

GOVERNMENT OF INDIA
MINISTRY OF AYUSH
RAJYA SABHA
UNSTARRED QUESTION NO. 1607
TO BE ANSWERED ON 6TH AUGUST 2024
" Research in Ayush Sector"

1607 Sh. Sanjay Seth

Will the Minister of Ayush be pleased to state:

- (a) the current research initiatives undertaken by Government in the Ayush sector in the last five years particularly in Uttar Pradesh;
- (b) the details of fund that has been allocated to support Ayush research and development projects in the past three years;
- (c) the measures implemented/being implemented to encourage collaboration between Ayush institutions, academia and industry for research and innovation; and
- (d) the steps being taken to ensure that research outcomes in Ayush are effectively disseminated and integrated into healthcare practices nation-wide?

ANSWER
THE MINISTER OF STATE (IC) OF THE MINISTRY OF AYUSH
(SHRI PRATAPRAO JADHAV)

(a) Ministry of Ayush has undertaken following Research Initiatives in the Ayush sector in the last 5 years including State of Uttar Pradesh as follows: -

(1) **Central Council for Research in Ayurvedic Sciences (CCRAS)** has undertaken several studies mainly in **2 institutes of Uttar Pradesh namely Central Ayurveda Research Institute, Jhansi & Regional Ayurveda Research Institute, Lucknow** related to Prophylaxis, Management, awareness, and pre-clinical studies in the COVID-19 pandemic, Three patents were granted to it.

- It has undertaken research for development of an automated working prototype model for the preparation of Kshara sutra for the treatment of Anorectal disease in collaboration with IIT Delhi.
- The various public health oriented research activities undertaken are as follows:
 - i. Implementation of Integration of AYUSH (Ayurveda) with National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases & Stroke (NPCDCS) in three districts, viz. Surendranagar (Gujarat), Bhilwara (Rajasthan), Gaya (Bihar) to demonstrate the feasibility of integration of Ayurveda involving 49 CHCs, 3 District Hospitals, and 189 PHC 111182 patients enrolled, 145416 Yoga classes conducted, 1727758 participants attended Yoga classes, 8303 outreach camps were conducted.

- ii. Tribal Health Care Research Programme under Tribal Sub Plan (TSP) through 14 CCRAS institutes in 14 states.
 - iii. Ayurveda Mobile Health Care Research Programme under Scheduled Castes Sub Plan (SCSP) through 20 CCRAS institutes in 18 states.
 - iv. Women and Child Health Care (RCH) Programme under Scheduled Castes Sub Plan (SCSP) through 10 CCRAS institutes in 10 states.
 - v. Ayurvedic Health Centres under the North East Plan functioning at 19 centers in 4 States.
- It has also undertaken the research to generate evidence of the safety of 19 commonly used Ayurvedic metal-based / Herbo mineral medicines through experimental studies, Systematic Reviews and meta-analysis studies in 32 disease conditions, setting up of National Raw Drug Repository and Good Manufacturing Practices (GMP) certified Research Pharmacy and Quality Control Laboratory at CARI, Jhansi
 - Developed a web-based portal for Research publication in AYUSH, Council's journals 'Journal of Drug Research in Ayurvedic Sciences (JDRAS) and Journal of Research in Ayurvedic Sciences (JRAS)' are made online and included in the UGC Care list and Launched SAHI (Showcase of Ayurvedic Historical Imprints) portal, e-MEDHA Catalogue (E-Medical Heritage Accession) portal, RMIS Portal (Research Management Information System) as a guiding tool for Research and Development for aspiring researchers, and AMAR (Web-based Electronic repository of Ayurveda, Siddha, Unani, Yoga & Naturopathy Siddha Manuscripts) Portal.
 - Under capacity building for research, Introduced Ph.D. fellowship wherein 28 Scholars (22 AYUSH +6 allied) were registered at 13 Universities/Institutes, Introduction of CCRAS Post Doctoral Fellowship Scheme, Introduction of STUDENTSHIP PROGRAM FOR AYURVEDA RESEARCH KEN (SPARK) and Introduction of Scheme for Training in Ayurveda Research for PG Scholars (PG-STAR) .
 - Under Inter-Ministerial Collaboration, CCRAS in conjunction with Directorate General of Armed Forces Medical Services (DGAFMS) undertook 2 clinical studies, Anaemia control among adolescent girls through Ayurveda interventions in the five districts under Mission Utkarsh was done on collaboration with Ministry of Women & Child Development, Joint R&D and Public Health initiatives project under MoU between M/o Ayush & M/o Tribal Affairs and Ayush-Indian Council of Medical Research (ICMR) Collaboration is done for Clinical Research on priority areas, Setting up of AYUSH-ICMR advanced centres for integrative research at AIIMS, Research capacity building of Ayush professionals & Development of the supplementary ethical guidelines for Integrative Care Research etc.

(2) **Central Council for Research in Siddha (CCRS)** mainly focuses on clinical research including safety and efficacy studies of Siddha drugs. It has granted 86 Intra Mural Research (IMR) projects and out of this 8 IMR projects have been completed in all the aspects. 17 projects are awaiting PEMC clearance and 61 IMR projects are in progress. Out of 61 ongoing projects, 18 projects are Clinical Research, 18 are Pre-Clinical Research, 4 are Medicinal Plants Research, 9 are Literary Research and 12 corresponds to Drug Research projects. 1 Patent is granted to it and so far it has published 54 books and 755 scientific research articles.

(3) **Central Council for Research in Homoeopathy** is undertaking research initiatives through its 27 institutes/Units and 07 Homoeopathic treatment centers, including **3 institutes in the State of Uttar Pradesh namely Dr. D.P Rastogi Central Research Institute of Homoeopathy, Noida, Central Research Institute (Homoeopathy), Lucknow and Clinical Trial Unit on Homoeopathy on Viral Encephalitis, Lucknow** in the following fields:-

- i. **Clinical Research:** Research studies on Acute encephalitis syndrome, Covid-19, side effects of chemotherapy in cancer, Post covid-19 illness, Chronic kidney disease, trigeminal neuralgia, haemophilia, dengue, hypothyroidism, pre diabetes, Menstrual irregularities, cholelithiasis, anaemia, bronchial asthma, psoriasis, renal calculi, progressive myopia, osteoarthritis, rheumatoid arthritis, gout, primary dysmenorrhea, irritable bowel syndrome, Acute Ischemic stroke, Otitis Externa, Non-Alcoholic Fatty Liver Disease (NAFLD), primary chronic anal fissures, Stable Ischemic Heart Diseases, Allergic Rhinitis, Distal radius Fracture, Simple Myopia, Chronic Suppurative otitis media, Prehypertension, Female infertility due to anovulatory polycystic ovarian syndrome, Chronic urticaria, Chronic Migraine, Early Hemorrhoidal Disease, adhesive capsulitis of the shoulder/Frozen shoulder, Plantar Fasciitis etc.
- ii. **Drug validations studies** have been undertaken on dyspepsia, migraine, asthma, acne, hemorrhoids etc.
- iii. **Drug Development:** Pharmacognostic and physico-chemical standards of drugs have been developed; revision and up-gradation of existing monographs are being conducted.
- iv. **Drug proving studies on drugs** such as Acer negundo, Adonsoniadigitata, Cimetidine, Cineraria maritima, Omeprazol, Siegesbeckiaorientalis and **Clinical Research studies on** Iron deficiency anemia, Polycystic ovarian disease, Tinea, Warts & Vinca have been conducted.
- v. **Fundamental and Basic Research:** Fundamental research to explore the possible action of homeopathic medicine is being carried out on cancer Malaria, Leishmaniasis, JE & Dengue, Covid related studies. New studies have been initiated on conditions like Diabetes, Renal stones, Cancer, malaria, JE, kala azar. In diabetes molecular mechanism of action of Syzygiumjambolanum and Cephalandraindica, in another molecular level study anti-lithiatic potential of homeopathic preparation of B. vulgaris studied. Similarly of cancer cells killing property of Thuja& Sulphur, were studied and pathway of action were explored.
- vi. **Epidemics:** The Council has undertaken research studies on dengue, Malaria etc. Three epidemic research studies which have been specifically done in the State of Uttar Pradesh are Homoeopathic Medicine Arsenicum album 30 C for Covid-19 in 2020 which is a Retrospective Analysis from Mass-level Data by Bakson Homoeopathic Medical College, Greater Noida, Uttar Pradesh, a retrospective cohort study on association between Usage of Prophylactic AYUSH Medicines and Disease Severity in COVID-19 Patients and a cross sectional research study on Concurrent Drug utilization evaluation including medication adherence of Arsenicum album 30 as

prophylactic medicine and immunity booster against COVID-19 by the institutes of Noida and Lucknow.

(4) The SCSP/TSP mobile health program of **Central Council for Research in Unani Medicine (CCRUM)** is mainly carried out in 5 institutes of CCRUM in Uttar Pradesh namely **Central Research Institute of Unani Medicine, Lucknow, Regional Research Institute of Unani Medicine, Aligarh, Drugs Standardization Research Institute, Ghaziabad, Regional Research Centre (RRC), Allahabad and Clinical Research Unit (Unani), Meerut** wherein villages having SC/ST population have been selected to create awareness for preventive aspects of different diseases.

(5) The research facility in **National Institute of Ayurveda (NIA)** are Drug Discovery & Development Unit (DDDU), Advanced Human Physiology Lab (AHPL) and Central Laboratory, NIADU, Jaipur wherein these units have conducted preliminary study on 15 Ayurvedic medicines with confirmatory pre-clinical results, 7 research projects in Advanced HPL etc.

(6) **North Eastern Institute of Ayurveda & Homoeopathy (NEIA&H)** has recently undertaken a research project i.e. Promoting the Ayurveda interventions for Iron Deficiency Anemia among tribal females in Mawpat and Myllem Block of East Khasi Hills district of Meghalaya under Ayurswasthya Yojana.

(b) The details of funds allocated to various research councils/ national institutes/ subordinate offices/ statutory bodies etc under Ministry of Ayush for the development of Ayush sector including Ayush Research and development projects in the past three years is placed at **Annexure**.

(c) The measures implemented/being implemented to encourage collaboration between Ayush institutions, academia and industry for research and innovation are as under:

(1) **Central Council for Research in Ayurvedic Sciences (CCRAS)** has Collaborated with academic institutes/colleges through SMART (Scope for Mainstreaming Ayurveda Research in Teaching professionals) program. The SMART program is intended to inculcate research aptitude in academicians which would ultimately benefit in increasing the quantum of publications to generate evidence base for Ayurveda. Multicentre 11 collaborative studies have been undertaken in priority areas such as Osteoarthritis (OA), Iron Deficiency Anemia (IDA), Generalized Anxiety Disorder (GAD), Psoriasis, Dyslipidemia, and Rheumatoid Arthritis (RA) involving 38 colleges across India.

- CCRAS has initiated Scheme for Training in Ayurveda Research for PG Scholars (PG-STAR) from June 2023. This scheme is primarily aimed at promoting good quality research in Ayurveda students pursuing post-graduation courses as well as to improve visibility and accessibility of their research work to larger research audience.
- AYUSH Ph.D. Fellowship Programme was initiated by Ministry of Ayush in the year 2016 in all Research Councils through CCRAS as a Nodal Council to encourage quality research in AYUSH Systems, to further enhance research opportunities for

meritorious AYUSH Scholars and to generate good human resource for quality research in AYUSH sector. These fellowships are also being awarded to the Non Ayush (Non-medical- allied sciences) NET qualified post graduates interested to conduct research in Ayush related fields.

- The Council has recently organized a one day Interactive Meet PRAGATI-2024 (Pharma Research in AyurGyan And Techno Innovation) on exploring Research opportunities in Collaboration with CCRAS and Ayurveda Drug Industries wherein many industries participated.
- The Research Councils also transfers technology to the industry through National Research Development Corporation (NRDC).

(2) **Central Council for Research in Yoga & Naturopathy** is running a scheme of establishing collaborative Research Centre's (CRC) to undertake Collaborative Research with leading Medical as well as Yoga and Naturopathy Institutions. The Council has also opened Yoga and Naturopathy OPDs/ Wellness Centre's in Govt. Hospitals/Institutes of Delhi, Haryana, Karnataka, Tripura, Madhya Pradesh and established centre for Mind Body Intervention through Yoga in AIIMS Raipur, AIIMS Rishikesh and PGI Chandigarh.

(3) **Central Council for Research in Siddha** has set-up the incubatory cell namely Academia-industry Research Incubation for Value-chain Up-gradation (ARIVU) to promote innovation and entrepreneurship by translating novel ideas and innovation in various disciplines of Siddha Research, into products, processes and services for commercial exploitation and the benefit of society. Proposals which will have social and strategic impacts in India and has potential for large resource generation, impact value and Visibility to CCRS and ARIVU incubation activities are considered under the scheme. The IP generated shall be shared between the incubators (s) and industry partner(s) nominating the incubate. The following 4 projects are in progress under ARIVU scheme of CCRS:

- Developing a statistical application for ethnobiological field studies.
- Prototype Development of ManikadaiNool Device (eM-NOOL) for Disease Prediction and Prognosis.
- Nanofiber based scaffold for wound healing using electro spinning technique.
- Mercury sensing Portable Testing Strips (MePTS).

(4) **Central Council for Research in Homoeopathy** has signed 136 Memorandum of Understanding (MoUs) with other research institutions, universities, colleges etc for undertaking research.

(5) **Central Council for Research in Unani Medicine** has 24 collaborations with academic institutions and scientific organizations for research and innovation in Unani medicines.

(6) The **National Institute of Ayurveda** has executed/signed 2 International Memorandum of Understanding (MoU) with University of Malaysia and Philippine Institute of Traditional & Alternative Health Care and signed 33 MoUs with various institutes/universities etc nationally for research & innovation.

(d) The steps being taken to ensure that research outcomes in Ayush are effectively disseminated and integrated into healthcare practices nation-wide are as follows:

(i) The research outcomes are being published in peer reviewed journals, disseminated through various social media & print media platforms and presented in seminar conferences for effectively dissemination into healthcare practices nation-wide.

(ii) Central Council for Research in Homoeopathy (CCRH) is effectively disseminating its research outcomes through various awareness related activities as well, which are as follows:-

- It is regularly participating in national/ state level Arogya Melas/ Health camps/ exhibition to promote homoeopathy amongst general masses organized by Ministry of Ayush.
- As part of Information Education and Communication program, Council has developed information and education material for the public which are distributed free to the public in Exhibitions/Health Melas / Seminars etc.
- Health Camps are undertaken at SC dominated villages to popularize homoeopathy in these areas.
- Participating in poshan maha abhiyan through its centers
- Participating in the activities related to Azadi ka Amrit Mahotsav.
- Providing healthcare services through the OPDs/IPDs of the above institutes/units and treatment centres.
- It also publishes a quarterly CCRH Newsletter which is accessible online.

Annexure

Details of funds allocated to various research councils/ national institutes/ subordinate offices/ statutory bodies under Ministry of Ayush for the development of Ayush sector including Ayush Research and development projects in the last three years

S. No.	Last 3 years	Amount Allocated (Rs. in crores)
1.	2021-22	1318.735
2.	2022-23	1357.98
3.	2023-24	1449.116
Total		4125.831