

**C.C.R.S.**  
**Annual Report 2017-18**

**सी.सी.आर.एस.**

वार्षिक प्रतिवेदन  
2017-18



**केंद्रीय सिद्ध अनुसन्धान परिषद्**

आयुष मंत्रालय, भारत सरकार

सिद्ध केंद्रीय अनुसन्धान संस्थान भवन, अण्णा सरकारी अस्पताल परिसर,  
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वर्ष 2017-18 के लिए सीसीआरएस का अधिप्रमाणित वार्षिक प्रतिवेदन  
**Authenticated Annual Report of CCRS for the year 2017-18**

अधिप्रमाणित

**Authenticated**

श्रीपद यसो नाईक  
राज्य मंत्री (स्वतंत्र प्रभार)  
आयुष मंत्रालय, भारत सरकार

SHRIPAD YESSO NAIK  
Minister of State Independent Charge  
Ministry of AYUSH, Govt. of India



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**CENTRAL COUNCIL FOR RESEARCH IN SIDDHA**

Ministry of AYUSH, Govt. of India

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# Table of Contents

COMMITTEES .....	4
INTRODUCTION .....	9
OBJECTIVES OF THE COUNCIL.....	10
ORGANIZATION STRUCTURE.....	10
BUDGET .....	12
ACTIVITIES OF VARIOUS INSTITUTES/UNIT.....	13
PROJECTS.....	18
<b>A. INTRAMURAL RESEARCH PROJECTS.....</b>	<b>18</b>
1. CLINICAL RESEARCH PROJECTS .....	18
2. PRE-CLINICAL RESEARCH PROJECTS .....	19
3. DRUG STANDARDIZATION PROJECTS .....	20
4. DRUG DEVELOPMENT PROJECTS.....	21
5. LITERARY RESEARCH AND DOCUMENTATION PROJECTS.....	22
6. MEDICINAL PLANT RESEARCH PROJECTS.....	23
7. COLLABORATIVE PROJECTS .....	24
<b>B. EXTRAMURAL RESEARCH PROJECTS.....</b>	<b>25</b>
PUBLICATIONS.....	30
1. RESEARCH PUBLICATION IN INDEXED/PEER VIEWED JOURNALS.	30
2. PUBLICATIONS OF BOOKS .....	36
3. PATENT .....	36
PARTICIPATION/ PRESENTATION .....	37
1. SEMINAR / CONFERENCE / WORKSHOP ORGANIZED BY THE INSTITUTE.....	37
2. THE FIRST SIDDHA DAY .....	39
3. THIRD INTERNATIONAL DAY OF YOGA.....	40
4. SCIENCE CLUB MEETING .....	40
5. TRAINING/ WORKSHOP ATTENDED BY OFFICERS OF CCRS – PERIPHERAL INSTITUTES/UNITS .....	41
6. EXPO .....	45
7. PRESENTATION IN SEMINARS/CONFERENCES.....	46

<b>8. PARTICIPATION IN SEMINARS/CONFERENCES.....</b>	<b>48</b>
<b>9. EVENTS.....</b>	<b>48</b>
<b>10. RESEARCH PAPERS AND PRESENTATION OF GUEST LECTURERS.....</b>	<b>50</b>
<b>11. PARTICIPATION IN AROGYA FAIRS .....</b>	<b>56</b>
<b>MEMORANDUM OF UNDERSTANDING (MOU) .....</b>	<b>57</b>
<b>CLINICAL RESEARCH .....</b>	<b>59</b>
<b>1. HEALTH CARE SERVICES THROUGH OPD AND IPD .....</b>	<b>59</b>
<b>2. SPECIAL OPDS .....</b>	<b>60</b>
<b>3. SWASTHYA RAKSHAN PROGRAMME .....</b>	<b>61</b>
<b>4. DEPARTMENT OF PATHOLOGY .....</b>	<b>61</b>
<b>5. DEPARTMENT OF BIOCHEMISTRY.....</b>	<b>62</b>
<b>6. PHARMACO-VIGILANCE PROGRAMME.....</b>	<b>62</b>
<b>DRUG RESEARCH.....</b>	<b>65</b>
<b>1. DRUG DEVELOPMENT .....</b>	<b>65</b>
<b>2. PHARMACY .....</b>	<b>65</b>
<b>3. LICENSING &amp; CERTIFICATION .....</b>	<b>65</b>
<b>4. DEPARTMENT OF CHEMISTRY.....</b>	<b>68</b>
<b>5. DRUG STANDARDIZATION.....</b>	<b>68</b>
<b>PRE-CLINICAL RESEARCH.....</b>	<b>70</b>
<b>1. DEPARTMENT OF PHARMACOLOGY .....</b>	<b>70</b>
<b>MEDICINIAL PLANT RESEARCH.....</b>	<b>72</b>
<b>1. MEDICO-ETHNO BOTANICAL RESEARCH.....</b>	<b>72</b>
<b>2. CULTIVATION OF MEDICINAL PLANTS .....</b>	<b>72</b>
<b>3. DIGITIZATION AND COMPILATION OF HERBARIUM AND FOLKLORE CLAIMS .....</b>	<b>72</b>
<b>4. 365 DAYS NATIONAL CAMPAIGN ON MEDICINAL PLANT AWARENESS.....</b>	<b>73</b>
<b>5. PHARMACOGNOSY .....</b>	<b>73</b>
<b>LITERARY RESEARCH AND DOCUMENTATION.....</b>	<b>75</b>
<b>1. KEY ACTIVITIES OF LR &amp; DD .....</b>	<b>75</b>
<b>2. ACTIVITIES IN THE CURRENT YEAR .....</b>	<b>76</b>
<b>3. AYUSH RESEARCH PORTAL.....</b>	<b>79</b>
<b>4. DIGITIZATION.....</b>	<b>79</b>

<b>SIDDHA PHARMACOPOEIA COMMITTEE (SPC).....</b>	<b>80</b>
<b>OBJECTIVES AND ACHIEVEMENTS OF SIDDHA PHARMACOPOEIA     COMMITTEE (SPC).....</b>	<b>80</b>
<b>HUMAN RESOURCE DEVELOPMENT.....</b>	<b>80</b>
<b>1. IEC MATERIALS/ PAMPHLETS.....</b>	<b>80</b>
<b>2. OTHER TOOLS.....</b>	<b>80</b>
<b>3. THE RESEARCH APPLICATION NETWORK (THERAN).....</b>	<b>80</b>
<b>INAUGURATION OF NEW WING AT SRRI, THIRUVANANTHAPURAM.....</b>	<b>81</b>
<b>MISCELLANEOUSE ACTIVITIES .....</b>	<b>81</b>
<b>1. INSTITUTIONAL HUMAN ETHICS COMMITTEE (IHEC) .....</b>	<b>81</b>
<b>2. ICD II-TM-SIDDHA .....</b>	<b>81</b>
<b>3. PROMOTION OF OFFICIAL LANGUAGE .....</b>	<b>82</b>
<b>4. INTERNAL COMPLAINTS COMMITTEE CONSTITUTED UNDER     SEXUAL HARASSMENT OF WOMEN AT WORK PLACE (PREVENTION,     PROHIBITION AND REDRESSAL) .....</b>	<b>82</b>
<b>5. WEBSITE .....</b>	<b>82</b>

# COMMITTEES

## General Body

- ❖ Minister of State (IC), AYUSH - President
- ❖ Secretary, AYUSH - Vice-president
- ❖ Secretary / DG, Health Research - Member
- ❖ Director General, CSIR - Member
- ❖ Special Secretary & FA, Ministry of Health & Family Welfare - Member
- ❖ Joint Secretary, Ministry of AYUSH - Member
- ❖ Director, National Institute of Siddha, Chennai - Member
- ❖ Dy. Advisor (Siddha)/Jt. Advisor (Siddha) – Member
- ❖ Director, PLIM, Ghaziabad - Member
- ❖ Prof. Dr. G. Ganapathy, Siddha Expert - Non Official Member
- ❖ Dr. I. Sornamariammal, Siddha Expert - Non Official Member
- ❖ Dr. S.P. Thiyagarajan, Expert in Modern Medicine - Non Official Member
- ❖ Director General, Central Council for Research in Siddha - Member Secretary

## Executive Committee

S.No.	Name / Designation	Position
1.	Secretary, AYUSH	Chairperson
2.	Additional Secretary & Financial Advisor, Ministry of Health & Family Welfare	Member
3.	Joint Secretary, Ministry of AYUSH	Member
4.	Deputy Advisor (Siddha)/ Jt. Advisor (Siddha)	Member
5.	Dr. I. Sornamariammal, Expert in Siddha	Non-Official Member
6.	Dr. S. P. Thiyagarajan, Expert in Modern Medicine	Non-Official Member
7.	Director General, CCRS	Member Secretary

### Scientific Advisory Board

S.No.	Name	Designation	Position
1.	Dr. G. Veluchamy	Former Director, Central Research Institute for Siddha, Chennai	Chairman
2.	Prof. Dr. V. Banumathi	Director, National Institute of Siddha, Chennai	Member
3.	Dr. Manoj Vasant Murhekar	Director, i/c, National Institute of Epidemiology (NIE), ICMR, Chennai	Member
4.	Dr. B. Chandrasekaran	Director, CSIR-Central Leather Research Institute, Chennai	Member
5.	Dr. K. Kolandaswamy	Director, Director of Public Health and Preventive Medicine, Chennai	Member
6.	Dr. N. Murgesan	Director, Central Drug Testing Laboratory, Chennai	Member
7.	Dr. P. Gunasekaran	Director, Kings Institute for Preventive Medicine and Research, Chennai	Member
8.	Dr. T.S. Chandra	Professor, Dept. of Biotechnology, Indian Institute of Technology, Chennai	Member
9.	Prof. Dr. R.S. Ramaswamy	Director General, CCRS, Chennai	Member secretary

### Internal Complaints Committee related to Sexual Harassment of Woman at workplace (prevention, prohibition and redressal) act, 2013

S.No	Name	Designation	Position
1.	Dr. Shyamala Rajkumar	Research Officer (Siddha) S-II CCRS, Chennai	Chairman
2.	Dr. R. Shakila	Research Officer (Chemistry) S-II SCRI Chennai	Member
3.	Dr. R. Meena	Research Officer (Siddha) SCRI, Chennai	Member
4.	Dr. V. Aarthi	Research Officer (Siddha) CCRS, Chennai	Member
5.	Dr. S. Bhavani	Research Officer (Siddha) SCRI, Chennai	Member
6.	Ms. T. Divya.	Advocate, Chennai	Member

### Technical Audit Committee

S.No	Name	Designation
1.	Prof. Dr. P. Jeyaprakash Narayanan	Former Vice-Principal, GSMC, Chennai.
2.	Prof. Dr. A. Kumaravel	Former Professor, GSMC, Palayamkottai.
3.	Dr. S. Thirunavukkarasu	Former A.D. (Siddha), CCRAS, New Delhi.
4.	Dr. S. Rajalakshmi	Former A.D. (Siddha), SRRI, Puducherry
5.	Dr. V. Gopal	Professor-cum-Principal & HOD (Pharmacognosy), Mother Theresa Post Graduate and Research Institute of Health Sciences, Puducherry
6.	Dr. Sasikala Ethirajulu	Former Research Officer (Pharmacognosy) S-III, SCRI, Chennai

### Siddha Pharmacopoeia Committee

S.No.	Name / Designation	Position
1.	Dr. P. Jeyaprakash Narayanan	Chairman
<b>Ex-Official Member</b>		
2.	Joint Advisor (Siddha)	Member
3.	Director, PCIM &H	Member
4.	Director, PLIM	Member
5.	Director General, CCRS	Member
<b>Non-Official Member Organic / Plant Chemistry</b>		
6.	Dr. P.T. Perumal	Member
7.	Dr. R. Sundaram	Member
<b>Pharmaceutical Chemistry</b>		
8.	Dr. A. Rajasekaran	Member
<b>Pharmacognosy</b>		
9.	Dr. D. Chamundeeswari	Member
10.	Dr. Mamta B. Shah	Member
<b>Gunapadam</b>		
11.	Prof. Dr. M. Rajasekaran	Member
<b>Siddha Pharmacy</b>		
12.	Dr. M. Pitchiah Kumar	Member
13.	Dr. G. Sivaraman	Member
<b>Siddha Industry</b>		
14.	Dr. L. Sivakumar	Member
<b>Bio-technology</b>		
15.	Dr. M. Ramanathan	Member
<b>Parpam / Minerals &amp; Metals</b>		
16.	Dr. K. Ponsingh	Member
17.	Dr. M. Ravichandran	Member



**Sub committees:**  
**Muppu Subcommittee under SAB**

S.No	Name	Designation	Position
1.	Prof. Dr. A. Kumaravel	Former Chairman, SAB, CCRS	Chairman
2.	Dr. G. Victor Rajamanickam	Senior Scientist & Director in Research, Vel's University, Pallavaram	Member
3.	Dr. N. Chandrasekar	Professor & Head, Centre for Geo-Technology, Manonmaniam Sundaranar University, Tirunelveli.	Member
4.	Dr. C. Eleza	Medical Officer (Siddha), Kanyakumari	Member
5.	Dr. G. Manimaran	HOD, School of Tectonics, Dept. of Geology, V.O.C. College, Tuticorin.	Member
6.	Dr. R. Sudha	Asst. Medical Officer (Siddha), Denkanikottai, Krishnagiri.	Member
7.	Dr. S. Ayyasamy	DSMO, Kanchipuram & Thiruvalluvar Dist.	Member
8.	Dr. B. Michael Jeyaraj	Managing Trustee, Ulaga Tamil maruthuva kazhagam, Papanasam	Member
9.	Mr. A. Asokan	Traditional Healer, Vellore	Member
10.	Prof. Dr. R.S. Ramaswamy	Director General, CCRS	Member Secretary

**Varmam and Bone Setting Subcommittee under SAB**

S.No	Name	Designation	Position
1.	Prof. Dr. A. Kumaravel	Former Chairman, SAB, CCRS	Chairman
2.	Dr. K. Gopakumar	Former Research Officer, i/c, S – II, SCRI, Arumbakkam, Chennai	Member
3.	Prof. Dr. N. Shunmugom	Associate Professor, Dept. of Tamil, SRMV College of Arts & Science, Coimbatore	Member
4.	Dr. T. Kannan Rajaram	Siddha Physician, Nagercoil	Member
5.	Dr. R. Ramesh Babu	Siddha Physician, Kallakurichi	Member
6.	Dr. S. Natarajan	Research Officer (Siddha), SCRI, Chennai	Member
7.	Dr. K.P. Arjunan	Traditional Siddha Practitioner, Vellore	Member
8.	Thiru. Arjunan Asan	Traditional Siddha Practitioner, Nagercoil	Member
9.	Mr. Karuna	Traditional Siddha Practitioner, Chennai	Member

10.	Dr. G. Manimaran,	HOD, School of Tectonics, V.O.C. College, Tuticorin	Member
11.	Prof.Dr.R.S. Ramaswamy	Director General, Chennai	Member Secretary

**Kattu and Kalangu Subcommittee under SAB**

S.No	Name	Designation	Position
1.	Prof. Dr. A. Kumaravel	Former Chairman, SAB, CCRS	Chairman
2.	Prof. Dr. I. Sornamariammal	Former Joint Director, Dept. of Indian Medicine and Homeopathy, Chennai	Member
3.	Dr. Ravichandran	Reader & HOD, Dept. of Udal koorugal (Anatomy), Government Siddha Medical College, Chennai	Member
4.	Dr. T. Thirunarayanan	Secretary, CTMR, Chennai	Member
5.	Dr. S. Natarajan	Research Officer (Siddha), SCRI, Chennai	Member
6.	Dr. K. P. Arjunan	Traditional Siddha Practitioner, Vellore	Member
7.	Dr. Ravindranathan	Traditional Siddha Physician, Mathuranthagam	Member
8.	Prof. Dr. R.S. Ramaswamy	Director General, Chennai	Member Secretary

# INTRODUCTION

Central Council for Research in Siddha is an autonomous body under the Ministry of AYUSH, Government of India. This autonomous body is registered under the Societies Act in July 2010. The AYUSH ministry was especially created for traditional system of medicines in the year 2014 for effective development and promotion of AYUSH systems. Central Council for Research in Siddha was established as a separate council in the year 2010 after bifurcating from Central Council for Research in Ayurveda and Siddha (CCRAS). It is the apex body for Siddha system of medicine in India. It is the authority for setting standards for Research Methodology and Guidelines in Siddha.

## Vision

To promote research activities, contributing towards the globalization of Siddha system of Medicine.

## Mission

- Encourage and support ethical research in Siddha system of medicine.
- Provide skilled researchers to the community.
- Serve the public through world class research in Siddha system of medicine.
- Advocate and disseminate knowledge in Siddha research to improve the quality of life.

The activities of the Council are

- Clinical Research
- Drug Research
- Pre-clinical Research / Pharmacological Research
- Medicinal Plant Research (Medico-Ethno Botanical Research, Pharmacognosy),
- Literary Research & Documentation

Apart from these activities the Council is conducting outreach activities viz. Swasthya Rakshan Programme.

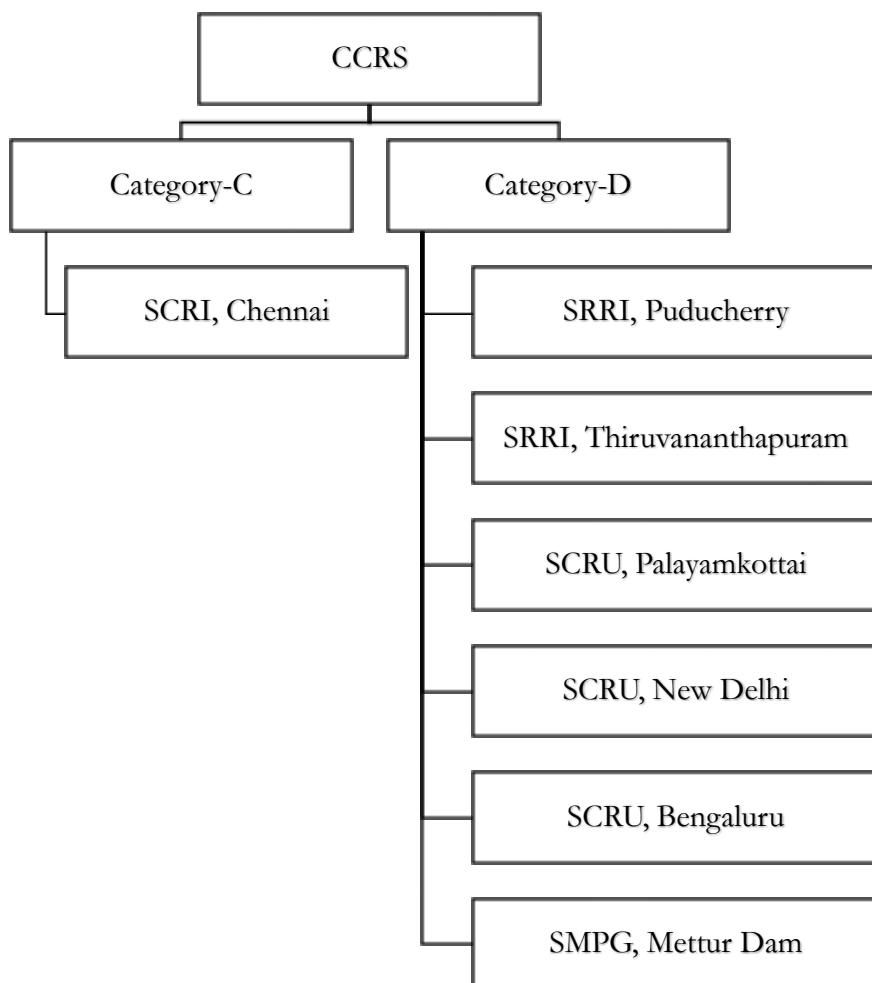
The activities of the Council are carried out through its Institutes/Centres/Units located all over India.

1. Siddha Central Research Institute, Chennai, Tamil Nadu
2. Siddha Regional Research Institute, Puducherry
3. Siddha Regional Research Institute, Thiruvananthapuram, Kerala
4. Siddha Clinical Research Unit, Palayamkottai, Tamil Nadu
5. Siddha Medicinal Plants Garden, Mettur, Tamil Nadu
6. Siddha Clinical Research Unit, Karol Bagh, New Delhi
7. Siddha Clinical Research Unit, Bengaluru, Karnataka
8. Siddha Wing, AYUSH Wellness Clinic, Rashtrapati bhawan, New Delhi
9. Siddha OP Wing at All India Institute of Ayurveda, New Delhi

The Council has also taken up collaborative studies with various Universities, Hospitals and Institutes to widen the research perspectives.

### Peripheral Institutes/Units

After re-organization the Institutes/Units have been classified into 4 categories, of which the CCRS Institutes/Units fall under 'C' and 'D' categories mentioned as under:



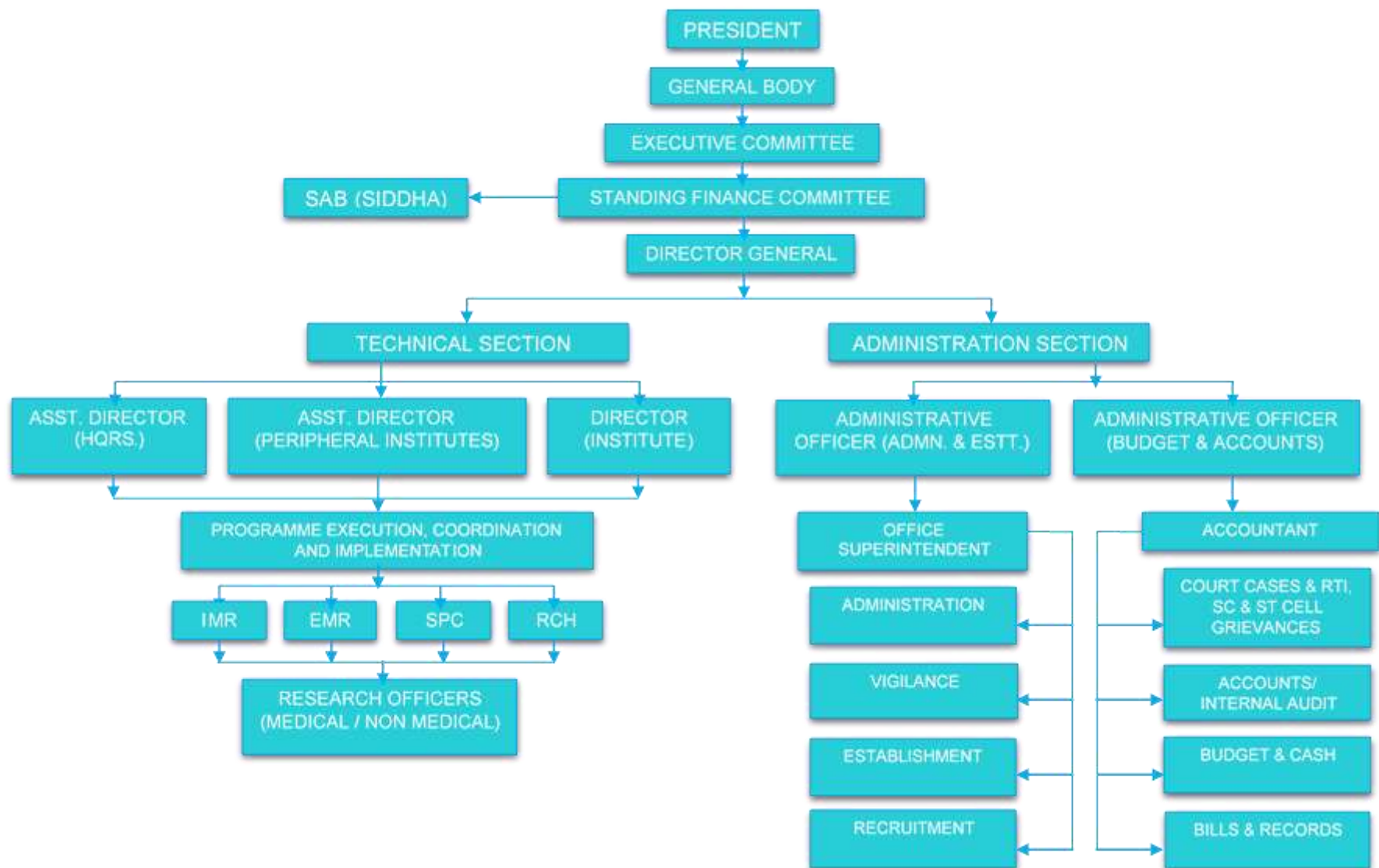
## OBJECTIVES OF THE COUNCIL

The main objectives of the Council are as follows:

- ✚ Development of safe, effective Siddha medicines and therapeutic techniques for diseases of national and global importance.
- ✚ Validation of classical Siddha formulations and therapies.
- ✚ Capacity building programmes on Research methodology and drug development.
- ✚ Research & Development support for academic, research institutes and industry.
- ✚ Dissemination of research outcome through publications and research journals.

## ORGANIZATION STRUCTURE

The implementation of recommendations of Nityanand Committee was reviewed by Joint Secretary (AYUSH) in a meeting held on 16-11-2009 under his Chairmanship for the development of the erstwhile CCRAS and notified on 15<sup>th</sup> December 2009, which included the presently functioning CCRS Institutes/Units also. The organization set up of CCRS is depicted in the flow chart below.



# BUDGET

## Budget Provision at a glance

Scheme	B.E. 2017-18 (in lakhs)	Funds released in 2017-18 (in lacs)	Actual expenditure 2017-18 (in lacs)
Plan			146.49
Non-Plan	2694.00	2694.00	2291.17
<b>Total</b>	<b>2694.00</b>	<b>2694.00</b>	<b>2437.66</b>

## Head-wise Actual Expenditure

S.No	Particulars	Total Expenditure for 2017-18 (in lacs)		
		Non-Plan	Plan	Total
1.	Pay & Allowances	1212.97	24.72	1237.69
2.	Pension	234.24	-	234.24
3.	Payment of Gratuity –DCRG	82.36	-	82.36
4.	Payment of commutation	42.61	-	42.61
5.	NPS (Employer)	135.25	-	135.25
6.	Leave travel Concession (LTC)	1.86	-	1.86
7.	Travelling allowances	46.65	4.97	51.62
8.	Office expenses- Contingencies	322.17	79.89	402.06
9.	Other Administrative exp.	84.14	8.71	92.85
10.	Research Activities	57.48	13.06	70.54
11.	Seminar, Workshop & AROGYA	24.48	14.05	38.53
12.	Advertisement and Publicity	21.28	0.95	22.23
13.	Machinery & Equipments	25.68	0.14	25.82
14.	Capital works (Major Works)	-	-	-
15.	Minor works	-	-	-
	<b>Total</b>	<b>2291.17</b>	<b>146.49</b>	<b>2437.66</b>

## Centre-wise Actual Expenditure

Particulars	Total Expenditure for 2017-18 (in lakhs)		
	Non - Plan	Plan	Total
<b>De – Centralized Units</b>			
SCRI, Chennai	993.68	55.77	1049.45
SRRI, Pondicherry	263.90	25.06	288.96
SRRI, Thiruvananthapuram	141.81	24.82	166.63
SMPG, Mettur Dam	88.36	33.54	121.9
SCRI, Palayamkottai	84.27	2.63	86.9
SCRU, New Delhi	53.42	-	53.42
SCRU, Bengaluru	17.98	-	17.98
<b>Centralized Unit</b>			
CCRS, Headquarters	647.75	4.67	652.42
<b>Grand Total</b>	<b>2291.17</b>	<b>146.49</b>	<b>2437.66</b>

## ACTIVITIES OF VARIOUS INSTITUTES/UNIT

### 1. State-wise distribution of Peripheral Institutes / Units of CCRS

S.No.	Name of the State	Name of the Institutes / Units
1.	Tamil Nadu	i. Siddha Central Research Institute, Chennai.
		ii. Siddha Clinical Research Unit, Palayamkottai.
		iii. Siddha Medicinal Plants Garden, Mettur.
2.	Kerala	Siddha Regional Research Institute, Thiruvananthapuram.
3.	Puducherry (U.T.)	Siddha Regional Research Institute, Puducherry.
4.	New Delhi (U.T.)	Siddha Clinical Research Unit, Karol Bagh.
5.	Bengaluru	Siddha Clinical Research Unit, Govt. Sri Jayachamarajendra Ayurveda Hospital.

### 2. Co-located units of CCRS

- Siddha wing at AYUSH Wellness Clinic at Rashtrapati Bhavan, New Delhi-Caters to the medical needs of the President, officials of President's Secretariat and residents of the President's Estate.
- A Siddha OP wing at All India Institute of Ayurveda at Saritha Vihar, New Delhi- provides Health care services.
- Apart from this, Siddha Medical Services Unit, Health Centre at Pondicherry university provides Siddha treatment for the staff and students of the university

### 3. Allocation of Research Activities

S.No	Name of Institute	Project / Activities
1.	Siddha Central Research Institute, Chennai.	1. Clinical Research 2. Drug Standardization 3. Literary Research & Documentation Programme 4. Fundamental Research 5. National Pharmaco-vigilance Programme for Ayurveda, Siddha and Unani (ASU) Drugs 6. Health care services through Out – Patient Department (OPD) and In-Patient Departments (IPD) 7. Specialty Clinic for Geriatric Health Care 8. Specialty Clinic for Varmam, Thokkanam and Bone setting 9. Specialty Clinics for Diabetes mellitus 10. Specialty Clinics for reproductive and child health care 11. Pharmacy 12. Intra-mural Research projects. 13. Swasthya Rakshan Programme (SRP) 14. Miscellaneous activities.

2.	Siddha Regional Research Institute, Puducherry.	<ol style="list-style-type: none"> <li>1. Clinical Research.</li> <li>2. National Pharmaco - vigilance Programme for Ayurveda, Siddha and Unani (ASU) Drugs.</li> <li>3. Health care services through Out–Patient Department (OPD) and In-Patient Departments (IPDs).</li> <li>4. Specialty clinic for Geriatric Health Care.</li> <li>5. Specialty clinic for Varmam and Thokkanam.</li> <li>6. Intra-mural Research projects.</li> <li>7. Swasthya Rakshan Programme (SRP).</li> <li>8. Miscellaneous activities.</li> </ol>
3.	Siddha Regional Research Institute, Thiruvananthapuram.	<ol style="list-style-type: none"> <li>1. Clinical Research.</li> <li>2. Drug Standardization.</li> <li>3. National Pharmaco - vigilance Programme for Ayurveda, Siddha and Unani (ASU) Drugs.</li> <li>4. Health care services through Out–Patient Department (OPD).</li> <li>5. Specialty clinic for Geriatric Health Care.</li> <li>6. Specialty clinic for Varmam &amp; Thokkanam.</li> <li>7. Intra-mural Research projects.</li> <li>8. Swasthya Rakshan Programme (SRP).</li> <li>9. Miscellaneous activities.</li> </ol>
4.	Siddha Clinical Research Unit, Palayamkottai.	<ol style="list-style-type: none"> <li>1. Clinical Research.</li> <li>2. National Pharmaco-vigilance Programme for Ayurveda, Siddha and Unani (ASU) Drugs.</li> <li>3. Health care services through Out–Patient Department.</li> <li>4. Specialty clinic for Geriatric Health Care.</li> <li>5. Intra-mural Research projects.</li> <li>6. Swasthya Rakshan Programme (SRP).</li> <li>7. Miscellaneous activities.</li> </ol>
5.	Siddha Medicinal Plants Garden, Mettur.	<ol style="list-style-type: none"> <li>1. Medico-Ethno-Botanical Survey.</li> <li>2. Cultivation of Medicinal Plants.</li> <li>3. Maintenance and Development of medicinal plants garden.</li> <li>4. Intra-mural Research projects.</li> <li>5. Swasthya Rakshan Programme.</li> <li>6. Miscellaneous activities.</li> </ol>
6.	Siddha Clinical Research Unit, Karol Bagh, New Delhi	<ol style="list-style-type: none"> <li>1. Clinical Research.</li> <li>2. National Pharmaco-vigilance Programme for Ayurveda, Siddha and Unani (ASU) Drugs.</li> <li>3. Health care services through Out–Patient Department.</li> <li>4. Specialty clinic for Geriatric Health Care.</li> <li>5. Specialty clinic for Varmam &amp; Thokkanam</li> <li>6. Intra-mural Research projects.</li> <li>7. Swasthya Rakshan Programme.</li> <li>8. Miscellaneous activities.</li> </ol>



7.	Siddha Clinical Research Unit, Bengaluru	<ol style="list-style-type: none"> <li>1. Clinical Research.</li> <li>2. Health care services through Out–Patient Department (OPD) and In-patient Department (IPD)</li> <li>3. Speciality clinic for Varmam &amp; Thokkanam</li> <li>4. Swasthya Rakshan Programme</li> </ol>
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1. **Siddha Central Research Institute (SCRI), Chennai** is identified as a potential centre of excellence for clinical research. This Institute is located in the campus of Anna Government Hospital of Indian systems of Medicine and Homoeopathy at Arumbakkam, Chennai. Central Research Institute for Siddha was established in the year 1971. SCRI, Chennai has got the basic facilities for Clinical research, drug research and literary research. In the department of literary research, palm leaf manuscripts and rare Siddha books collection, preservation, annotation, Cataloguing, transcription and publications are being periodically carried out. The department of Clinical research carries out the clinical trials with 50 bedded hospital facilities. Department of Biochemistry and Pathology laboratories also support the Clinical research. Pharmacovigilance cell functions effectively for the betterment of the society and the system. The department of Pharmacognosy helps in identification of herbal drug, Siddha botanical standardization and Siddha Pharmacopoeia works. Standardization of trial drugs, single drugs and Siddha compound formulations are carried out in the department of Chemistry. Department of Pharmacology carries out the biological evaluation, safety and toxicity studies.
2. **Siddha Regional Research Institute (SRRI) Puducherry** was established on 22<sup>nd</sup> August, 1979. This institute started functioning in its own premises at Kuyavarpalayam since 2003 with a well-maintained campus and pleasing herbal garden with more than 150 medicinal plants. This institute has enough infrastructure with various departments — Out-Patient Department, In-Patient Department, Varmam clinic, dispensary, clinical pathology laboratory and a library. An In-Patient Department with 25 beds is being utilized for various clinical research projects. Since inception the institute is engaged in clinical research on Siddha formulations for various ailments.
3. **Siddha Regional Research Institute (SRRI)** is located in Thiruvananthapuram, Kerala with the Department of Clinical Research and Drug Research (Chemistry and Botany Department). The SRRI Thiruvananthapuram caters to the health needs of general public by providing the free out patient service and performing the research activities in the clinical sector. In drug research single and compound formulations are being standardised.
4. **Siddha Clinical Research Unit, Palayamkottai** was established on 6<sup>th</sup> February 1980 in the premises of Government Siddha Medical College campus, Palayamkottai. The Survey of Medicinal Plants Unit (SMPU) located there, to its credit, has surveyed around 300 forest areas, which include both Eastern and Western Ghats of Tamil Nadu. A Herbarium hall with 9000 Herbarium sheets covering 1986 individual species and a Museum with 1000 crude drug materials are maintained. General OPD, Varmam OPD and External therapies are provided at Siddha Clinical Research Unit, Palayamkottai.

5. **The Survey of Medicinal Plants Unit – Siddha and Siddha Medicinal Plants Garden** are located at Mettur Dam, Salem, Tamil Nadu. Survey of Medicinal Plants Unit – Siddha undertook 332 Medico Ethno Botanical survey in different parts of Tamil Nadu and recorded 10054 field collections. The unit has documented 7700 herbarium specimens covering 1836 species of medicinal plants with special reference to Siddha and Ayurveda in Tamil Nadu. The objectives of survey of medicinal plants unit is to study the medicinal plants wealth of Tamilnadu by undertaking Medico Ethno Botanical survey tours, collection and documentation of medicinal plants for herbarium, raw drugs/plant materials for museum, plant materials/raw drugs for effective drug supply, identification and authentication of medicinal plants, documentation of medico ethno botanical claims. The Siddha Medicinal Plants Garden has established and developed an arboretum, poly green house. The garden supply raw drugs to meet the partial requirement of SCRI Pharmacy, SPC related works. Farming activities and maintenance of garden is taken care by this unit.
6. **Siddha Clinical Research Unit, New Delhi** started its function on 29<sup>th</sup> February 2016 in the campus of Ayurveda & Unani Tibbia College, Karol Bagh, New Delhi, in the space provided by the Department of AYUSH, Govt. of NCT of Delhi. At present, Out-patient Department (General and Varmam OPD) services, geriatric OPD and clinical research activities are being carried out at the Unit. The Unit is also running integrated AYUSH OPD at All India Institute of Ayurveda (AIIA), Sarita Vihar, New Delhi on every Fridays and Saturdays. Under the Swasthya Rakshan Programme of Ministry of AYUSH, SCRUND is conducting Swasthya Rakshan OPDs on every Monday in the premises of Ramakrishna Mission Ashram, New Delhi and on every first Sunday in Nanakpura Malayalee Welfare Forum, Moti Bagh, New Delhi.
7. **Siddha Clinical Research Unit, Bengaluru** started functioning at the campus of Govt. Sri Jayachamarajendra Ayurveda Hospital, Dhanvantri Road, Bengaluru since 25<sup>th</sup> May, 2017. This unit provides medical aid for various diseases through Siddha System of medicine as an adjunct to research pursuits for patients visiting OPD. Speciality treatments like Varmam and Thokkanam therapies for musculo-skeletal and neurological disorders are available for patients.
8. **AYUSH Wellness Clinic** was inaugurated by the President of India on 25<sup>th</sup> July 2016, which has a Siddha wing along with other AYUSH systems. The Clinic is catering to the medical needs of the President, officials of President's Secretariat and residents of the President's estate. Treatment includes both internal medicines and external therapies mentioned in Siddha literature. Varmam therapy is one of the unique therapies offered by this Siddha wing to patients suffering from all types of vali (vatha) disorders. Apart from Varmam therapy, external therapies like fumigation, poultice, bandaging, etc., are also available for patients



# PROJECTS

AR:2017-18

# PROJECTS

## A. Intramural Research Projects

Central Council for Research in Siddha is carrying out various IMR projects in its peripheral institutes / units. The details of the ongoing and completed projects are illustrated in the following table.

### 1. Clinical Research Projects

- |    |                          |  |
|----|--------------------------|--|
| 1. | Title of the IMR-Project | <b>RCT of Two Siddha Drugs in the Management of Urolithiasis (Kalladaippu) - Phase 2</b>   |
|    | Name of the PI           | Dr. A. Rajendra Kumar  |
|    | Status                   | License for Pre-Natal Diagnostic Technique (PNDT) acquired and USG machine installation process has been completed.  |
| 2. | Title of the IMR-Project | <b>Multi centric single arm prospective open trial to check the safety and efficacy of a classical Siddha formulation Rasagandhi Mezugu in Karuppai Narthasai Kattigal (Fibroid Uterus) among women (25-45 years) attending CCRS-research institutes/unit (MERRYFUL)</b>   |
|    | Name of the PI           | Dr. Shyamala Rajkumar  |
|    | Name of the Co-PIs       | Dr. A. Rajendra kumar, Dr. S. Bhavani, Dr. G. S. Lekha, Dr. K. Sivaranjani, Dr. Padmalatha, Dr. Benitha Segin, Dr. Nirmala Vijaya kumar  |
|    | Centers                  | SCRI, Chennai, SRRI, Puducherry, SRRI, Thiruvananthapuram, SCRUI, Palayamkottai  |
|    | Status                   | <ul style="list-style-type: none"> <li>• Since the project is a multicentric trial, IHEC approval has been obtained from all the four centres.</li> <li>• Ultra Sono-gram purchased for all centres. PNDT approval and installation done for two centres and it is in pipeline for other two centres.</li> <li>• Trial drug prepared at IMPCOPS (GMP certified Pharmacy).</li> <li>• The stability studies of RGM is in progress as per the recommendation of IHEC, SRRI, Puducherry.</li> </ul> |
| 3. | Title of the IMR-Project | <b>Validation of Siddha Udal Iyal inventory –YI for assessment of body constitution : a descriptive, cross sectional study</b>   |
|    | Name of the PI           | Dr. M. Kannan  |
|    | Name of the Co-PI        | Dr. P. Sathiyarajeswaran   |
|    | Status                   | SAB approved, fund Sanctioned, project is in progress  |
| 4. | Title of the IMR-Project | <b>Assessment of awareness and usage of Siddha medicine among the patients reporting to selected Siddha OPD in Puducherry &amp; Karaikkal region.</b>  |

Name of the PI	Dr. A. Rajendra Kumar
Status	Project completed and report submitted to CCRS for Project Evaluation and Monitoring Committee (PEMC)
5. Title of the IMR-Project	<b>A Randomized Controlled Three arm Clinical Trial on the effectiveness of Mudakku Vatha Ilagam (MVI) and Varmam Therapy in Midlife population afflicted by Azhal Keel Vayu (AKV) (Knee-Osteoarthritis).</b>
Name of the PI	Dr. S. Shunmugaram
Name of the Co-PI	Dr. B. Chitra
Status	IHEC approval obtained. Project initiated.
6. Title of the IMR-Project	<b>Evaluation of safety and efficacy of Sivappu Kukkil Thylam and Varmam Therapy among subjects with Osteoarthritis of knee joints.</b>
Name of the PI	Dr. S. Saravanan
Status	IHEC approval obtained. CTRI registration done.
7. Title of the IMR-Project	<b>Evaluation of efficacy and safety of two Siddha formulations for the treatment functional constipation –A comparative randomized clinical trial</b>
Name of the PI	Dr. R. Manickavasagam
Status	IHEC approval obtained. CTRI Registration is in process.

## 2. Pre-Clinical Research Projects

1. Title of the IMR-Project	<b>Pre-Clinical Evaluation (Chronic toxicity ) of Gowri Chinthamani Chenduram – A Siddha Drug</b>
Name of the PI	Dr. P. Elankani
Name of the Co-PI	Dr. R.Ganesan
Status	Study was initiated. Blood was withdrawn for batch A and batch B animals to carryout 30th day biochemical parameters. Study is in progress.
2. Title of the IMR-Project	<b>A Siddha polyherbal formulation (Nilappanai Chooranam) in the management of Oligospermia (Vindhanu Kuraipadu)</b>
Name of the PI	Dr. S. Selvarajan
Name of the Co-PIs	Dr. V. Gayathri Devi, Dr. G. Dayanand Reddy
Status	<ul style="list-style-type: none"> <li>Standardization of Nilappanai chooranam completed.</li> <li>Recruitment of project staff to carry out the pharmacological study is in progress.</li> </ul>
3. Title of the IMR-Project	<b>Evaluation of Anti-cancerous activity of Sengathari ennai in <i>in-vitro</i></b>

Name of the PI	Dr. R. Thilagavathi
Status	Project work initiated
4. Title of the IMR-Project	<b>Anti-hyperlipidemic activity of D5 choornam.</b>
Name of the PI	Dr. G. Dayanand Reddy
Status	The study is under process, at present the data is being analyzed for statistical significance and awaiting for histopathology report and tissue homogenizer for various parameters.
5. Title of the IMR-Project	<b>Nephroprotective Effect of <i>Sphaeranthus amarathoides</i> Burm. f. (Sivakaranthai) against Gentamycin induced nephrotoxicity in Rats.</b>
Name of the PI	Dr. R. Ganesan
Name of the Co-PI	Dr. G. Dayanand Reddy
Status	<ul style="list-style-type: none"> <li>• IAEC approval obtained. Plant sample collected and authenticated.</li> <li>• Standardisation completed. Pharmacological study is in progress.</li> </ul>

### 3. Drug Standardization Projects

1. Title of the IMR-Project	<b>Qualitative and Quantitative Analysis of Lead in 'Lead containing plants' – A Scientific Validation of Siddha Claim</b>
Name of the PI	Smt. Anitha John
Name of the Co-PI	Dr. M. Padma Sorna Subramanian
Status	<ul style="list-style-type: none"> <li>• Analysis of 3 plant materials: Microscopic Analysis, Powder Microscopic Analysis.</li> <li>• Physico-chemical analysis HPTLC study – extracts of 10 plant materials.</li> <li>• Herbarium preparation – 1 plant.</li> <li>• Estimation of lead and other metals – 6 plant materials.</li> </ul>
2. Title of the IMR-Project	<b>Isolation of chemical marker from selected plants used in Reproductive and Child Health.</b>
Name of the PI	Smt. R. Shakila
Status	<ul style="list-style-type: none"> <li>• Isolated a compound from <i>Cassia fistula</i> and is yet to be identified.</li> <li>• Early fractions of <i>Myristica fragrans</i> has been sent for GC-MS analysis.</li> <li>• Installation of HPLC is in process.</li> </ul>
3. Title of the IMR-Project	<b>Qualitative and Quantitative Analysis of Chembu (copper) in 'Chembu containing Plants' – A Scientific validation of Siddha claim.</b>

Name of the PI	Dr. K. Parthasarathy
Name of the Co-PI	Dr. M. Padma Sorna Subramanian
Status	<ul style="list-style-type: none"> <li>• Analysis of 3 plant materials: Microscopic Analysis, Powder Microscopic Analysis, Physico-chemical analysis.</li> <li>• HPTLC study – extracts of 10 plant materials.</li> <li>• Herbarium preparation – 1 plant.</li> <li>• Estimation of lead and other metals – 6 plant materials.</li> </ul>
4. Title of the IMR-Project	<b>Untargetted approach to the geochemical characterization of Hypothecated Muppu (Marine sediments collected from Bay of Bengal at Rameswaram and white powdery salts collected from Kovanur and Siddha malli)</b>
Name of the PI	Dr. K. Parthasarathy
Name of the Co-PIs	Dr. S. Ayyasamy, Dr. R. Sudha
Status	<ul style="list-style-type: none"> <li>• Chemical characterization of Sangu parpam prepared from seven different herbs was completed.</li> <li>• Non-marine evaporite called “Pooneeru” was geo-chemically characterised.</li> <li>• Provisional patent was filed under the title “Process for the preparation of “Pooneeru used in the Siddha medicine”.</li> <li>• Pooneeru was collected from January to June, 2018 on full moon day.</li> </ul>
5. Title of the IMR-Project	<b>Metabolomic profiling and Identification of Principle Components from herbals used in Siddha System for Cognitive disorders using multivariate statistical analysis</b>
Name of the PI	Dr. K. Parthasarathy
Name of the Co-PIs	Dr. M. Kannan, Dr. V.L. Reena
Status	LC-MS instrument was procured and installed. Recruitment of project staff is in progress.
6. Title of the IMR-Project	<b>Analysis of inorganic composition of selected plants used in Siddha system.</b>
Name of the PI	Smt. R. Shakila
Status	<ul style="list-style-type: none"> <li>• Collected <i>Triticum aestivum</i> Linn. from Mandi, HP. The ash of 5 samples were sent to XRF analysis.</li> <li>• Procurement of XRD is in progress.</li> </ul>

#### 4. Drug Development Projects

1. Title of the IMR-Project	<b>Standardisation of Sirukan Nagam Suddhi (Purification) and Physio chemical evaluation of Naga parpam, A Siddha drug- process study.</b>
Name of the PI	Dr. M. Harihara Mahadevan
Status	Raw drugs procurement is in progress.

- |    |                          |   |
|----|--------------------------|---|
| 2. | Title of the IMR-Project | <b>Sarakku Vaippu of a poly herbal formulation with Abini like properties by Siddha Methodology of Konganavar</b> |
|    | Name of the PI           | Dr. V. Aarthi   |
|    | Name of the Co-PI        | Dr. L. Juliet   |
|    | Status                   | Review of literature completed and initiated pilot study of formulation of study drug.                            |
- 
- |    |                          |   |
|----|--------------------------|---|
| 3. | Title of the IMR-Project | <b>A Comparative study on Quality control parameter of Mathirai/Tablet formulations used in Siddha system of medicine</b>   |
|    | Name of the PI           | Dr. M. S. Shreedevi   |
|    | Name of the Co-PI        | Dr. M. Muthutamizh  |
|    | Project supervisor       | Dr. P. Sathiyarajeswaran  |
|    | Status                   | <ul style="list-style-type: none"> <li>• Authentication of raw Drugs of the project completed.</li> <li>• Purification process of below listed Raw drugs completed: Venkaram, Milagu, Nabi, Sukku, Lingam, Rasa Karpooram, Nervalem, Thipilli, Adhimathuram.</li> <li>• Analysis of formulations completed for (Swasakudori Mathirai, Bala sanjeevi &amp; Santha Sandrothayam Mathirai).</li> <li>• Disintegration study of Swasakudori Mathirai, Bala sanjeevi completed. Market survey of Project drugs completed.</li> <li>• Purchase of surveyed market drugs completed.</li> <li>• Disintegration study of market brands completed Weight variation study of Market brands completed.</li> </ul> |
- 
- |    |                          |  |
|----|--------------------------|--|
| 4. | Title of the IMR-Project | <b>Scientific validation of Serankottai (<i>Semecarpus anacardium</i>) before and after purification in Siddha system of medicine</b>  |
|    | Name of the PI           | Dr. L. Juliet  |
|    | Name of the Co-PI        | Dr. V. Aarthi, Dr. V.L. Reena  |
|    | Status                   | <ul style="list-style-type: none"> <li>• Purchasing and collection of raw drugs for the purification processes.</li> <li>• Process II &amp; Process IV purification processes have been completed.</li> <li>• Processes III &amp; Process V are in progress.</li> <li>• Five samples sent for analysis.</li> </ul> |

## 5. Literary Research and Documentation Projects

- |    |                          |   |
|----|--------------------------|---|
| 1. | Title of the IMR-Project | <b>Development of Siddha Treatment Guidelines for Non-Communicable Diseases (DSTGNCD)</b> |
|    | Name of the PI           | Dr. P. Sathiyarajeswaran  |
|    | Name of the Co-PIs       | Dr. Shyamala Rajkumar, Dr. M. Kannan  |
|    | Status                   | Project completed and Zero draft book is submitted to CCRS for PEMC                       |



- |    |                          |  |
|----|--------------------------|--|
| 2. | Title of the IMR-Project | <b>Vernacular Name Encyclopedia of Siddha Drugs Mentioned in Siddha Materia Medica (Gunapadam)</b>   |
|    | Name of the PI           | Dr. P. Sathiyarajeswaran   |
|    | Name of the Co-PIs       | Dr. Shyamala Rajkumar, Dr. M. Kannan   |
|    | Status                   | <ul style="list-style-type: none"> <li>• Vernacular names of 90 medicinal plants and 76 herbo-mineral drugs have been analyzed, reasoning identified and decision arrived.</li> <li>• The etymological root of all animals and its by-products mentioned in Siddha materia medica have been analyzed</li> </ul>  |
| 3. | Title of the IMR-Project | <b>Database of Siddha preparations for certain diseases mentioned in the enlisted books of drugs and cosmetics act, 1940</b>   |
|    | Name of the PI           | Dr. Shyamala Rajkumar  |
|    | Status                   | Completed and project report submitted to CCRS for PEMC  |
| 4. | Title of the IMR-Project | <b>Siddha Encylopaedia &amp; Android Application for Research Community and Health care Institutions (T.V. Sambasivam Pillai Medical Dictionary) - SEARCH<sup>i</sup></b>  |
|    | Name of the PI           | Dr. M. Kannan  |
|    | Name of the Co-PI        | Dr. P. Sathiyarajeswaran   |
|    | Status                   | <ul style="list-style-type: none"> <li>• Creation of soft copy (v1):5320 pages were typed.</li> <li>• Completion of hard copy proof correction (v2): 1740 pages in Volume I, 150 pages in Volume II.</li> <li>• Completion of soft copy proof correction (v3):600 pages in Volume I.</li> <li>• Section wise data base was completed. All the 86618 key words were categorized under 52 sections.</li> <li>• 2310 new keywords were identified.</li> <li>• Derived mobile App Technical specification from App developer.</li> </ul> |
| 5. | Title of the IMR-Project | <b>Annotation and Translation of the Siddha Classical Book "Agathiyar Aruliya Pin Enbathu"</b>   |
|    | Name of the PI           | Dr. P. Thenmozhi   |
|    | Name of the Co-PI        | Dr. M. Kannan  |
|    | Status                   | Typing work of the book finished and correction is in progress<br>Recruitment of Tamil Scholar is in progress.   |

## 6. Medicinal Plant Research Projects

- |    |                          |  |
|----|--------------------------|--|
| 1. | Title of the IMR-Project | <b>Digitisation and compilation of Herbarium and Folklore claims of Survey of Medicinal Plants Unit-Siddha, Palayamkottai.</b> |
|    | Name of the PI           | Dr. M. Padma Sorna Subramanian   |

Name of the Co-PI	Dr. A. Kanagarajan
Status	<ul style="list-style-type: none"> <li>• Digitisation of Raw drugs (dried form) of the museum sample (481 nos.) is reprocessed and photographed.</li> <li>• Botanical names with author citations; family names etc. are checked in the website database – 1530 species (mounted herbarium sheets) representing 3150 collection numbers.</li> </ul>
2. Title of the IMR-Project	<b>Medico Ethno Botanical Study of Palamalai</b>
Name of the PI	Dr.M.Padma Sorna Subramanian
Status	<ul style="list-style-type: none"> <li>• Number of Survey tours undertook: 01.</li> <li>• Number of Field collections made: 55.</li> <li>• Number of Species recorded: 55.</li> <li>• Number of Genus recorded: 51.</li> <li>• Number of Families recorded: 37.</li> <li>• Number of Ferns recorded: 02.</li> <li>• Number of Photographs taken: 85.</li> <li>• Number of Herbarium Sheets prepared: 410.</li> <li>• Number of Raw drug samples added to SMPG Museum: 05.</li> <li>• Number of Folklore claims: 06.</li> <li>• Number of Saplings collected and added to SMPG: 46.</li> </ul>
3. Title of the IMR-Project	<b>A Survey on Ethno medicinally important plants for common ailments</b>
Name of the PI	Dr. P. Radha
Name of the Co-PI	Dr. K. Sivaranjani
Status	<ul style="list-style-type: none"> <li>• First Phase survey tour was made and 25 ethno-medicinal folklore claims were documented from 10 informants of Tiruppur block, Tiruppur District (5 villages) and about 50 plants were collected for herbarium.</li> <li>• A manuscript based on the medico-botanical survey on Udumalai Block, Tiruppur District is in progress.</li> </ul>

## 7. Collaborative Projects

1. Title of the IMR-Project	<b>Status of labeling, drug information and branding in marketed anti-diabetic Siddha formulations: Cross-sectional study</b>
Name of the PIs	Dr. P. Sathiyarajeswaran, Dr. P. Manickam
Status	Data under compilation
2. Title of the IMR-Project	<b>Pre-clinical safety and efficacy of Nuna kadugu (internal medicine) and Nuna thailam (external medicine) in Venpadai (Vitiligo)</b>
Name of the PI	Prof. Dr. R. S. Ramaswamy

Name of the Co-PI	Dr. G. Dayanand Reddy
Status	<ul style="list-style-type: none"> <li>• Preparations of NK and NT were done. Testing of Pesticides, Aflatoxin, Microbial load and Heavy metal in NunaKadugu (NK) and NunaThailam (NT) were done.</li> <li>• 90 day Dermal and Oral toxicity studies have been completed.</li> <li>• Stability Study of NT is in progress.</li> </ul>

## B. Extramural Research Projects

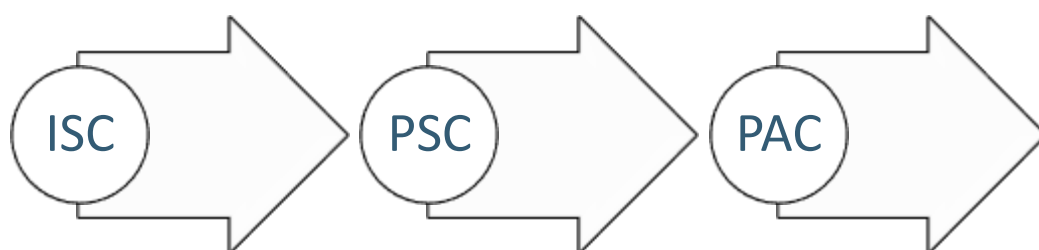
The AYUSH ministry has introduced the scheme of Extra-mural Research for the purpose of motivating academic and research organizations to pursue research activities in AYUSH along with allied sciences like Botany, Chemistry, Pharmacy, and Pharmacology. The EMR is designed to encourage R&D in key areas based on disease burden in alignment to National Health programme. It also aims to make use of the vast research infrastructure available within the country for standardization and validation of classical drugs.

CCRS is coordinating / facilitating the research projects related to Siddha under the Extra-mural Research Scheme of Department of AYUSH since 2011.

### Aim and Objectives

- To produce Research and Development (R & D) based AYUSH drugs for prioritized diseases
- To generate data on safety, standardization and quality control for AYUSH products and practices
- To develop evidence based support on the efficacy of AYUSH drugs and therapies
- To encourage research on classical texts and investigate fundamental principles of AYUSH systems
- To generate data on heavy metals, pesticide residues, microbial load, Safety/Toxicity etc. in the raw drugs and finished products
- To develop AYUSH products having intellectual property rights (IPR) and potentials for increasing AYUSH exports
- To develop potential Human Resource in AYUSH systems, especially to develop scientific aptitude and expertise related to AYUSH systems
- To develop joint research venture among AYUSH Departments and other Organizations / Institutes

### Extra Mural Research Process Snap Shot



**Role of Internal Scrutiny Committee in EMR**

- Application by a stake holder (University, Researcher, College, NGO).
- Thorough examination by ISC (Internal Scrutiny committee).
- If found fit, EMR projects are recommended to PSC by DG, CCRS, Chairman of ISC.
- If not, will be sent back to the PI for necessary modification/correction or rejection.

**Role of Project Screening Committee in EMR**

- Applicants recommended by ISC are called for presentation.
- Thorough examination by PSC (Project Screening Committee)
- If found fit, EMR projects are recommended to PAC by JS, AYUSH, Chairman of PEC.

**Role of Project Approval Committee in EMR**

- Thoroughly examines the projects referred by PSC.
- If approved, recommends for grants.

**Current Status of EMR proposals**

The current status of EMR projects handled in the year 2017-18 is tabulated below.

**Completed Projects of EMR – Siddha**

Sl.No.	Title of the project	Name and address of PI
1.	Pre-clinical Studies of a Polyherbal and a Herbomineral formulation in the Management of Urolithiasis – A Comparative study	Dr. D. Chamundeeswari, Principal, Faculty of Pharmacy, Sri Ramachandra University, Porur, Chennai - 600 116
2.	Documentation and clinical validation of the efficacy of classical Siddha external therapy “Suttigai” for Azal keelvayu	Dr. S. Sridhar, Ashram Siddha Yoga Research Institute, Salem – 636 004
3.	Study on the Unique Siddha Dosage form Kattu	Dr. T. Thirunarayanan Centre for traditional Medicine & Research Adambakkam, Chennai - 600 088.
4.	Documentation of Visha Vaidhya Practices (Treatment of poison intake and poisonous bites) in the southern parts of Tamil Nadu	Dr. V. Ganapathy, Vivekananda Kendra – NARDEP, Kanyakumari – 629 702.

**Ongoing Projects of EMR – Siddha**

Sl.No.	Title of the project	Name and address of PI
1.	Scientific validation of a Siddha - formulation, Iedi Vallathi (Mezhugu) for arthritis and to derive its underlying mechanisms	Dr. D. Chamundeeswari, Principal, Faculty of Pharmacy, Sri Ramachandra University, Porur, Chennai - 600 116.
2.	Therapeutic efficacy of <i>Rasaganthi mezhugu</i> (RGM) in 7-12 Dimethyl benz[a]anthracene (DMBA) induced mammary tumours in rats	Dr. C. Balachandran, Dean and Professor of Veterinary Pathology, Madras Veterinary College, Vepery, Chennai - 600 007.
3.	In vitro and in vivo evaluation of therapeutic potential of Siddha drugs upon Chikungunya virus infection	Dr. Sujatha Sunil Vector Borne Diseases Group International Center for Genetic Engineering and Biotechnology Aruna Asaf Ali Marg, New Delhi
4.	Standardization, validation, toxicity and efficacy studies on Sangu parpam and Arathai Choornam	Dr. M. Ramanathan, Principal cum Professor PSG College of Pharmacy Peelamedu, Coimbatore-641 004.
5.	Validation of the Pharmacological Efficacy of Nandhi Mezhugu, pretreatment with Kummati Mezhugu in Preclinical models of anovulation and its application in Veterinary medicine in Ovulatory Disorders in Cattle.	Dr. M. R. Srinivasan, Assistant Professor, Department of Veterinary Pharmacology and Toxicology, Madras Veterinary College, Chennai - 600 007.
6.	Elucidation of the mechanism of action of a Siddha formulation against Alzheimer's disease	Dr. K. Uma Maheswari, Associate Dean & Professor, Centre for Nanotechnology Advanced Biomaterials, SASTRA University, Thanjavur.
7.	Enumerative and analytical study on certain Siddha drugs against enteric and superficial skin infective microbial pathogens	Dr. Ernest David, Prof. & Head, Dept. of Biotechnology, Thiruvalluvar University, Vellore - 632 115.
8.	An Evaluation of Chandamaruta Cheduram and Ayaveera Cheduram through study of Neurotransmitter, Protein and Enzyme level alterations occurring during their treatment for MCAO Focal Cerebral ischemia (induced brain stroke) in rats	Dr. S. Balarama Kaimal, Asst. Professor, Dept. of Biochemistry, Saveetha Medical College and Hospital, Thandalam, Chennai - 602 105.
9.	Oncological care with Siddha concepts in formulation: A novel scientific approach	Dr. N. Deepa, Asthagiri Herbal Research Foundation, Perungudi Industrial Estate, Perungudi, Chennai - 600 096.

<b>10.</b>	Validation of the safety and therapeutic efficacy of Poorana chandirodayam in Dimethylhydrazine dihydrochloride induced colon cancer in rats.	Dr. S.P. Preetha, Principal Investigator & Asst. Professor, Dept. of Veterinary Pharmacology & Toxicology, Madras Veterinary College, Chennai –600 007.
<b>11.</b>	Single step extraction of whole plant extract containing phenylpropanoids and investigation of their biomedical role in treatment of stomach cancer	Dr. M. Meenakshi Sundaram, Assistant Professor, School of Chemical & Biotechnology, SASTRA University, Tirumalaisamudram, Thanjavur-613401



# PUBLICATIONS

## PUBLICATIONS

Publication of the research activities is the need of the hour to march forward towards globalization of Siddha system of medicine. Publications are the outputs of research activities of the Council. In the reporting year 96 research articles are published in national/international peer reviewed journals.

### 1. Research Publication in Indexed/peer viewed journals

Sl. No.	Publications
1.	Deepa Yadav, Mohd Salim Reshi, ChhaviUthra, Sadhana Shrivastava, Nalini Shrivastava, Sunil Kumar Koppala Narayana. Botanical and Chemical Fingerprinting of Medicinal Roots of <i>Justicia gendarussa</i> Burm f.Phcog Res.2017; 8(2): 26-30.
2.	Chaithra S Hebbar, Lalitha BR, Sunil Kumar KN, Krishnamurthy D. HPTLC profiling of useful parts of fifteen plants in Ayurveda with cold potency. Int J Res Ayurveda Pharm. 2017; 8(2):26-30.
3.	Laxmi Bidari, Suma V Mallya, Suchitra Prabhu, Sunil Kumar Koppala Narayana, Pharmacognosy. Nutritional Value and Antioxidant Activity of <i>Aglaia elaeagnoidea</i> (A.Juss.) Benth. J Ayu Med Sci. 2017; 2(1):104-11.
4.	Suchitra Prabhu, Puneeth, Priyadarshini Rao, Sunil Kumar Koppala Narayana, Ravishankar Basaviah, Suchitra Prabhu, Puneeth, Priyadarshini Rao. Comparative Phytochemical and Antioxidant Properties of <i>Costuspictus</i> and <i>C. speciosus</i> . J Ayu Med Sci. 2017; 2(1):121-8.
5.	RemyaAndalil, BrindhaSundaramoorthy, DivyaKallingikalathil Gopi, Sunil Kumar Koppala Narayana, SathiyaRajeswaran P. Atlas of Macro-microscopy of Savuripazham of Siddha – Fruit of <i>Trichosanthebesticuspidata</i> Lour. J Ayu Med Sci. 2017; 2(1):153-7.
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7.	Brindha S, Divya KG, Remya A, Sunil Kumar KN, SathiyaRajeshwaran P. A complete maco-microscopic profile of <i>Capparis zeylanica</i> L. leaf. J Ayu Med Sci. 2017;2(2):174-8.
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12.	Mohammed F, Joshi SV, Patgiri B, Bairy ST, Narayana SK. Analytical Standards of Vrukshamla ( <i>Garcinia indica</i> Choisy) BeejaTaila - Kokum Butter. J Ayu Med Sci. 2017;2(3):247-50.
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95.	Punitha A, Visweswaran, Rajendra Kumar A, Manickavasakam K. Effect of Sarva Noi Linga chenduram for anti urolithiatic activity in Ethylene glycol induced animal model. International Journal of Advanced Research in Biological Sciences. 2017; Vol 2(4): 50-9.
96.	Faridha A, Gayathri Gunalan, Rajendra Kumar A. Siddha therapeutics for the management of PCOS - A Review. Indo American Journal of Pharmaceutical Research. 2018; Vol 8, Issue 03, 1481-9.

## 2. Publications of Books

Nine books were published in the reporting year.

S. No	Title of the Books	Version
1.	Monograph on Nila Vembu Kudineer	English
2.	Monograph on D5 Chooranam	English
3.	Siddha Maruthuva Eliya Vazhakku Muraigal (Revised 6 <sup>th</sup> Edition)	Tamil
4.	Siddhar Yogam Oor Karpam	Tamil
5.	Guidelines for Practice of Siddha Varmam Therapy – 2017	English
6.	A Hand Book of Glossary on Siddha External Therapies. (Excerpts from T.V.Sambasivam Pillai Dictionary)	Bilingual
7.	A Glossary on Siddha External Therapies (Excerpts from T.V.Sambasivam Pillai Dictionary)	Bilingual
8.	Siddha Protocols and Research OUTcomes (SPROUT) for Siddha External Therapies	English
9.	Agathiyar Aivu Thoguppu	Tamil

## 3. Patent

**Title:** Synergistic natural novel usage of Siddha formulation - Thiriphal Chooranam as pharmaceutical excipient

**Abstract:**

The present invention and application discloses a pharmaceutical drug excipient / binder / disintegrant prepared through the synergistic effects of Thiriphal Kudineer (decoction) / aqueous

extract provides an excellent pharmaceutical excipient / binder / disintegrant which can be used in the preparation of tablets which possesses good binding property and having improved compressibility, when utilised in wet granulation method of tablet preparation. Synergistic effects of Thiriphala improves the characteristics and the properties of the tablets when mixed. The present invention also discloses a method for obtaining tablets made into an acceptable pharmaceutical form by weight with respect to the total weight of the tablet. Tests proved that Thiriphala Kudineer (decoction) / aqueous extract is very easy to prepare and has excellent binding and disintegrating properties which is the important function for tablet and simple cost-effective method to compress good tablets. So that, drug preparation cost can be lowered, side effects of the drug are reduced and the drug efficacy can be improved. Similarly, alcoholic extraction is prepared using Thiriphala Chooranam which can be also used as a binding / disintegrant agent. Inventors of the patents are Dr. P. Sathiyarajeswaran, Dr. M. S. Shree Devi, Dr. M. Kannan, Mr. N. Kirubakaran from CCRS – SCRI, Chennai.

## PARTICIPATION/ PRESENTATION

### 1. Seminar / Conference / Workshop organized by the Institute

S. No.	Title of the Seminar / Conference / Workshop	Institutes / Units	Date
1.	Workshop on general awareness and propagation of Extra Mural Research Scheme (EMR) of Ministry of AYUSH	Siddha Regional Research Institute, Puducherry	21 <sup>st</sup> April 2017
2.	National Seminar on "Glory of Siddhar Agathiyar and His Contribution to Siddha system of Medicine"	Siddha Central Research Institute, Chennai	26 <sup>th</sup> & 27 <sup>th</sup> August 2017
3.	A National seminar on current trends in Siddha Varmam Therapy	Siddha Clinical Research Unit, New Delhi	4 <sup>th</sup> and 5 <sup>th</sup> November 2017
4.	National Conference on "Pura Maruthuvam – External Therapies in Siddha system of Medicine" (NCPM-2017)	Siddha Regional Research Institute, Puducherry	9 <sup>th</sup> and 10 <sup>th</sup> December 2017
5.	National Workshop on conservation of medicinal plants	Siddha Medicinal Plants Garden, Mettur Dam	16 <sup>th</sup> and 17 <sup>th</sup> December 2017
6.	National conference on prevention and management of lifestyle disorders through Siddha system of Medicine	Central Council for Research in Siddha	4 <sup>th</sup> January, 2018
7.	One Day Workshop on Official Language Hindi	Siddha Central Research Institute, Chennai	12 <sup>th</sup> January, 2018

### National Seminar on "Glory of Siddhar Agathiyar and his Contribution to Siddha System of Medicine"

Siddhar Agathiyar, one among the line of Eighteen Siddhars, is called the Father of Siddha Medicine. His contribution to Siddha system of medicine and other related fields is immense. Ministry of AYUSH has approved the proposal to celebrate Agathiyar's birthday as "Siddha Day" every year. The first "Siddha Day" falls on 4<sup>th</sup> January 2018. It has also been suggested by the Ministry

of AYUSH to conduct a National Seminar, well in advance, as a preamble to the grand Siddha Day celebration. Based on this National Seminar on “The Glory of Siddhar Agathiyar and his Contribution to Siddha System of Medicine” was organised on 26<sup>th</sup> & 27<sup>th</sup> August 2017 by Literary Research & Documentation Department, Siddha Central Research Institute, Central Council for Research in Siddha, Ministry of AYUSH, Govt. of India) Arumbakkam, Chennai - 600106. The enlightenment acquired through the deliberation on these 2 days accentuated the greatness and magnificence of Siddhar Agathiyar.

Twelve resource persons from various field of interest delivered their lecture on Glory of Siddha Agathiyar. One hundred and sixteen delegates participated in the Seminar, 34 poster presentations were displayed related to history and Anthropology on Agathiyar, Agathiyar and his Legacies, Agathiyar and his contributions towards Alchemy, Agathiyar and his contributions to Basic principles in Siddha, Agathiyar and his contributions to Medicine, Agathiyar and his contributions towards Linguistics and Astrology

#### **National Seminar on Current Trends in Siddha Varmam Therapy 4<sup>th</sup> & 5<sup>th</sup> November 2017, AYUSH Auditorium, New Delhi**

The National seminar was inaugurated by Sh. P.N. Ranjit Kumar, the Joint Secretary, Ministry of AYUSH, New Delhi and inaugural address was also delivered by him. Felicitation addresses were given by Prof. Dr. R.S. Ramaswamy, Director General, CCRS and Prof. Vaidhya. K.S. Dhiman, Director General, Central Council for Research in Ayurvedic Sciences, New Delhi. Eight invited speakers, four from the Council and four from outside the Council, who are experts in the field of Varmam therapy, shared their expertise in the Seminar. Sh. Roshan Jaggi, Joint Secretary, Ministry of AYUSH, New Delhi, Dr. D.C. Katoch, Advisor (Ayurveda), Ministry of AYUSH and Dr. Vanitha Muralikumar, President, Central Council for Indian Medicine, New Delhi graced the valedictory ceremony by their presence.

Various participants from Ayurveda, Siddha and Unani streams participated in the seminar from the following Institutes / Councils,

1. Ayurveda and Unani Tibbia College, Karol Bagh, New Delhi
2. Ch. Brahm Prakash Ayurvedic Charak Sansthan, New Delhi (A postgraduate Ayurveda Institute of Delhi government)
3. All India Institute of Ayurveda, Sarita Vihar, New Delhi
4. Central Council for Research in Unani Medicine, New Delhi
5. Central Council for Research in Ayurvedic Sciences, New Delhi
6. National Institute of Ayurveda, Jaipur.

Research Officers from the peripheral institutes and units of CCRS actively participated in the seminar

#### **National Conference on Pura Maruthuvam – External Therapies in Siddha System of Medicine (NCPM-2017), December – 9<sup>th</sup> & 10<sup>th</sup>, 2017 At Dr.A.P.J. Abdul Kalam JIPMER Auditorium, Puducherry.**

The Siddha Regional Research Institute, under the Central Council for Research in Siddha (CCRS) has organized a two day National Conference on Pura Maruthuvam- External Therapies in Siddha System of Medicine on 9<sup>th</sup>& 10<sup>th</sup> December, 2017 at Dr. APJ Abdul Kalam JIPMER Auditorium, Puducherry for Undergraduate and Postgraduate Scholars of Siddha Medicine, Siddha



Practitioners, Faculty and Research Officials of Siddha institutions, Research Scholars, Senior Research Fellows, Research Associates, Scientists and others who are involved in interdisciplinary research and also for nominees of AYUSH Pharma Industry or entrepreneurs. The two day National Conference on Pura Maruthuvam has the following scopes,

1. Literature evidences for external therapies in Siddha.
2. Evidence based researches in the field of external therapies.
3. Pros and cons in practicing external therapies.
4. Development of standard operating procedure for external therapies.
5. Emerging trends in external therapies for the management of life style disorders.
6. Effective therapeutic approaches for chronic diseases in external therapy.
7. Exploration of folklore practices in external therapy.
8. Ethical perspectives in the practice of external therapies.

**National workshop on Conservation and Cultivation of Medicinal Plants (NWCCMP), 16<sup>th</sup> & 17<sup>th</sup> of December, 2017 at Mohan residency, Mettur Dam**

The Siddha Medicinal Plants Garden, Mettur Dam under the Central Council for Research in Siddha (CCRS) organized the National workshop on Conservation and Cultivation of Medicinal Plants (NWCCMP), 16<sup>th</sup> & 17<sup>th</sup> December, 2017 at Mohan residency, Mettur Dam. In the National conference, 159 delegates including Researchers/Academicians/Students and medicinal plants stakeholders from various research and academic institutions participated and presented their research works. Six scientific sessions with 53 oral and 18 poster research papers were presented by delegates from different disciplines related with medicinal plants. The delegates were taken for a field visit to Siddha Medicinal Plants Garden, Mettur Dam and were introduced with the live medicinal plants being grown/cultivated in the Siddha Medicinal Plants Garden. An exhibit of live medicinal plants and crude raw drugs were also arranged in the temporary shamina erected for the workshop.

## **2. The first Siddha Day**

It was decided by the Ministry of AYUSH to observe Siddha Day every year on the birthday of Siddhar Agathiyar, the father of Siddha Medicine. Accordingly, the first Siddha Day celebration was organised on 4<sup>th</sup> January 2018, by the Central Council for Research in Siddha in collaboration with the Directorate of Indian Medicine and Homeopathy, Government of Tamil Nadu, The Tamil Nadu Dr. M. G. R Medical University and National Institute of Siddha. The event was held in the Silver Jubilee auditorium of The Tamil Nadu Dr. M.G.R Medical University, Chennai. The National Conference on “Prevention and management of Lifestyle Disorders through Siddha System of Medicine” was organized in the first Siddha Day. Nine hundred and Twenty registered delegates participated in this mega-event apart from several invitees and Siddha experts. Six plenary lectures were delivered by invited speakers on the theme “Prevention and Management of Life-style disorders through Siddha system of Medicine”.

The National Conference on “Prevention and management of Lifestyle Disorders through Siddha System of Medicine” was also organized on the eve of First Siddha day. The Souvenir comprising 213 abstracts, a monograph on Siddhar Agathiyar and the Hindi version of the book Theraiyar Kudineer were released.

The celebration of the first Siddha Day was marked by many valuable events – Siddha stalls put up by the Council and other Government Siddha institutions displayed informative materials on

Siddha system of medicine. An exhibition cum sales of medicinal plants had been arranged by Siddha Medicinal Plants Garden, a unit of CCRS located in Mettur. Siddha, Varmam and Yogam outpatient clinics were conducted for providing free consultation and Siddha medicines for the public. Around 650 public were benefited.

Prior to Siddha day, quiz competition, essay competition, elocution competition and short film competition were held to exhibit and hone the talents of students of Siddha Medical colleges. Prizes and certificates were awarded to the winners on the Siddha Day.

### **3. Third International day of yoga**

The international yoga day celebration commenced from 9.6.017. As a part of celebration of IYD and to create awareness towards healthy and long life among the staff through Yogam, a practical session was conducted to all staff members of Central Council for Research in Siddha and Siddha Central Research Institute from 9.6.17 to 20.6.2017. The students from Govt. Siddha Medical college, Chennai, were also trained along with the staff. The Director General, Prof. Dr. R.S. Ramaswamy conducted theory and practical demonstrations of yogasanas. DG, CCRS gave a talk on yoga in the International Yoga Day celebration of All India Radio. The students trained by DG also performed yogasanas and pranayamam on stage. The talk by DG was aired in FM gold and Rainbow FM on 21.6.17. The Director General, CCRS was invited to give a special lecture on 21.6.17 in connection with IDY celebration in National Institute of Epidemiology, ICMR, Chennai. He also made live programme in Podhigai television on 21.6.17. T.Shirts were issued to all the participants.

On 21.6.2017, the International Day of Yoga was celebrated in the playground of Govt. Siddha Medical College, Chennai. 194 staff of CCRS and SCRI and internees of Govt, Siddha Medical College, Chennai participated in the mass yoga performance. The staffs participated in the uniform provided by the Council and followed the instructions of DG. A book on Yoga was released by the Literary Research and Documentation Department of SCRI. The book was released by DG and the first copy was received by our OPD patient Mr. Ramadoss.

### **4. Science Club Meeting**

#### **Introduction**

The Science club of CCRS - Siddha Central Research Institute, Chennai is conducted with the aim to provide in-house training and the exposure to the recent advances in different areas of different faculties to the research officials of this institute. The chairman of the science club for the reporting year was Dr. P. Sathiyarajeswaran, Asst. Director (Siddha) and i/c, Secretary Dr. M. Kannan, Research officer (Siddha) and Coordinator Dr. G. Dayanand Reddy, Asst. Director, Scientist-2 (Pharmacology).

#### **Aims & objectives**

- To update the knowledge of the members through invited lectures from eminent Scientists.
- To reorient, revise, and regulate the ongoing research projects.
- To get training for better presentation of our scientific work and to improve the style of presentation.
- To understand the advancement in latest technology, therapies and the methodology followed in reputed institutions.
- To get guidance and professional contact / access for further collaborative research work to share knowledge through healthy interaction.

### Members of the club

All the staff starting from Group-C working in this Institute in various departments likes Pharmacognosy, Chemistry, Biochemistry, Pathology, Pharmacology and Clinical Research are the members of the club.

### Details of Science Club meeting organized during the reporting period

During the current year five Science Club meetings were held. “Overview of Intellectual Property Rights by Dr. Eugene Wilson, Evaluation of Naadi and its significances in Obstetrics and Gynaecology by Dr. S. K. Sasi, Standardization of ISM drugs – An Integrative Approach by Dr. K. Parthasarathy, Basics of Varmam, contemporary subtle energy theories and its research methodology by Dr. S. Natarajan and Overview of Regulatory Toxicology by Dr. S. Sugun Lal Jabaris are the topics dealt in the Science Club meeting.

### 5. Training/ Workshop attended by Officers of CCRS –Peripheral Institutes/Units

Sl.No.	Name of the participant	Name of Seminar/ Conference / Workshop / Training	Name of the Organiser	Date of Participation
1.	Dr. M. S. Shree Devi	Public awareness campaign on Iyarkai maruthuvam & Iyarkai unavu thiruvizha	Doordharshan Kendra	1 <sup>st</sup> April, 2017
2.	Dr. P. Sathiyarajeswaran	Structural standards and quality management system in AYUSH hospitals towards NABH accreditation	Ministry of AYUSH, New Delhi	6 <sup>th</sup> April, 2017
3.	Dr. S. Selvarajan Dr. G Dayanand Reddy	Awareness Programme on EMR Scheme (Min. of AYUSH)	Ministry of AYUSH, Govt. of India	21 <sup>st</sup> April, 2017
4.	Dr. M. Kannan	National workshop on e -Granthalaya 4.0 software for Automation and Networking of Government Libraries	Central Council for Research in Unani Medicine & National Informatics Centre (Ministry of Electronics and Information Technology, Govt. of India)	2 <sup>nd</sup> – 4 <sup>th</sup> May, 2017
5.	Dr.R. Meena Dr.S.Esaivani Dr. T. Kavitha	A discussion on Neurology and Orthopedics	Apollo Medical Centre, Annanagar	27 <sup>th</sup> May, 2017
6.	Dr. M. S. Shree Devi	NABH- AYUSH Assessor training programme	QCI, India	5 <sup>th</sup> to 9 <sup>th</sup> June, 2017
7.	Smt. S. Gajalakshmi Smt. E. Shanthi Smt. R. K. Sathya	CME on Specialized Hands-on training for AYUSH Therapists.	Kokila Siddha Hospital and	22 <sup>nd</sup> to 27 <sup>th</sup> June, 2017

			Research Centre, Madurai.	
8.	D. Satheesh Dr. M. Muthu Tamizh	One Day Chromatography Work shop	Madras University	30 <sup>th</sup> June, 2017
9.	Dr. M. Kannan Dr. M. Muthu Tamizh	Training programmes on Capacity Building Initiative for Trade Development in India (CITD)	QCI, India, Kochi	3 <sup>rd</sup> & 4 <sup>th</sup> July, 2017
10.	Dr. S. Selvarajan Dr. A. Rajendra Kumar Dr. Eugene Wilson Dr. A Kanagarajan Sh. George Joseph	Training Programme on “Training-cum- Workshop for implementation of Public Financial Management System (PFMS)”	CCRS, Chennai	7 <sup>th</sup> & 8 <sup>th</sup> July, 2017
11.	Dr. A. Rajendra Kumar Dr. Eugene Wilson	Capacity Building Initiative for Trade Development in India (CITD) herbal products for the EU market – Traditional herbal products directive and good manufacturing practice	Quality Council of India	10 <sup>th</sup> to 11 <sup>th</sup> July 2017
12.	Dr. L. Mugunthan Dr. K. Samraj	Affordable Health Care for All-way forward for TamilNadu	Confederation of Indian Industry (CII) Chennai, Hilton Hotel	19 <sup>th</sup> July, 2017
13.	Dr.P. Sathiyarajeswaran Dr. A. Rajendra Kumar Dr. R. Meena Dr. S. Shunmugaram Dr.K.Samraj	CME programme on structural standards and quality management system in AYUSH hospitals towards NABH accreditation	Kokila Siddha Hospital and Research Centre, Madurai	6 <sup>th</sup> August, 2017
14.	Dr. M. Kannan	Training programme on Communication and Presentation Skills (CAPS)	Institute of Management Training and Research International Centre Goa	29 <sup>th</sup> August to 2 <sup>nd</sup> September, 2017
15.	Dr. S. Selvarajan	Training programme on Government e- Marketplace (GeM) and GFRs 2017	National Institute of Financial Management (NIFM) campus in Faridabad	4 <sup>th</sup> & 5 <sup>th</sup> September, 2017
16.	Dr. R. Rathinamala	A Half-a-day workshop/ awareness	The National Informatics	7 <sup>th</sup>

	Dr. Gayathri Gunalan Sh. G. Vijaya Kumar, UDC	session for the Central Government departments to provide an overview of the e-procurement process.	Centre, Chief Secretariat Complex, Puducherry.	September, 2017
17.	Dr. A. Rajendra Kumar	Forum for Ethical review committees in the Asian and Western Pacific region SIDCER-FERCAP.	ICMR-NIE, Chennai.	18 <sup>th</sup> to 20 <sup>th</sup> September, 2017
18.	Dr. G. S. Lekha Dr. B. Chitra	Training Workshop to initiate centralized collection of AYUSH Morbidity statistics through NAMSTP by dual coding system	CCRAS, New Delhi	6 <sup>th</sup> October, 2017
19.	Dr. Shyamala Rajkumar Dr. Eugene Wilson	INDO-USP Workshop on Pharmacopoeial Monographs of Ayurvedic/Herbal Medicines	PCIM&H, Ministry of AYUSH, Govt. of India and USP, Rockville, Maryland, USA	6 <sup>th</sup> November, 2017
20.	Dr. B. Chitra	5 days workshop on “Applied Psychometrics in research – principles of scale development and validation organized by school of public health.	SRM University Kattankulathur, Chennai.	13 <sup>th</sup> to 17 <sup>th</sup> November, 2017
21.	Dr. M. Kannan	Distinguished Lecture & Symposium on Pharmacovigilance for H Products By Indian Pharmacopoeial Commission, Ghaziabad	Indian Pharmacopoeia Commission, Ghaziabad.	20 <sup>th</sup> November, 2017
22.	Dr. S. Selvarajan	Training programme on Advance Public Procurement	National Institute of Finance Management (NIFM), Faridabad	4 <sup>th</sup> to 8 <sup>th</sup> December, 2017
23.	Dr. C. Anbarasi	Workshop on Access to Technology for Innovation and Establishing a Technology and Innovation Support centre (TISC) Network	Centre for Intellectual Property Rights, Anna University, Guindy, WIPO, Geneva and DIPPI, Ministry of Commerce and Industry, Government of India	7 <sup>th</sup> & 8 <sup>th</sup> December, 2017

24.	Dr. Shyamala Rajkumar Dr. V. Aarthi Dr. G.S. Lekha Dr. L. Juliet Dr. R. Rathinamala Dr. P. Thenmozhi	A National workshop on “Conservation & Cultivation of Medicinal plants”	Siddha Medicinal Plants Garden, Mettur.	16 <sup>th</sup> & 17 <sup>th</sup> December, 2017
25.	Dr. M. Muthu Tamizh	Training programme on Computational Chemistry (Introduction to Gaussian: Theory and Practice) in New Delhi	Gaussian Inc. USA.	8 <sup>th</sup> to 12 <sup>th</sup> January, 2018
26.	Dr. S. Natarajan Dr. M. Harihara Mahadevan Dr. Eugene Wilson Dr. R. Rathinamala Dr. B. Akila	Two days training cum exposure programme on “Social media content development.” - Level I	AYUSH Auditorium, Janakpuri, New Delhi	15 <sup>th</sup> & 16 <sup>th</sup> January, 2018
27.	Dr..G.Dayanand Reddy	GST-Training Programme	NIFM, Faridabad	17 <sup>th</sup> to 19 <sup>th</sup> January, 2018
28.	Dr. B. Akila	Cancer Events, AIIA, New Delhi	Center of Integrative Oncology (CIO) of AIIA, New Delhi	5 <sup>th</sup> & 6 <sup>th</sup> February, 2018
29.	Dr P.Elankani	Training Programme on Public Procurement	National Institute of Financial Management, Faridabad	5 <sup>th</sup> to 10 <sup>th</sup> February, 2018
30.	Dr. A. Rajendra Kumar Dr..G. S. Lekha	Training programme on Public Procurement.	National Institute of Financial Management, Faridabad	19 <sup>th</sup> to 24 <sup>th</sup> February, 2018
31.	Dr. Eugene Wilson Dr. R. Rathinamala Dr. B. Akila	Two days training cum exposure programme on “Social media content development.” - Level II	AYUSH Auditorium, Janakpuri, New Delhi	16 <sup>th</sup> & 17 <sup>th</sup> February, 2018
32.	Dr. P. Sathiyarajeswaran	State Level workshop on National Biodiversity action plan	Tamil Nadu Biodiversity conservation and greening project (TBGP), Chennai	20 <sup>th</sup> February, 2018
33.	Dr. P. Sathiyarajeswaran	Inception workshop and launch of Indo-German Technical co-operation project-access and benefit sharing partnership project (TBGP)	Tamil Nadu Biodiversity conservation and greening project (TBGP), Chennai	27 <sup>th</sup> February, 2018

34.	Dr. M. Muthu Tamizh	National workshop on Nuclear Magnetic Resonance	SAIF, IIT-M, Chennai	5 <sup>th</sup> to 8 <sup>th</sup> March, 2018
35.	Dr. M. Muthu Tamizh Sh. D. Satheesh	Participated in international conference (ICORTAC)	Madras University	15 <sup>th</sup> to 17 <sup>th</sup> March, 2018
36.	Dr. A Kanagarajan Dr. R. Rathinamala Dr. M. Kannan Dr. R. Rathinamala	Induction Program on Pharmacovigilance for Coordinators of ASU&I drugs	All India Institute of Ayurveda (Ministry of AYUSH, Govt. of India) New Delhi	19 <sup>th</sup> March, 2018
37.	Mr. Chitikela, P Pullaiah and Mrs.K.Bhavani	ICMR Sponsored Workshop On Lab Animal Techniques And Ethics	Sathyabama Institute of Science and Technology, Chennai	19 <sup>th</sup> to 23 <sup>rd</sup> March, 2018
38.	Mr. N. Kirubakaran	Conference and Workshop on lab Instruments, Chemicals & Machineries	ASIALABEX 2018 Trade Centre - Chennai	20 <sup>th</sup> March, 2018

## 6. Expo

S.No	Name of the Officer	Title	Organization	Date
1.	Dr. B. Akila	Wellness India Expo	Pragati Maidan, New Delhi	29 <sup>th</sup> to 31 <sup>st</sup> August, 2017
2.	Dr. V. Aarthi Dr. T. Kavitha Dr. A. Usha	III Indian International Science Festival (IISF) - 2017	Ministry for Environment and forest and vijana Bharati and IIT Madras, Anna University	13 <sup>th</sup> to 16 <sup>th</sup> October, 2017
3.	Sh. M. Natarajan	27 <sup>th</sup> Swadeshi Science Congress	Swadeshi Science Movement – Kerala and Amrita Viswa Vidyapeetham, Amrita University, Kollam	7 <sup>th</sup> to 9 <sup>th</sup> November, 2017
4.	Dr. S. Saravanan	Ayurveda Conclave: Vision 2022: Widening Horizon of Ayurveda for three fold growth of market size, India Habitat Centre, New Delhi	Ministry of AYUSH and Confederation of Indian Industries	16 <sup>th</sup> October, 2017
5.	Dr. R. Meena Dr. L. Juliet Dr. P. Thenmozhi Dr. R. Susila Dr. T. Kavitha	World Congress on Holistic Health 2018	The Tamilnadu Dr.MGR medical university, Chennai.	9 <sup>th</sup> to 10 <sup>th</sup> December, 17

6.	Dr.Harihara Mahadevan Dr.R.Meena Dr.S.Esaivani Rubeena M Sujith T	Ayurveda Parv during All India Ayurvedic Congress at International Ashram	Bangaluru	16 <sup>th</sup> to 18 <sup>th</sup> February, 18.
7.	Dr. T. Kavitha Dr. K. Samraj Dr. R. Susila	Nalam expo- 2018	Govt. Siddha Medical College, Chennai.	15 <sup>th</sup> to 18 <sup>th</sup> February, 2018

### 7. Presentation in Seminars/Conferences

S. No	Name of the Officer	Presented Title	Venue	Date
1.	Dr. M. Kannan	Inspection visit for National Raw Drug Repository by Committee from Ministry of AYUSH, Govt. of India Digital Imaging at SCRI for NRDR	Siddha Central Research Institute Chennai	30 <sup>th</sup> June, 2017
2.	Dr. P. Sathiyarajeswaran	Dissertation and Paper Publication on Research	Lecture - Sarada Krishna Homeopathic Medical College, Kulasekharam, Kanyakumari Dist.	17 <sup>th</sup> August, 2017
3.	Dr. P. Sathiyarajeswaran Dr. M. Kannan	Special event - ICD – 11 Definitions related to development of National ASU Morbidity codes in the line of TM – ICD-11 format – Review and Finalization meeting	CCRS, Chennai	3 <sup>rd</sup> October, 2017
4.	Dr. M. Kannan	THERAN – THE Research Application Nexus (Electronic Capturing System) - presentation and software demo National Seminar on Current Trends in Siddha Varmam Therapy	AYUSH Auditorium, 61-65, Institutional Area Janakpuri, New Delhi	4 <sup>th</sup> & 5 <sup>th</sup> November, 2017
5.	Dr.K.Samraj	Effectiveness of Siddha Topical Applications for Chronic Non-Healing Lower Extremity Ulcers- Case Series	Siddha Regional Research Institute, Puduchery	9 <sup>th</sup> & 10 <sup>th</sup> December, 2017
6.	Dr. P. Sathiyarajeswaran	National Workshop on Conservation and cultivation of Medicinal Plants	Mohan Residency, Square Market, Mettur dam	16 <sup>th</sup> & 17 <sup>th</sup> December, 2017
7.	Sh. V. Chelladurai,	“Export Potential of Medicinal Plants and Value additions” in National Workshop on Conservation	SMPG Mettur	16 <sup>th</sup> & 17 <sup>th</sup> December, 2017



		and Cultivation of Medicinal Plants.		
8.	Dr. K.G. Divya	“TUCN red listed medicinal plants in Siddha” at National Workshop on Conservation and Cultivation of Medicinal Plants	SMPG Mettur	17 <sup>th</sup> December, 2017
9.	Rubeena. M	“Bioactive entities from ingredients of Nilavembu kutineer” at National Workshop on Conservation and Cultivation of Medicinal Plants		
10.	Dr. M. Kannan	THERAN – THE Research Application Nexus (Electronic Data Capturing System) - presentation and software demo All Council Meeting exclusive for THERAN software demonstration and Presentation	Central Council for Research in Ayurvedic Sciences (Ministry of AYUSH Govt. of India) 61-65, Institutional Area Janakpuri, New Delhi	13 <sup>th</sup> December, 2017
11.	Dr. M. Kannan	Multi Centric Clinical Trial Experiences in Neerizhivu (Diabetes mellitus) The First Siddha Day Celebration By Central Council for Research in Siddha (Ministry of AYUSH Govt. of India) Chennai	Auditorium The Tamil Nadu Dr. MGR. Medical University, Chennai	4 <sup>th</sup> January, 2018
12.	Dr. K.N Sunil Kumar	“Development of Monograph on Quality Standard of <i>Viscum angulatum</i> B. Heyne ex DC. (Pulluruvi) by Macro-microscopy, phytochemical, HPTLC and NMR techniques”	International Conference on Challenges for Global Competitiveness of AYUSH and Natural Products organized by Delhi	2 <sup>nd</sup> to 4 <sup>th</sup> February, 2018.
13.	Dr. K. Parthasarathy	“Structural Characterization of Drug substances by spectroscopic techniques” in state level conference on “Chemistry and Environment pollution”.	Abdul Hakeem College, Melvisharam. Vellore.	13 <sup>th</sup> February, 2018
14.	Dr. P. Sathiyarajeswaran	Integration AYUSH into palliative care: IAPON 2018 preconference workshop	AIIMS, New Delhi	22 <sup>nd</sup> February, 2018

## 8. Participation in Seminars/Conferences

S.No	Name of the Officer	Name of the Event	Name of the Organizer	Date
1.	Dr. V. Gayathri Devi	“Analytical solutions for today’s science”	Fortune Hotel The South Park, MG Road, Palayam, Thiruvananthapuram conducted by Agilent Technologies India Pvt. Ltd	4 <sup>th</sup> October, 2017
2.	Dr. R. Manickavasagam	Update Proctology – National Conference on Ano-Rectal Disorder, Malvan, Maharashtra	Ayurved proctology Association and Maharashtra Council for Indian Medicine, Mumbai	24 <sup>th</sup> to 26 <sup>th</sup> November, 2017
3.	Mr. Edukondalu Mr. K. Dhanaraj	Laboratory Animal Science and Techniques training course	NIN, Hyderabad	12 <sup>th</sup> to 16 <sup>th</sup> December, 2017
4.	Dr. G. S. Lekha, Dr. Anitha John, M Natarajan, Neethu Kannan B. Tirupathi B	National Conference on Medicinal plant research and Translational Trends (MPRTT 2017)	Avinasalingam University, Coimbatore, DST – CURIE	18 <sup>th</sup> & 19 <sup>th</sup> December, 2017
5.	Dr. S. Saravanan	1 <sup>st</sup> edition of National Biotechnology Conclave, Hotel Sangri La, New Delhi	Department of Biotechnology, Government of India and Confederation of Indian Industry	22 <sup>nd</sup> December, 2017
6.	Dr. P. Sathiyarajeswaran	Participation in the 22 <sup>nd</sup> INCOFYRA	Prashanti Kudeeram, S-VYASA University Bengaluru.	9 <sup>th</sup> January, 2018
7.	Dr. P. Sathiyarajeswaran	National Seminar on “life style disease with focus on Diabetes (NSLSD-2018)	University of Madras, at Venugopal Auditorium	19 <sup>th</sup> March, 2018

## 9. Events

S.No	Name of the Officer	Event	Venue/ Date	Activities
1.	Dr. S. Selvarajan	11th Common Review Mission (CRM) of National Health Mission (NHM)	Nagaland, 4 <sup>th</sup> to 10 <sup>th</sup> November, 2017	Review the deliverables with regard to all the health care facilities including the AYUSH systems of the state of Nagaland

2.	Dr. M. Kannan Dr. G.S. Lekha Dr. M. Harihara Mahadevan Dr. B. Chitra Dr. Eugene Wilson	Training workshop to initiate centralized collection of AYUSH morbidity statistics through national AYUSH morbidity and standardized terminologies portal (NAMSTP)	AYUSH Auditorium, Janakpuri, New Delhi 6 <sup>th</sup> October, 2017	Review and finalization meeting for definitions related to the development of Siddha Morbidity codes in the lines of TM-ICD-11
3.	Dr. S. Saravanan	International Yoga Fest, A Curtain raiser for International Yoga Day 2018	21 <sup>st</sup> to 23 <sup>rd</sup> March, 2018	Displaying and Distributing IEC materials, Sale of CCRS Publication
4.	Dr. M. S. Shree Devi	Live program – Siddha questions	Doordharshan Kendra 25 <sup>th</sup> April 2017	
5.	Dr. R. Meena	International Day of Yoga program	All India Radio, Chennai. 15 <sup>th</sup> June 2017	Speech about Therapeutic Yoga
6.	Dr. P. Sathiyarajeswaran	Monitoring committee for central sector scheme with promotion of AYUSH intervention in Public Health Initiatives	National Institute of Siddha, Tambaram Sanatorium 1 <sup>st</sup> & 2 <sup>nd</sup> November 2017	

## 10. Research papers and Presentation of Guest lecturers

S.No.	Name of the presenter	Title of the presentation	Conference / Seminar / Workshop / other	Date
1.	Dr. M.S. Shree Devi	Women care in Siddha medicine	National Arogya fair -at Indore	7 <sup>th</sup> April, 2017
2.	Dr. Eugene Wilson	IPR/Translational values of Extra Mural Research Proposals”	One-day workshop on creating effective utilization of EMR scheme entitled “General awareness and Propagation of EMR scheme of Ministry of AYUSH, SRRI, Puducherry	21 <sup>st</sup> April, 2017
3.	Dr. B. Chitra	Mother and Child care and Mitigation of effects of Summer Heat.	The field publicity office, Vanur Block, Puducherry.	27 <sup>th</sup> April, 2017
4.	Dr. A. Faridha	Mother and Child care and Mitigation of effects of Summer Heat.	The field publicity office, Morattaandi Puducherry.	28 <sup>th</sup> April, 2017
5.	Dr. K. Parthasarathy	Project proposal presentation of “Development of National Raw Drug Repository” (NMPB project)	AYUSH Bhawan, New Delhi	1 <sup>st</sup> May, 2017
6.	Dr. A. Faridha	Awareness about Siddha medicinal plants.	The field publicity office, Youth Educational Center, Auroville, Puducherry	5 <sup>th</sup> May, 2017
7.	Dr. T.Kavitha	Siddha management for womens health	Arogya mela –Chennai	5 <sup>th</sup> May, 2017
8.	Dr. S. Natarajan	Innovative Global Program for Scientific training of Barbers based on the Siddha Varmam Points which are located in head and neck	Transdisciplinary university, Bangalore.	25 <sup>th</sup> July, 2017
9.	Dr.S.Saravanan	Introduction to the basic principles of Siddha and its relevance in the light of basic principles of Ayurvedic medicine	Seminar on Introduction to the basic principles of Unani, Siddha, Homoeopathy	5 <sup>th</sup> August, 2017
10.	Dr. L.Juliet	Role of Siddha in Female Reproductive Health care	National Arogya fair -at Vishakapatnam	9 <sup>th</sup> September, 2017
11.	Dr. P. Thenmozhi	Geriatric Health Care Through Siddha System of Medicine		11 <sup>th</sup> September, 2017
12.	Dr. A. Rajendra Kumar	Scope for research in Siddha in conditions of Infertility.	Temple of consciousness, Aliyar, Coimbatore.	7 <sup>th</sup> October, 2017

13.	Dr. V. Gayathri Devi	Invited lecture on “Phytochemical techniques: Extraction and Isolation”	‘Recent Approaches in Biochemical Research’	13 <sup>th</sup> October, 2017
14.	Dr. K. Elavarasan	Study on the Efficacy of Varmam therapy and Siddha Medicines in Pediatric Neurological Disorders-Cerebral Palsy and Erbs palsy	National Workshop on Marmachikitsa	27 <sup>th</sup> & 28 <sup>th</sup> October, 2017
15.	Dr.R.Manickavasagam	Management of Pakka Vatham and Migraine through Siddha Varmam Therapy	National Seminar on Current trends in Siddha Varmam Therapy, AYUSH auditorium, Janakpuri, New Delhi	4 <sup>th</sup> & 5 <sup>th</sup> November, 2017
16.	Dr. S. Natarajan	Basics of Varmam and contemporary subtle energy theories		
17.	Dr. R. Meena	Management of ceganavatham and azhal keel vayu through Siddha Varmam Therapy		
18.	Dr.K.Elavarasan	A study on effectiveness of Siddha Varmam therapy and Siddha Medicine in paediatric neurological problems (Cerebral palsy and Erb’s palsy)		
19.	Sh. M. Natarajan,	A review on nanoparticles synthesis from biological resources	27th Swadeshi Science Congress Amrita Vishwavidyapeetham, Amrita University, Amritapuri Campus, Kollam	7 <sup>th</sup> to 9 <sup>th</sup> November, 2017
20.	Sh. Tirupathi B	A Review on Therapeutic actions of Piper nigrum L. (Black Pepper).		
21.	Ms. Neethu Kannan B	An insight to ethno-medicinal plants of Apocynaceae used in Siddha medicine		
22.	Dr. Gayathri Devi V	Characterisation Of Ayakantha Chenduram, A Nanosized Herbo-Mineral Formulation Using Modern Techniques		
23.	Dr. C. Anbarasi	Preclinical safety and efficacy studies on Siddha Polyherbal formulation Madhumega chooranam in the management of Neerizhivu (Diabetes mellitus)	1st International AYUSH conference & Exhibition 2017, Dubai, UAE	9 <sup>th</sup> & 11 <sup>th</sup> November, 2017

24.	Dr. G. S. Lekha	1st International AROGYA Fair in collaboration with FICCI	Management of Lifestyle Disorders through Siddha System at Vigyan Bhavan New Delhi	5 <sup>th</sup> December, 2017
25.	Dr.R.Manickavasagam	Kudori – An Unexplored Siddha External Therapy for Handling of Emergency Clinical Conditions	National conference on Puramaruthuvam - External therapies in Siddha system of medicine, by Siddha Regional Research Institute, Puducherry	9 <sup>th</sup> & 10 <sup>th</sup> December, 2017
26.	Dr. C. Anbarasi	Case series - Management of <i>Thandagavatham</i> with Siddha Varmam therapy and <i>Podithimirthal</i> therapy		
27.	Dr. S. Natarajan	Management of Ankle injuries with Siddha Varmam Therapy and Traditional bone setting method (Kattu)		
28.	Dr. R.Susila,	Diversification of external therapeutics a current need in field of baalar vagadam(Siddha paediatrics)		
29.	Dr. R.Meena	Evidence based conduct of Varmam clinical trials-An overview.		
30.	Dr. S.Esaivani	The efficacy of katrazhai thiripala kattu in the management of karuppai adithallal (uterine prolapse) A case study		
31.	Dr. G. S. Lekha	Emergency medical care and external therapy in Siddha		
32.	Dr. K.Samraj	Effectiveness of Siddha Topical Applications for Chronic Non-Healing Lower Extremity Ulcers- Case Series		
33.	Dr.K.Samraj	Siddha Management of High altitude Disorders and External therapies in Siddha System of Medicine	Arogya Mela –Nagaland	15 <sup>th</sup> December, 2017
34.	Dr. Eugene Wilson	Overview of Siddha system of Medicine		14 <sup>th</sup> December, 2017

35.	Sh. V. Chelladurai	Presented an invited lecture on the “Export Potential of Medicinal Plants and Value additions”.	National Workshop on Conservation and Cultivation of Medicinal Plants. Siddha Medicinal Plants Garden, Mettur Dam	16 <sup>th</sup> & 17 <sup>th</sup> December, 2017
36.	Dr. Radha P	Anticancer activity of <i>Vinca</i> alkaloids from madagaskar periwinkle ( <i>Catharanthus roseus</i> (L.) G. Don) – A review.		
37.	Dr. M.Padma sorna Subramanian	Ex-situ conservation of RET plant species in Siddha Medicinal Garden		
38.	Dr. M.Padma sorna Subramanian	Herbal Wealth of Marunthumalai		
39.	Sh. R. Lakshmanan	Prominent Plant Species of Palamalai Hills of Salem dt. Tamilnadu, India		
40.	Dr. M. Thiruvalluvar	Ethno Botanical Study of Medicinal Plants Used for the Poisonous (Vishskkadi) Ailments of Palamalai in Salem dt. Tamilnadu, India		
41.	Dr. Padma Sorna Subramanian M	Phytochemical Analysis of <i>Flueggea leucopyrus</i> Willd.		
42.	Dr. Padma Sorna Subramanian M	In vitro Anti – diabetic activity of <i>Orthosiphon comosus</i> Wight ex Benth. (Lamiaceae)		
43.	Dr. G. S. Lekha	IPR and patenting issues on Medicinal plants	National Conference on Medicinal Plant Research and Translational Trends (MPRTT 2017) Avinasalingam University, Coimbatore, Tamil Nadu	18 <sup>th</sup> & 19 <sup>th</sup> December 2017
44.	Dr. Kasirajan N	Management of Skin diseases in Siddha system of Medicine – A Review		
45.	Dr. Anitha John	Chemical standardisation of <i>Pavetta indica</i> Linn. (Leaf)		

46.	Sh. B. Tirupathi	Chemical Standardisation And An Overview Of <i>Wrightia Tinctoria</i> R. Br. – A Potent Herbal Drug		
47.	Sh. M. Natarajan	Chromatographic Techniques In Quality Assessment Of Herbal Drugs		
48.	Ms. Neethu Kannan	Plant assisted synthesis of metallic nanomaterials: A green chemistry perspective		
49.	Dr. V. Gayathri Devi	Invited lecture on “Methods of Standardization for Medicinal Plant Materials”		
50.	Dr. Padma Sorna Subramanian M	Special lecture on “Utilization of medicinal plants and its Cultivation”	Farmer’s meeting in Aththanoor, Namakkal dt., Tamilnadu organised by “Biodiversity conservation and greenness scheme under Dept. of Forest, Salem.	20 <sup>th</sup> December 2017.
51.	Dr. G. S. Lekha	Traditional concept of Cancer management in Siddha System.	First Siddha Day 2018; Central Council for Research in Siddha, Chennai	4 <sup>th</sup> January 2018
52.	Dr. M. Muthu Tamizh	Computational Chemistry Training programme (Introduction to Gaussian: Theory and Practice)	Gaussian Inc. USA New Delhi	8 <sup>th</sup> to 12 <sup>th</sup> January, 2018
53.	Dr. S. Selvarajan	Over view of Siddha system of medicine in the one-day training program for the officers of Ministry of AYUSH	Training Hall, NASC Complex, PUSA, New Delhi.	20 <sup>th</sup> January, 2018
54.	Dr. P. Sathiyarajeswaran	Research in Siddha system of Medicine		20 <sup>th</sup> January, 2018
55.	Dr. B. Akila	“Siddha in Cancer”	Cancer Events	5 <sup>th</sup> February, 2018
56.	Sh. R. Nagaraj	Documentation of ethno-medicinal plants from folk healers of Padmanabamangalam, Tuticorin District, Tamil Nadu	3rd National Conference on Frontiers in Eco-biological Sciences and its Applications	7 <sup>th</sup> to 9 <sup>th</sup> February, 2018



57.	Dr. L. Juliet	Evaluation of Antioxidant Properties of Poly Herbal Siddha Preparation. Karisalai KarpaChooranam	Siddha Unit, Jaffna university, Srilanka	23 <sup>rd</sup> to 27 <sup>th</sup> February, 18
58.	Dr. T. Kavitha	Acute and repeated oral toxicity studies on Siddha drug Lavanga choornam	1 st International conference and Exhibition on Siddha Medicine -2018\ Sri Lanka	27 <sup>th</sup> February, 18
59.	Dr. M. Muthu Tamizh	National Workshop on Nuclear Magnetic Resonance Spectroscopy	SAIF, IIT-M, Chennai	5 <sup>th</sup> to 8 <sup>th</sup> March, 2018
60.	Dr. T. Kavitha	Magalir Nalanil Siddha Maruthuvam	On the occasion of women's day celebration	8 <sup>th</sup> March, 2018
61.	Dr. T. Kavitha	Stress Management		
62.	Dr. R. Susila	Beauty mania and the devastating factors behind		
63.	Dr S Natarajan	Multicentric Clinical Trial Experiences on Diabetes	Life style diseases with focus on Diabetes, University of Madras, Taramani, Campus	19 <sup>th</sup> March, 2018
64.	Dr. P. Sathiyarajeswaran	Research Methodology	GSMC, Arumbakkam, Chennai	22 <sup>nd</sup> March, 2018
65.	Dr. K. Sivaranjani	Varmam for Geriatric care	1 <sup>st</sup> International Conference & Exhibition on Siddha Medicine 2018 organized by Unit of Siddha Medicine, University of Jaffna, Kaithadi, SRILANKA.	2018

## 11. Participation in Arogya fairs

S.No.	Name of Mela/ Exhibition / Camp	Participation	Duration & place	Activities
1.	National level Arogya Fair - Indore, Madhya Pradesh Organized by FICCCI, AYUSH	Dr..S.Natarajan Dr..M.S.Shreedevi Dr. C. Anbarasi Dr..B.Akila	7 <sup>th</sup> to 10 <sup>th</sup> April, 2017	Medical camp, awareness through translates exhibited in the CCRS stall, sale of Siddha books
2.	National level Arogya mela in Chennai	Dr.M.Harihara Mahadevan Dr.R.Thilagavathi Dr. T. Kavitha Dr. A. Usha	5 <sup>th</sup> & 8 <sup>th</sup> May, 2017 Chennai	OPD for public and Siddha books sales and pamphlets distribution to the public.
3.	The MADITSSIA-AYUSH-2017.	Dr. S. Bhavani Dr. R. Rathinamala	11 <sup>th</sup> to 15 <sup>th</sup> August, 2017 MADITSSI A Hall, Madurai.	Distribution of OPD and issued free Siddha medicines. Publications of CCRS were sold. Charts were exhibited. Pamphlets about the Siddha system of medicine and remedy for different diseases were distributed.
4.	National level AROGYA Expo 2017 &The International conference on “convergence of health traditions in Bharatavarsha.”	Dr.L.Juliet Dr.P.Thenmozhi Dr. S. Shunmugaram	8 <sup>th</sup> to 11 September, 2017 Andhra University Grounds, Vishakhapatnam, Andhra Pradesh.	Special OPD and issue of free Siddha medicines. Publications of CCRS were sold. Charts were exhibited. Pamphlets about the Siddha system of medicine and remedy for different diseases were distributed.
5.	India International Trade Fair 2017	Dr. S. Saravanan Dr. B. Akila	14 <sup>th</sup> to 27 <sup>th</sup> November, 2017, Pragati Maidan, New Delhi	Siddha Consultation including Varmam therapy and advice about NCD Awareness and Screening Camps
6.	Arogya 2017: First international exhibition and conference on AYUSH and wellness sector	Dr.G. S. Lekha Dr.R.Manickavasagam Dr. K.G. Divya Dr.Natarajan M	4 <sup>th</sup> to 7 <sup>th</sup> December, 2017 New Delhi	Distribution of pamphlets regarding Siddha medicine, display of books on Siddha medicines, OPD consultation.
7.	State Arogya	Dr.Eugene Wilson Dr. K. Samraj Sh. A.K. Mandal, Sh. A. Rajesh	12 <sup>th</sup> to 15 <sup>th</sup> December, 2017 Mokokchung , Nagaland	Display and distribution of publicity materials, Stall management and Consultation

# Memorandum of Understanding (MOU)

1. Central Council of Research in Siddha (CCRS), Ministry of AYUSH, Government of India and **Rajiv Gandhi Centre for Bio Technology, Thiruvananthapuram** entered into Memorandum of Understanding on 11<sup>th</sup> April, 2017 to undertake collaborative research and training activities for establishing evidence based Siddha system. The MoU focuses on developing new collaborative research and teaching programmes in the areas of fundamental research, clinical research, health care research, drug discovery, literary research, training of faculty members and sharing of faculty members' expertise etc.

CCRS was represented by its Director General Prof. Dr. R. S. Ramaswamy and Rajiv Gandhi Centre for Bio Technology (RGCB), Thiruvananthapuram was represented by its Director Prof. Dr. M. Radhakrishna Pillai. The signing of MoU took place at the Rajiv Gandhi Centre for Bio Technology, Thiruvananthapuram in the presence of Dr. S. Selvarajan, Research Officer (Siddha), Incharge of Siddha Regional Research Institute, Thiruvananthapuram, Dr. V. Gayathri Devi, Research Officer (Chemistry), Dr. G. S. Lekha, Research Officer (Siddha), Siddha Regional Research Institute, Thiruvananthapuram, Dr. T. R. Santhosh Kumar, Scientist – F, Dr. K. Santhosh Kumar, Scientist – F from Rajiv Gandhi Centre for Biotechnology and Dr. K. B. Harikumar, Scientist – C, Dr. E.V. Sonya, Scientist – G and Dr. E. Sreekumar, Scientist - F from Rajiv Gandhi Centre for Bio Technology.

2. Central Council for Research in Siddha (CCRS), Ministry of AYUSH, Government of India and **Santhigiri Health Care and Research Organization, Thiruvananthapuram** entered into Memorandum of Understanding on 11<sup>th</sup> April, 2017 to undertake collaborative research and training activities for establishing evidence based Siddha system. The MoU is focussed on developing new collaborative research and teaching programmes in the areas of fundamental research, clinical research, health care research, drug discovery, literary research, training of faculty members and sharing of faculty members' expertise etc.

CCRS was represented by its Director General Prof. Dr. R. S. Ramaswamy and Santhigiri Health Care and Research Organization, Thiruvananthapuram was represented by Dr. Janani Nishchitha Jnana Thapaswini, Head, Administration. The signing of MoU took place at the Rajiv Gandhi Centre for Bio Technology, Thiruvananthapuram in the presence of Dr. S. Selvarajan, Research Officer (Siddha), Incharge of Siddha Regional Research Institute, Dr. G. S. Lekha, Research Officer (Siddha), Dr. V. Gayathri Devi, Research Officer (Chemistry) SRRI, Thiruvananthapuram, Shri. Vijayan, Manager, Santhigiri Health Care and Research Organization and Dr. V. Pushpaja, Santhigiri Health Care and Research Organization.



# CLINICAL RESEARCH

AR:2017-18

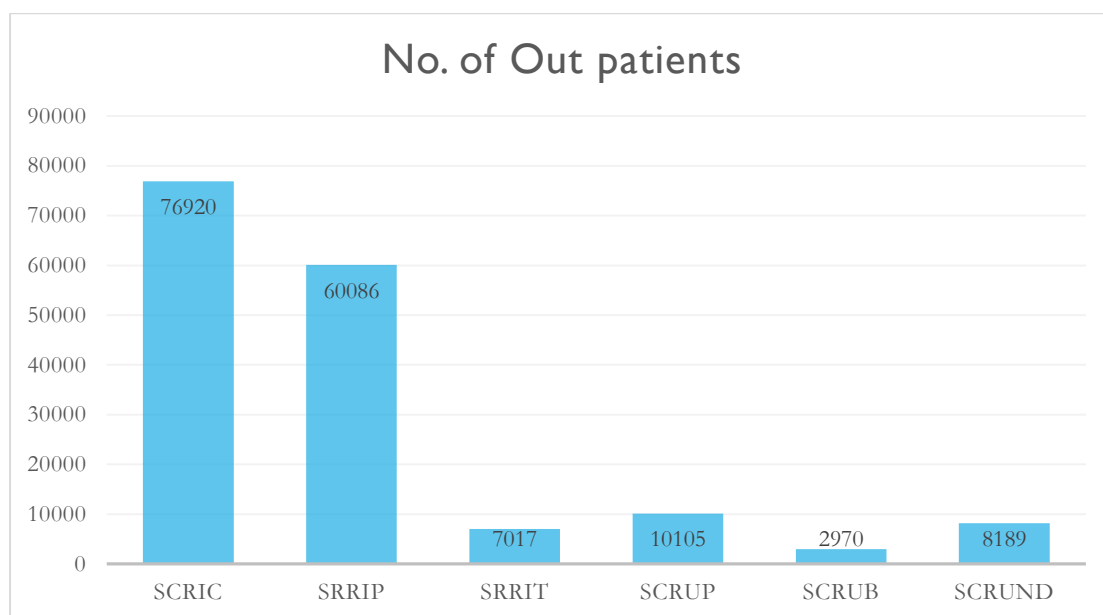
# CLINICAL RESEARCH

Clinical research in Siddha system of medicine helps in generating, authenticating, consolidating scientific evidences pertaining to Siddha system of medicine. To prove the efficacy of the Siddha drugs / to establish clinical safety of Siddha Drugs adopting AYUSH GCP Guidelines either to establish the claim stated in the literature or to test a newer combination for varied health problems is the mandate of clinical research. Various Randomized Controlled Clinical trials, observational studies, open clinical trials, comparative trials are carried out by the Council. During the reporting year, eleven clinical trials are being conducted by the council's peripheral institutes / units.

## 1. Health Care Services through OPD and IPD

OPDs	Gender	SCRIC	SRRIP	SRRIP	SCRUP	SCRUB	SCRU ND	Total
General OPD	M	23025	23407	1777	4759	1388	3830	58186
	F	19318	25256	3039	4393	774	3417	56197
	T.G	13	0	0	0	0	0	13
Flu Like Illness programme	M	10	97	27	0	0	0	134
	F	6	86	14	0	0	0	106
Special OPD for Neerizhivu	M	3940	0	0	0	0	0	3940
(Diabetes mellitus)	F	2864	0	0	0	0	0	2864
Geriatric Health Care Special OPD	M	6530	5827	727	475	0	8	13567
	F	3015	4090	803	478	0	50	8436
Special OPD for Varmam and Thokkanam	M	6013	477	187	0	604	2181	9462
	F	7547	846	443	0	204	2096	11136
RCH Special OPD	M	1016	0	0	0	0	0	1016
	F	2663	0	0	0	0	0	2663
Special OPD for Traditional Bone Setting (TBS)	M	427	0	0	0	0	0	427
	F	0	0	0	0	0	0	349
	T. G	1	0	0	0	0	0	1
IPD	M	92	0	0	0	0	0	92
	F	91	0	0	0	0	0	91
<b>Total</b>		<b>76920</b>	<b>60086</b>	<b>7017</b>	<b>10105</b>	<b>2970</b>	<b>8189</b>	<b>168680</b>

OPD Censes:



## 2. Special OPDs

### Flu like Illnesses programme

As per the instruction of the Council, the patients with the clinical features of flu like illness were treated in the OPD level, since October 2009. In this reporting year a total number of 240 cases were treated with the recommended drugs.

### Geriatric Health Care Special OPD

The geriatric population in India is increasing in recent decades due to various reasons like good and adequate nutrition and health delivery system. The Government of India and the Ministry of AYUSH has taken keen interest to promote health care to the older population through AYUSH. Siddha system of medicine has health promotive and rejuvenative approach for geriatric health care under the specialized branch called Kaya Karpam. The geriatric health care special OPD started functioning every Tuesday. In this reporting year, a total number of 22,003 cases were treated with the recommended drugs.

### Special OPD for Neerizhivu (Diabetes mellitus)

Special OPD for Neerizhivu (Diabetes mellitus) is conducted in Siddha Central Research Institute, Chennai. India is the hub of diabetes mellitus. Among the NCDs diabetic population in India especially Tamil Nadu is increasing in recent decades due to various reasons like sedentary life style, improper diet, etc.

Based on the burden of DM and national importance of NCDs, CCRS took the research on DM. After successful completion of the multicentric clinical trial with D5 chooranam which has given promising results, it has been launched in diabetic special OPD for the betterment of the society. The special OPD for Neerizhivu (DM) started functioning every Monday. In this reporting year, a total number of 6804 diabetic patients were treated with the D5 Chooranam.

## Varmam, Thokkanam and Bone setting Special OPD

Varmam and Thokkanam are unique and special therapeutic entities in Siddha, which are useful in treating several neurological and musculo – skeletal diseases mostly without the intervention of internal drugs. This Special OPDs is functioning in SCRI, Chennai, SRRI, Puducherry and Thiruvananthapuram, SCRUI, Bengaluru and New Delhi. In this reporting year a total number of **20598** patients were treated with Varmam and Thokkanam therapy.

### 3. Swasthya Rakshan Programme

Swasthya Rakshan Programme of Ministry of AYUSH is effectively implemented at Siddha Central Research Institute, Chennai (3 locations), Siddha Regional Research Institute, Puducherry (1 location), Siddha Regional Research Institute, Thiruvananthapuram (2 locations), Siddha Clinical Research Unit, Palayamkottai (2 locations), Siddha Clinical Research Unit, New Delhi (2 locations) and Palamalai hill (Tribal), Siddha medicinal plants garden, Mettur (1 location)

Sl. No.	Name of System (AYUSH) - Siddha	No. of Villages/ Colonies covered State-wise
1.	Siddha Central Research Institute, Chennai	PSBB Matriculation Higher Secondary School, Maangadu
		Vanagaram Panchayat Office, Vanagaram
		National Institute of Epidermiology (NIE) - Indian Council of Medical Research (ICMR), Ayapakkam
2.	Siddha Regional Research Institute, Puducherry	Bahour Village, Commune Panchayat Puducherry
3.	Siddha Regional Research Institute, Thiruvananthapuram	AKG Sports and Arts Club, Pangappara (Rural), Thiruvananthapuram
		Primary Health Centre, Karode (Rural), Thiruvananthapuram
4.	Siddha Clinical Research Unit, Palayamkottai	Keelanatham Melur Village
		Mela Thiruvengadanathapuram Village

Institutes / Units	Total
SCRIC	10230
SRRIP	1618
SRRIT	2317
SCRUP	2425
SCRUND	2589
SMPGMD	622
<b>TOTAL</b>	<b>19801</b>

### 4. Department of Pathology

Pathology	Male	Female	Total
No. of Investigations Carried out	2672	3163	5835

## 5. Department of Biochemistry

S. No	OPD/IPD	Biochemical Investigations	Number of investigations done	
1	General OPD	<u>Investigation</u> 1. Blood Glucose(Fasting) 2. Blood Glucose (OGTT and PP), Blood Urea, Serum Creatinine, Lipid Profile, Liver Function Test, Uric Acid, Calcium, Thyroid Function Test, HbA1c, RA, CRP, ASO, Insulin, Urine Microalbumin, Immunoglobulin A, Immunoglobulin E, Immunoglobulin G.	Male	Female
			7388	7093
			Total: 14481	
2	IPD	<u>Investigation</u> 1. Blood Glucose(Fasting) 2. Blood Glucose (OGTT and PP), Blood Urea, Serum Creatinine, Lipid Profile, Liver Function Test, Uric Acid, Calcium, Thyroid Function Test, HbA1c, RA, CRP, ASO, Insulin, Urine Microalbumin, Immunoglobulin A, Immunoglobulin E, Immunoglobulin G.	756	813
			Total: 1803	

## 6. Pharmaco-Vigilance Programme

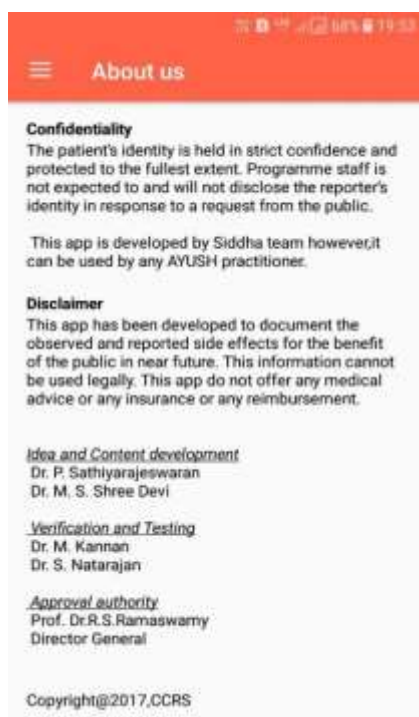
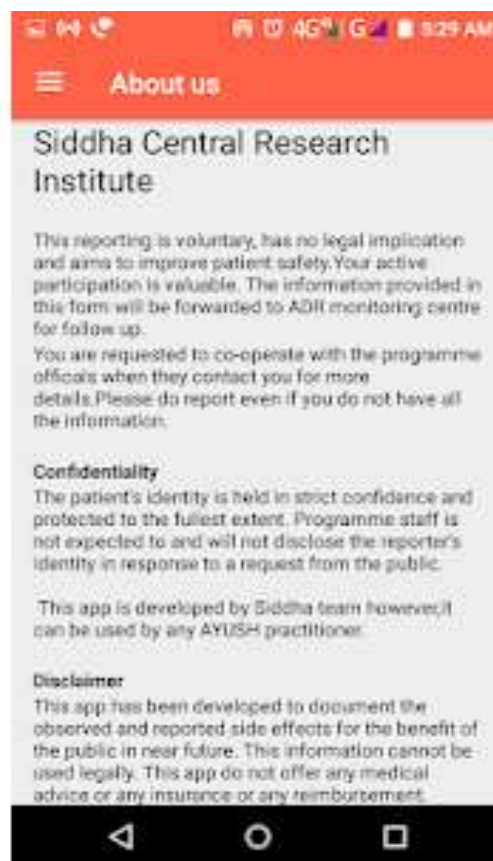
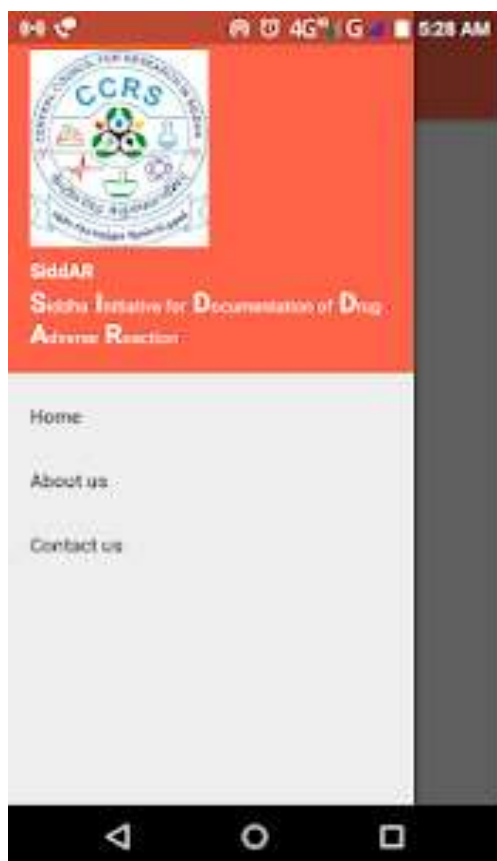
Siddha Central Research Institute, Chennai, Siddha Regional Research Institute, Puducherry and Siddha Regional Research Institute, Thiruvananthapuram are the peripheral Pharmacovigilance centres functioning under CCRS. No adverse drug reactions have been observed in Out-Patient Department and In-Patient Department patients in the any of the Institute/Units under CCRS.

### Pharmacovigilance App SiddAR

Pharmacovigilance ADR reporting system is very essential to each and every health care system. As per the ethical guidelines it is mandate to all the Research Councils and National Institutes to document the ADR. This reporting system started in the year 2009 and is actively and effectively carried out in SCRI. There is a tall claim that traditional medicines are safe and have no side effects. As per National Pharmacovigilance Resource Centre of India (NPRC) - Institute of PG Teaching and Research in Ayurveda (IPGTRA), Jamnagar, Gujarat and initiatives from AYUSH, this Institute has given contribution to the Pharmacovigilance system to emphasize more on the documentation of ADRs and creating awareness. Through Pharmacovigilance, quality of drugs can be improved and medication errors can be reduced for the betterment of the public.

In continuation of the above monitoring of the ADR, the Institute has developed the New Pharmacovigilance ADR reporting app (SiddAR) for the easy and convenience reporting system at any time & anywhere through e- filing system. The mobile app is designed in such a manner for usage in mobile app at patient convenience and the document to be reached to the ADR monitoring officer and the SMS alert system to be inbuilt to convey the information. The mobile android app was launched at National Conference on Pura Maruthuvam-2018 (NCPM), at Puducherry by the Prof. Dr. R.S. Ramaswamy, Director General, CCRS.





PvPI ADR (SiddAR) is an adverse drug reporting android application. Using PvPI adverse reporting android application, healthcare professional or consumers can instantly report any suspected Adverse Drug Reaction to PvPI from any part of India. The Pharmacovigilance Program of India (PvPI) was launched with a broad objective to safeguard the health of 1.27 billion people of India. Adverse drug Reactions (ADRs) are reported from all over the country to PvPI, which also work in collaboration with the global ADR monitoring centre (WHO-UMC), Sweden to contribute in the global ADRs data base. PvPI monitors the ADRs among Indian population and helps the regulatory authority of India (CDSCO) in taking decision for safe use of medicines



# **DRUG RESEARCH**

AR:2017-18

# DRUG RESEARCH

## 1. Drug Development

Drug development part was undertaken by the Pharmacy of Siddha Central Research Institute. The Pharmacy functioning has three main divisions like production unit, quality control unit and research unit. Production unit will have the roles and responsibilities of procuring of raw materials, processing of raw materials, purification (suthi) process, drug preparations, drug licensing & regulatory aspects, packaging, labelling & dispensing to hospital for patients as per the requirement. Quality control will support the production unit with respect to quality control estimation of raw materials and in process quality control analysis, analysis of finished drugs to ensure the quality of drugs before reaching the hospital unit.

## 2. Pharmacy

The Pharmacy is functioning since 1972. The main objectives for establishing the Pharmacy is to procure quality drugs, to prepare general medicines for running OPD & IPD and to prepare research drugs for screening. After the year 1979 the Pharmacy also started preparing certain general medicines for other Siddha units and special drugs for their research projects. So far, the Pharmacy has prepared about 15 types of research medicines and 18 types of general medicines.

To increase the production and to make the Pharmacy self-sufficient and to cater to the needs of all the Siddha units under the council, the same is being mechanised. The machineries have been installed and the operation initiated successfully. The cost of preparation after mechanisation will be cheaper than the open market. The quality of medicine can also be maintained.

## 3. Licensing & Certification

**Good Manufacturing Practice (GMP)** is a system for ensuring that products are consistently produced and controlled according to quality standards. It is designed to minimize the risks involved in any pharmaceutical production that cannot be eliminated through testing the final product. Based on this, to maintain the manufacturing standards and to improve the quality of drugs to the patients, Siddha Central Research Institute successfully completed the GMP audit and the Institute received the GMP certification for the quality manufacturing of drugs.


**Form 26-E-1**  
(See Rule 155 - B)

ORIGINAL  
No. 1274

**CERTIFICATE OF GOOD MANUFACTURING PRACTICES (GMP)  
TO MANUFACTURER OF AYURVEDA, SIDDHA OR UNANI DRUGS.**

CERTIFIED that manufacturing unit licence, namely M/S. Siddha Central Research Institute, Arignar Anna Govt Hospital of Postgraduate Medicine, situated at Chembur, Arambakkam, Chennai - 600 106 State Tamil Nadu, Licence No. 1235, Dt. 22.03.2010 comply with the requirements of Good Manufacturing Practices of Ayurveda-Siddha-Unani drugs as laid down in Schedule T of the Drugs and Cosmetics Rules, 1945.

This certificate is valid for a period of FIVE years and the Good Manufacturing Practices (GMP) is valid for the various dosage forms or Rasasushadis, as follows w.e.f. 28.09.2017

Date: 28.09.2017  
Place: 

SIGNATURE: [Signature]  
State Drug Licensing Authority (M), Tamil Nadu  
DESIGNATION: Chembur, Chennai - 600 106

Licensing Authority for Ayurveda/  
Siddha / Unani Drugs.

D. Dis. No. 982/DCI/2017, Dt. 28.9.2017

### List of New Drugs Licensing

The Institute applied licence for new product and received the licence grant for manufacturing of below listed products:

#### Sastric Medicine

S. No	Product Name	Reference Book	Page No.
<b>Kudineer Chooranam</b>			
1.	Kabasura Kudineer chooranam	The Siddha Formulary of India, Part – I	160
2.	Pitha Sura Kudineer Chooranam	The Siddha Formulary of India, Part – I	162
3.	Vatha Sura Kudineer Chooranam	The Siddha Formulary of India, Part – I	162
4.	Adathodai Kudineer chooranam	The Siddha Formulary of India, Part – I	160
<b>Chooranam</b>			
5.	Amukkara Kizhangu Chooranam	The Siddha Pharmacopeia of India, Part – I, Vol – I	1
6.	Atimatura Chooranam	The Siddha Pharmacopoeia of India, Part – I, Vol - I	12
7.	Gunma Uppu Chooranam	Pulippaani Vaidhyam – 500	5
8.	Maruthampattai Chooranam	The Siddha Pharmacopoeia of India, Part – I, Vol - I	104
9.	Nannari Ver Chooranam	The Siddha Pharmacopoeia of India, Part – I, Vol - I	115
10.	Naaval Pattai Chooranam	The Siddha Pharmacopoeia of India, Part – I, Vol – I	81
11.	Nelli Vatrul Chooranam	The Siddha Pharmacopoeia of India, Part – I, Vol – I	122
12.	Seenthil thandu Chooranam	The Siddha Pharmacopoeia of India, Part – I, Vol – I	35

13.	Vaividaga Chooranam	The Siddha Pharmacopoeia of India, Part – I, Vol – I	163
14.	Pirandai Uppu	The Siddha Formulary of India, Part – II	30
15.	Pungampoo Chooranam	The Siddha Formulary of India, Part – II	31
16.	Seeraga Chooranam	Siddha Vaidhiya Thirattu	211
<b>Thailam</b>			
17.	Kulir Thamarai Thailam	The Siddha Formulary of India, Part-II	115
18.	Mayana Thailam	Theraiyar Thaila Vargam	137
19.	Ulundhu Thailam	Siddha Vaidhiya Thirattu	263
20.	Vetpalai Thailam	Siddha Formulary of India, Part – II	343
21.	Lagu Vishamushti Thailam	Siddha Formulary of India, Part – I	105
22.	Valamburi Kai Thailam	Siddha Formulary of India, Part – II	139
23.	Siddhathi Ennai	Siddha Vaithiya Thirattu	271
<b>Theeneer</b>			
24.	Oma Theeneer	Siddha Vaithiya Thirattu	297
25.	Sombu Theeneer	Siddha Vaithiya Thirattu	297
<b>Manapagu</b>			
26.	Nannari Manapagu	Siddha Vaidhiya Thirattu	259
<b>Parpam</b>			
27.	Padikara Parpam	Siddha Vaidhiya Thirattu	127
<b>Kulambu</b>			
28.	Agasthiyar Kulambu	Siddha Formulary of India, Part – I	60
<b>Mathirai</b>			
29.	Korosanai Mathirai	Siddha Formulary of India, part – I	90
<b>Melugu</b>			
30.	Kilinjil Melugu	Siddha Formulary of India, Part – I	166
31.	Vellai Melugu	Siddha Formulary of India, Part – I	167
32.	Milagu Melugu	Siddha Vaithiya Thirattu	307
<b>Podi</b>			
33.	Padai Sankaran	Siddha Vaidhiya Thirattu	310
<b>Vadagam</b>			
34.	Inji Vadagam	Siddha Vaidhiya Thirattu	229

The Institute is working to fulfil various regulatory requirements as per the drugs & cosmetics rules 1945 - schedule T such as manufacturing, labelling, quality control aspects, regulatory auditing regarding the manufacturing & storage aspects of prepared drugs, stock maintenance and stock auditing of raw medicinal drugs, prepared drugs etc.

The Pharmacy additionally focusses on updating various regulatory requirements, manufacturing aspects of quality drug preparations, record maintenance, etc.

### Pharmacy instruments

The following list of instruments are available in SCRI Pharmacy

S.No	Name of Equipment	Year of Purchase	Cost of the Equipment	Condition of the Equipment
1.	Disintegrator	17-01-1980	9550.00	Working
2.	Mixer 50 kgs.	06-04-1980	26280.00	Working
3.	Oscillating Granulator	06-04-1980	18480.00	Not Working

4.	16 Stations Rotary Tablet	06-04-1980	47340.00	Working
5.	Coating Pan	06-04-1980	32280.00	Working
6.	24 Tray Drier 200° C	29-03-1994	17625.00	Working
7.	Chaff Cutting	11-01-1990	9395.00	Working
8.	Capsules	31-03-1992	25600.00	Working
9.	Kalvam Assembly (6 no's)	31-03-1992	46500.00	Working
10.	Sealing Machine	31-03-1995	1600.00	Working
11.	Refrigerator	10-03-2006	12740.00	Working
12.	DPM mini pact pulveriser	15-05-2006	160875.00	Working
13.	Automatic Sieving	31-03-1992	31800.00	Working
14.	Muffle Furnace	18-01-2010	144562.00	Working
15.	Pills Tablets cutting machine and dies 100 mg size pills	20-03-2010	12800.00	Working
16.	Pills making tube Machine	20-05-2010	14900.00	Working
17.	Wet grinder 5 lits cap.	29.04-2015	14900.00	Working
18.	Weighing Balance	19-08-2015	3000.00	Working

#### 4. Department of Chemistry

- Standardisation of three single drugs and 13 compound formulations were carried out. Establishment of sophisticated analytical instrumentation facility such as Triple quadrupole LC-MS, Inductively Coupled Plasma – Optical Emission Spectrophotometer (ICP-OES), UV-Visible Spectrophotometer and Microwave digester. JASCO V 750 UV-Visible spectrophotometer was procured in the project funds and installed in the laboratory of SCRI, Chennai.
- Standardisation of 37 single drugs and 8 compound formulations were done. Chromatogram for 57 single drugs have been developed for Siddha Pharmacopoeial work at SRRI, Thiruvananthapuram.

#### 5. Drug Standardization

##### Department of Quality control

##### Details of analysis carried out

S.No.	Sample Name/Code	Analysis Details
1.	Urai Mathirai (UM 1 to UM 10)	Loss on drying, Total Ash, Water soluble Ash, Acid insoluble ash, Water-soluble extractive, Alcohol-soluble extractive, pH and High Performance Thin Layer Chromatography analysis and its documentation
2.	Thiriphala Chooranam (TPC)	
3.	Thanrikkai (THK)	
4.	Kadukkai (KAD)	
5.	Nelli Vathal (NEL)	
6.	Unpeeled raw vasambu (URVP)	Loss on drying, Total Ash, Water soluble Ash, and Acid insoluble ash
7.	Skin peeled raw vasambu (SPRVP)	
8.	Charred vasambu (CV)	
9.	Skin Peel of Vasambu (SPV)	



# **PRE-CLINICAL RESEARCH**

# PRE-CLINICAL RESEARCH

Preclinical studies include safety and efficacy studies. The aim of a preclinical study is to collect data in support of the safety of the new treatment. These studies are conducted on the predetermined experimental models in the laboratory attached to the SCRI, Chennai. These studies are based on experimental models in different species of animals. This provides vital information for pursuing clinical studies in human beings.

## 1. Department of Pharmacology

Reapproved Project list by IAEC as follows

Sl. No.	Drug allotted	Target fixed	Studies carried out	Remarks
1.	Urai mathirai	Toxicity, Efficacy	Acute toxicity in rats	Completed
			Sub-acute toxicity in rats	Completed
			Chronic toxicity in rats	Completed
			Anti-inflammatory study in rats	Completed
			Analgesic activity in rats	Completed
			Immunomodulatory activity	Completed
2	Thetran vidhai kudineer	Toxicity, Efficacy	Acute toxicity in rats	Completed
			Sub-acute toxicity in rats	Completed
			Chronic toxicity in rats	Completed
			Anti-diabetic study	Under progress
4	<b>IMR – project:</b> Pre-clinical safety and efficacy study of Nuna Kadugu (Internal Medicine) and Nuna Thailam (External Medicine) in Venpadai (Vitiligo)	Toxicity, efficacy	Toxicity study	Under progress
6	Venthamarai choornam	Toxicity	Acute toxicity in rats	Yet to start

## Pharmacology / Pre-Clinical Animal Studies

### 1. Urai mathirai

Acute toxicity study of Urai mathirai was completed. There was no mortality in the drug treated groups which indicates that Urai mathirai is safe up to 100 mg/kg, which is ten times of therapeutic dose. The results of sub-acute toxicity study (28 days), chronic toxicity study (90 days), Analgesic activity, Anti-inflammatory activity, Immunomodulatory activity were completed statistical evaluation is in progress.

### 2. Thetran vidhai kudineer

Acute toxicity of Thetran vidhai kudineer was completed. There was no mortality in the drug treated groups which indicates that Thetran Vidhai (Kottai kudineer is safe up to 3600 mg/kg, which is ten times of therapeutic dose. The results of sub-acute toxicity study (28 days), chronic toxicity study (90 days), Anti-diabetic activity were completed statistical evaluation is in progress.

3. Anti-hyperlipidemic activity of **D5 choornam (IMR Project)** is in progress.





# MEDICINAL PLANT RESEARCH

AR:2017-18

# MEDICINIAL PLANT RESEARCH

Medicinal plants research is primarily carried out at Siddha Medicinal Plants Garden, Mettur

## 1. Medico-ethno Botanical Research

Eight survey tours to various places like Palar, Kombaikadu, Moolakompai, Kodiveri dam, Pannavadi, Kathrimalai, Yercaud, were carried out to study the medicinal plants wealth of the forest area and to facilitate raw drug supply to CCRS institutes for research purpose and healthcare. Also seedlings/saplings were collected to introduce in SMPG, Mettur dam.

- No. of plants collected at present: 217
- Herbarium specimen: 209
- Specimen collected for museum: 205
- Stem cuts/ saplings/ seedlings collected: 408
- Medicinal plants photographs taken: 160
- Folklore claims: 6
- An arboretum with 638 plants covering 211 species is being maintained in 3.7 acres

One hundred and forty seven new plants are introduced to the existing plants. Also 34 Red Endangered and Threatened (RET) species are conserved in SMPG.

## 2. Cultivation of Medicinal Plants

In the year 2017-2018, nine medicinal plants are under major cultivation. Five plants are under trail cultivation. The harvest of the plant materials are supplied to SCRI pharmacy.

## 3. Digitization and Compilation of Herbarium and folklore claims

Digitization is the process of converting information into digital format. During the period under report 2273 mounted herbarium sheets were checked and reprocessed and kept them free from infestations and other deterioration. Two thousand five hundred and fourteen mounted herbarium sheets were photographed for the purpose of digitizations. Thousand two hundred and six mounted herbarium sheets were re-photographed for bringing out perfection. Photographs of 5386 herbarium sheets including those of previous year were edited and appended scale along with the sheets. A herbarium with collection of dried plant specimens used in Siddha medicines are preserved in the SMPU-S Herbarium. Two hundred and forty four herbarium sheets covering 124 species were added to the existing herbarium. SMPU-S herbarium has 7700 herbarium sheets covering 1836 species under 248 families covering Angiosperms, Gymnosperms, Pteridophytes, Algae and fungi. In the catalogue the species were arranged on family wise starting from A-Z (say Acanthaceae the first family and Zygophyllaceae the last) following Bentham and Hooker's classification. The genera and species in a family were arranged alphabetically with author citation. The Flora of Tamil Nadu Analysis I to III was used as reference book. Tamil/Siddha/Local/folk names were added according to the availability.

#### **4. 365 Days National Campaign on Medicinal Plant Awareness**

National Medicinal Plants Board (NMPB) – Project: 365 Days National campaign on Medicinal plants Awareness: Campaign on awareness on Medicinal plants was carried out by providing news in dailies and weeklies from time to time and also by providing medicinal plants to the educational institutions for establishing herbal gardens in their premises and also promoting home herbal gardens. IEC pamphlets about the home herbal garden was issued as a promotion scheme for the visitors.

#### **5. Pharmacognosy**

The department of Pharmacognosy helps in identification of herbal drugs, Siddha Botanical Standardization and Pharmacopoeial works. Eight compound formulations and seventeen single drugs were standardized. Thirty plant specimens were included in herbarium and fifty raw drug specimens were included in the museum. Two hundred and eleven single drugs were authenticated during the year 2017-2018. They were authenticated by micro-microscopy including powder microscopy and quantitative microscopy. Two samples were authenticated by powder microscopy.



# LITERARY RESEARCH

AR:2017-18

# LITERARY RESEARCH AND DOCUMENTATION

Literary Research lays platform to any research in Siddha System as they are scientific reflections of the Intuitions of Siddhars. Palm leaves and paper manuscripts still hold with them many unfolded scientific details which are to be unearthed.

A Literary Research Unit was started by the Government of India, at Saraswathi Mahal Library Campus, Thanjavur in the year 1964 for the enlightenment of the Siddha system. In 1971, one more Literary Research Unit was started at Govt. Siddha Medical College, Palayamkottai. They have made wonderful collections of traditional manuscripts and very old Siddha printed books dealing with treatment of ailments from the traditional physicians all over Tamilnadu. In 1979 the Units were merged and formed as Literary Research & Documentation Department at CRIS, Chennai. In April 2007, the LR&DD was merged with CRIS, Chennai-106. The mandate of this department is to carry out Literary Research.

The wealth of traditional medicines is available both in a coded and non-coded document. This traditional knowledge should be properly documented, digitized, preserved and published to the public domain. Both virtual and real manuscripts are made available as a ready beckoner for students, research scholars and the public. Literary Research and Documentation Department of Siddha Central Research Institute, CCRS is carrying out the above said activities in a stipulated manner.

New books purchased in the year 2017-18: 1004 books.

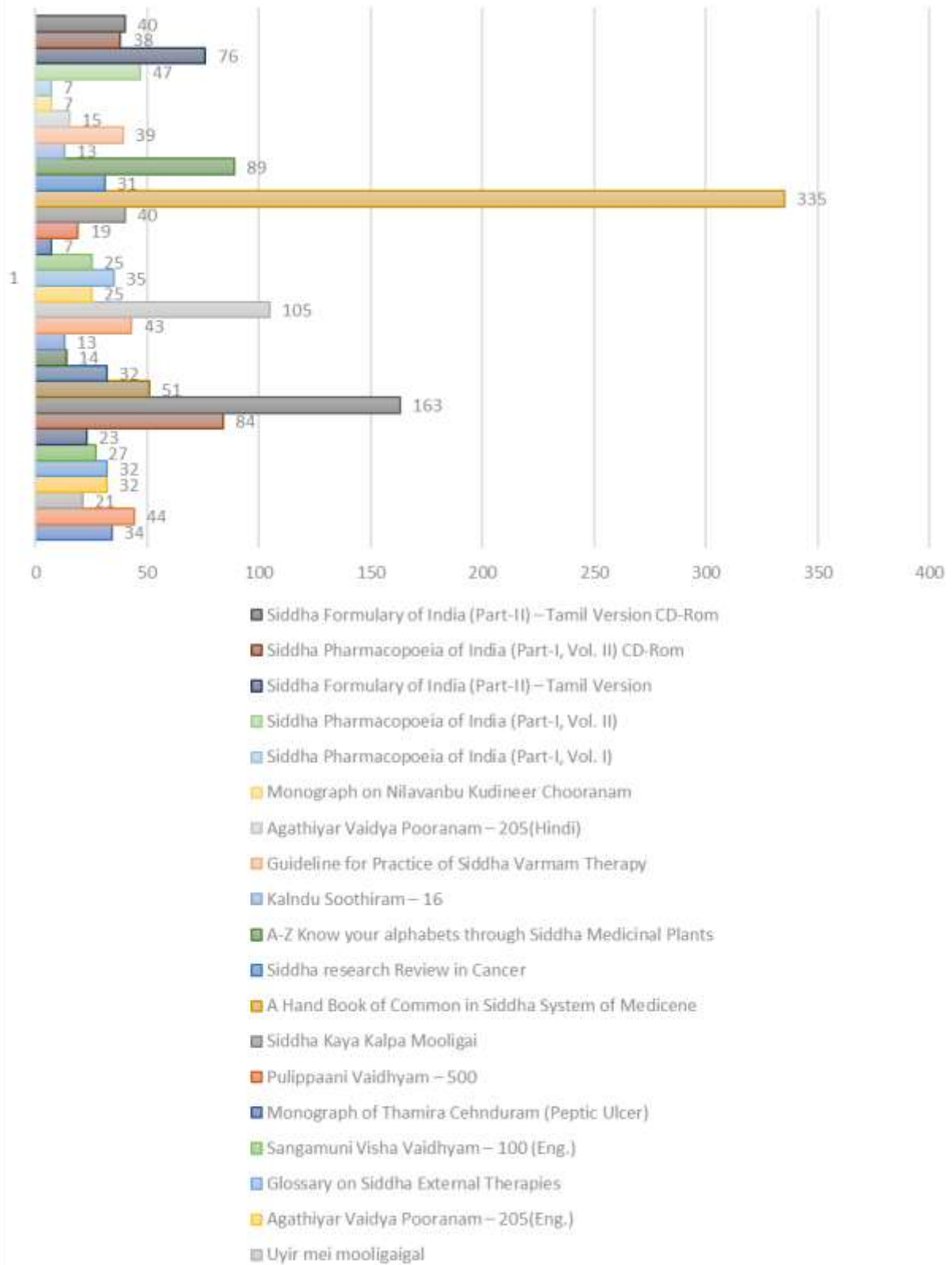
## 1. Key activities of LR & DD

- Collection of manuscripts and other old rare printed books and hand written copies.
- Cleaning and preservation of collected materials.
- Preparing, cataloguing and classification.
- Transcription of palm leaf manuscripts.
- Annotation of poems.
- Typing of transcribed poems along with annotations.
- Correction of typed copies.
- Comparison with original.
- Submission for approval.
- Publications.
- Translation of books published in Siddha into English, Hindi and other south Indian language.
- Publication of translated Siddha Text in English, Hindi and other south Indian language.
- Sale of publications.

## 2. Activities in the Current Year

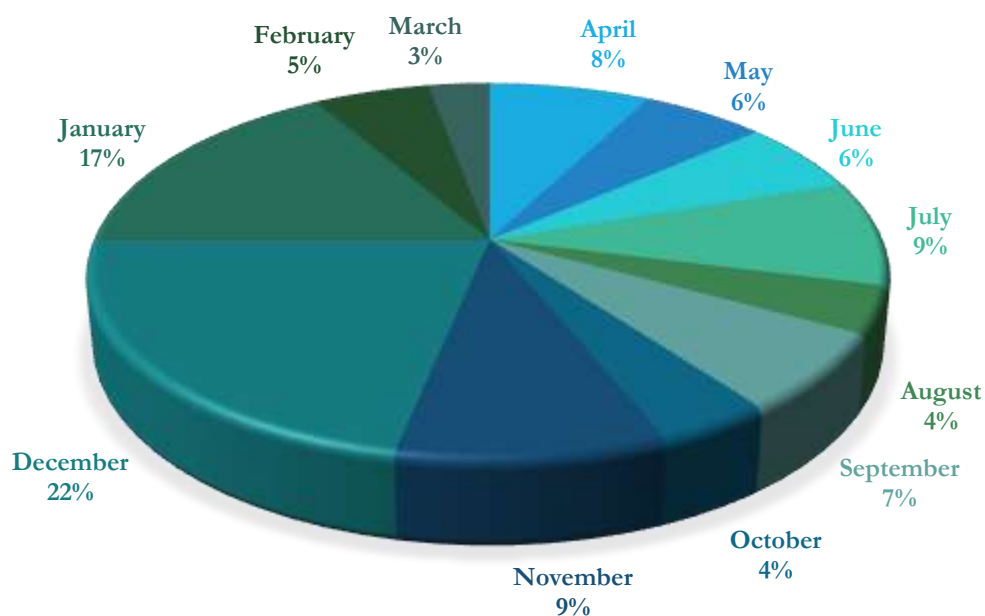
S. No	Title of the Books	version	Status	Remarks
1.	Siddhar Kaya Karpam	English	Proof correction is being carried out	Will be published in due course
2.	Materials collection for launching the Museum	-	Collection process is in progress	Will be launched in due course
3.	Library Management Software (THERAN)	-	3688 – Individual book id has been generated through THERAN.	Completed and back volume journals are in progress
4.	Collection of e-books for e-library	-	Collected pdf/e-books from various resources	2344 no of e- books /pdf added in the e-library
5.	Monograph on Nila Vembu Kudineer	English	Completed	Published and released on 26.08.2017
6.	Monograph on D5 Chooranam	English	Completed	Published and released on 26.08.2017
7.	Siddhar Kaya Karpam (Reprint)	Tamil	Completed	Published and released on 26.08.2017
8.	Siddha maruthtuva eliya vazhakku muraigal (Revised Edition 6 <sup>th</sup> )	Tamil	Completed	Published and released on 26.08.2017
9.	Siddhar Yogam Oor Karpam	Tamil	Completed	Published and released on June 21, 2017
10.	Guidelines for Practice of Siddha Varmam Therapy	English	Completed	Published and released on 09.12.2017
11.	A Hand Book of Glossary on Siddha External Therapies. (Excerpts from T.V.Sambasivam Pillai Dictionary)	Bilingual	Completed	Published and released on 09.12.2017
12.	A Glossary on Siddha External Therapies (Excerpts from T.V.Sambasivam Pillai Dictionary)	Bilingual	Completed	Published and released on 09.12.2017
13.	Siddha Protocols and Research OUTcomes (SPROUT) for Siddha External Therapies	English	Completed	Published and released on 09.12.2017
14.	Agathiyar Aivu Thoguppu	Tamil	Completed	Published and released on 04.01.2018

### Title wise books sold out in the year 2017-18



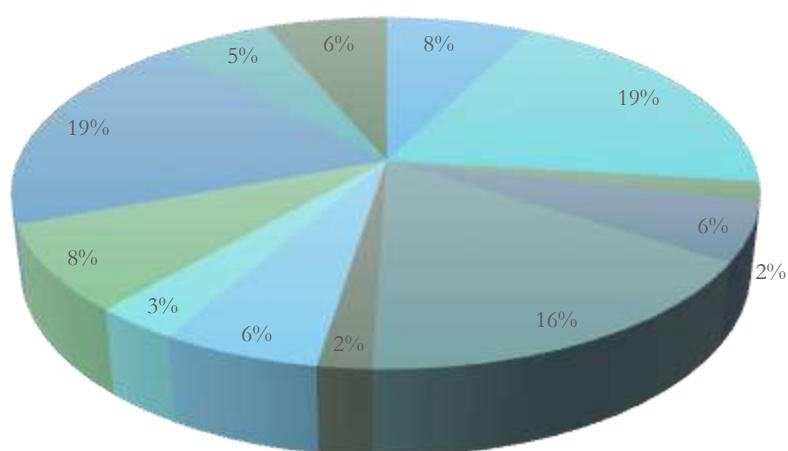
## LIBRARY USERS' PERCENTAGE (2017-2018)

### MONTH WISE LR&DD LIBRARY USER 2017-18



### Month wise sale of Publications 2017-18

■ April   ■ May   ■ June   ■ July   ■ August   ■ September  
 ■ October   ■ November   ■ December   ■ January   ■ February   ■ March





### 3. AYUSH Research Portal

In order to make research findings of AYUSH systems and the other allied faculties accessible through web, the Department of AYUSH started AYUSH Research Portal. Central Council for Research in Ayurvedic Sciences (CCRAS) and the National Institute of Indian Medical Heritage (NIIMH), Hyderabad are coordinating and maintaining this freely accessible web portal in collaboration with National Informatics Centre. All the research findings of Central Council for Research in Siddha are made available in this portal.



AYUSH Research Portal  
<http://ayushportal.nic.in>.

### 4. Digitization

In India most of the manuscripts composed by our Siddhars in ancient period are written on palm leaves. Digitization is one of the means of preservation of manuscripts. The Literary Research and Documentation Department has taken up the task of preservation of our treasure – palm leaf manuscript and digitization of the palm leaves.

S. No.	Name of the Books	Digitization
1.	The Pharmacopoeia Siddha Research Medicine	Completed
2.	Agathiyar 12000 Ennum Perunool Kaaviyam	Completed
3.	Ramadevar Sivayogam 200	Completed
4.	Agathiyar Antharnga Dhitchavithi	Completed
5.	Agathiyar Aarezhuthunthathi Antharnga Dhitchavithi	Completed
6.	Agathiyar pallu 200	Completed
7.	Agathiyar Aruliya Anuboga Vaithiya kazhanjiyam	Completed
8.	Agathiyar Muppu Soothirangal	Completed
9.	Agathiar vagara soothiram 200	Completed
10.	Akkalathu Siddha Vaithiya Anubava Muraigal	Completed
11.	Agathiar Karppa Muppu Kurnool 100	Completed
12.	Anubava Siddha Maruthuva Muraigal	Completed

# **Siddha Pharmacopoeia Committee (SPC)**

## **Objectives and Achievements of Siddha Pharmacopoeia Committee (SPC)**

The Siddha Pharmacopoeia Committee with the mandate of establishing quality parameters for Siddha drugs and formulations is working under the auspices of the Ministry of AYUSH. It is currently functioning at CCRS Headquarters, Chennai. “The Siddha Pharmacopoeia of India, Part I, Vol. III” and “The Siddha Formulary of India, Part I, 1st revised Edition (Tamil)” which have been approved by the SPC have been modified as per the new format and it have been sent to PCIM for printing. Again the format has been changed by PCIM and the works are in progress. 150 Siddha classical formulations have been identified for the Siddha Formulary of India, Part – III and the work is in progress. Translation of “The Siddha formulary of India, Part-II – English” is in progress. Preparation of the Siddha Pharmacopoeia of India, Part I, Vol. IV has also been initiated during the reporting period.

## **HUMAN RESOURCE DEVELOPMENT**

### **1. IEC Materials/ Pamphlets**

Brochures and Pamphlets were reprinted and were distributed / displayed in the National level Arogya fairs (Comprehensive Health Mela on AYUSH) and other campaigns. IEC materials have been published on several disease conditions and their management through Siddha System of Medicine. Eight pamphlets in English were translated to Hindi, Malayalam, Telugu and Kannada for distribution in the National level Arogya fairs.

### **2. Other Tools**

The Clinical Research Programme under the Council focuses mainly on clinical evaluation of selected therapies in clinical conditions. The activities in the following areas have been carried out and recently two new applications have been developed and implemented to aid in the health care services:

- THERAN – THE Research Application Network (Electronic Data Capturing System (Registration upto Receiving Medicine).
- SiddAR – Siddha initiative for documentation of drug Adverse Reaction App – Pharmacovigilance.
- In addition to this SLING – Duty Scheduling App is also implemented.

### **3. The Research Application Network (THERAN)**

It is an Electronic Data Capturing System, a kind of software which has been developed by the Central Council for Research in Siddha with the calibre software technologies and it was launched by Shri. P. N. Ranjith Kumar, Joint Secretary, Ministry of AYUSH, Govt. of India, during the inauguration of the two day National Seminar on “Current Trends in Siddha Varmam Therapy” held on 4<sup>th</sup> and 5<sup>th</sup> November, 2017 at AYUSH auditorium, Janakpuri, New Delhi.

Siddha Central Research Institute, Chennai successfully completed the trial and error execution and troubleshooting also. With the THERAN software, SCRI is successfully documenting the hospital information. Now CCRS is planning to extend the THERAN software to all its peripheral institutes and units.

### **Key features of THERAN**

- Conduct a full range of OPD consultation with excellent data recording
- Similarly, IPD can also be subjected to data capturing for day to day treatment and procedures
- Boon for getting the NABH and NABL accreditation
- Centralized patient registration system to create and maintain patients' record
- Routing of patients to respective department for consultation through Centralized Out-patient queue management system
- Serve the patients with system generated prescriptions – no pen and paper required
- In-built inventory system for better accountability
- Generate dynamic reports
- Work quantification of human resources can be measured
- Enhances transparency in cash transactions and eco-friendly

## **INAUGURATION OF NEW WING AT SRRI, THIRUVANANTHAPURAM**

The new wing i.e, the 3<sup>rd</sup> floor of SRRI, Thiruvananthapuram was inaugurated on 21-10-2017 by Shri Shripad Yesso Naik, the Hon'ble Minister of state (independent charge) Ministry of AYUSH, Govt. of India and presided over by Prof. Dr. R.S. Ramaswamy, Director General of CCRS in this annual year 2017-18.

## **MISCELLANEOUSE ACTIVITIES**

### **1. Institutional Human Ethics Committee (IHEC)**

Siddha Central Research Institute, Chennai, Siddha Regional Research Institutes, Thiruvananthapuram and Puducherry and Siddha Clinical Research Unit, New Delhi had convened Institutional Human Ethical Committee meetings at regular intervals.

The Second Institutional Ethical Committee Meeting of Siddha Clinical Research Unit, New Delhi was held on 4th October 2017 at the PG Library Hall of A & U Tibbia College, Karol Bagh for the evaluation six IMR projects.

### **Administrative training during the reporting year**

Shri. P. Prakasam, Retd. Deputy Director (Admin.), National Institute of Siddha, Chennai gave a talk on “Budget and its relations to establishment” on 18-07-2016.

### **2. ICD 11-TM-Siddha**

International Code of Diseases 11- Traditional Medicine- Siddha (ICD11-TM-SIDDHA)

The World Health Organization presents its compliments to member states and Associate members and has the honour to present major milestones towards the finalization of the 11<sup>th</sup> Revision of the International Classification of Diseases (ICD-11) as WHO seeks comments on the 2016 version of the ICD-11.

As enlisted under the heading "ICD-11 Advances and Data Priorities (New Data Options)" the move to include the new chapter for traditional medicine diagnosis is a welcome measure, which ensures tangible reporting of the services of Nationally recognized traditional medicine

practitioners, which is by and large under reported all these years due to lack of an organized system. Though the chapter included currently covers Traditional Chinese Medicine practiced in China, Japan and Korea, this measure has created space for inclusion of other recognized traditional medical systems viz., Ayurveda, Siddha, Unani etc., which are widely practiced in South, South East Asia and South-West Asian Countries and further making inroads into Europe, Africa, America and Australia and New Zealand.

Further as noted at “Data Priorities” enlisted at No. 3, there is even stronger demand for quality country mortality and morbidity statistics at national level as reported at the recent WHO World Health Statistics Report and at the Tokyo ICD-11 Revision Conference

Keeping in view of the above, Ministry of AYUSH, Government of India has initiated a process to develop National Morbidity Codes for Ayurveda, Siddha and Unani Systems of Medicine through wide National Consultation Process. Hence, an expert committee has been formed to develop National Morbidity Codes - Siddha by Ministry of AYUSH, Government of India. A working group was constituted at the organization level to carry out the works related to NAMSTP and the codes are uploaded in portal.

Based on the importance of ICD 11 (TM)-Siddha, SCRI, Chennai has constituted a working group to develop ontology frame work for ICD 11 (TM)-Siddha. The team has worked tirelessly and developed ontology frame work for Siddha. It has been evaluated by the ICD expert committee constituted by the Ministry of AYUSH, Govt. of India. The team has completed the task within stipulated time of 10 days. So far 927 Siddha ICD morbidity codes have been completed and it has been published in ASU morbidity website.

### **3. Promotion of Official Language**

Official language implementation programme has been carried out in CCRS and its peripheral institutes / unit. Hindi fortnight has observed and competitions for the staff of CCRS and its units were conducted. OLIC – Official Language Implementation Committee meetings were periodically convened.

### **4. Internal Complaints Committee constituted under sexual harassment of women at work place (Prevention, Prohibition and Redressal)**

The first meeting of the internal complaints committee constituted under sexual harassment of woman at work place (Prevention, Prohibition and Redressal) Act, 2013 was convened on 27th March, 2018. No case related to the issue was reported in the meeting. Sensitizing programme on sexual harassment for women working at Central Council for Research in Siddha and Siddha Central Research Institute was held on 28th March, 2018.

### **5. Website**

The official website of Central Council for Research in Siddha was launched on 18<sup>th</sup> February. By the constant support from the peripheral institutes/ units the website is functioning as the ‘facade of the Council’ depicting the information and important research activities carried out by the Council.

Link: <http://www.siddhacouncil.in>

**C.C.R.S.**  
**Annual Report 2017-18**

**सी.सी.आर.एस**

**वार्षिक प्रतिवेदन**  
**2017-18**



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