leaf	6 <sup>th</sup> Convention of Society for Ethnopharmacology & National Symposium on Translational Research of Traditionally used Indian medicinal plants with special reference to <i>Tinospora cordifolia</i>	School of Natural Products studies, Jadavpur University	7 <sup>th</sup> -8 <sup>th</sup> Sep., 2019
55.	Jadhav N.	To establish and standardize a treatment protocol for Glaucoma according to Ayurveda	Sunetra Conclave 2020	Shreedhareeyam Hospital Kerala and TAS at Koothattukulam, Kochi, Kerala.	7 <sup>th</sup> - 9 <sup>th</sup> Feb., 2020
56.	Soumya M. C.	Triphala-A wonder drug in Ayurveda	Current Trends and Advances in Biological Sciences (CTAB – 2020)	Post graduate Dept. of Botany and Biotechnology, Bishop Moore college, Mavelikkara sponsored by CSIR	5 <sup>th</sup> Feb., 2020
57.	Arya D.	Vegetation assessment Herbarium method and statistical analysis for long term Ecological monitoring.	Skill development programme	Organized by G.B. Pant National Institute of Himalayan Environment and Sustainable Development, Ministry of Environment, Govt. of India at RARI Ranikhet	27 <sup>th</sup> Feb 2020
58.	Chandla A.	Way to promote normal labour through Ayurveda w.s.r. to Navama maasa garbhini paricharya; A retrospective study.	“Suprajata –Maternal and Child health care through Ayurveda”	Podar Ayurvedic College Mumbai	5 <sup>th</sup> -6 <sup>th</sup> Oct., 2019



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