

ANNUAL REPORT 2016-2017



CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE

Annual Report

2016-2017



CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE

Ministry of AYUSH, Government of India
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CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE

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1. OVERVIEW

1.1 OBJECTIVES OF THE COUNCIL

The Central Council for Research in Unani Medicine (CCRUM) is an autonomous organization under the Ministry of Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy (AYUSH), Government of India. It was established on 30 March 1978 under Societies Registration Act, 1860; however, it started functioning from 10 January 1979. The main objectives of the Council are as follows:

- Formulation of aims and patterns of research on scientific lines in Unani Medicine
- To undertake research or any other programmes in Unani Medicine
- Prosecution of and assistance in research and propagation of knowledge and experimental measures generally in connection with the causation, mode of spread and prevention of diseases
- To initiate, aid, develop and coordinate scientific research on different aspects, fundamental and applied, of Unani Medicine, and to promote and assist institutions of research for the study of diseases, their prevention, causation and remedy
- To finance enquiries and researches for the furtherance of the objectives of the Council
- To exchange information with other institutions, associations and societies interested in the objectives similar to those of the Council, especially in the observation and study of diseases in the East in general, and in India in particular
- To prepare, print, publish and exhibit any papers, posters, pamphlets, periodicals and books for furtherance of the objectives of the Council and to contribute to such literature

1.2 PROGRAMME-WISE ACHIEVEMENTS

The Financial Year 2016–2017 was very fruitful for the Council. During this period, the Council took various new initiatives besides continuing its ongoing research activities in the areas of core research namely; Survey and Cultivation of Medicinal Plants, Drug Standardization Research, Clinical Research and Literary Research, and supplementary areas like information, education and communication and extension of healthcare services through a network of 23 centres throughout the country. During the period under report, the Council launched *Swasthya Rakshan* Programme, a project on integration of Unani Medicine in National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases & Stroke (NPCDCS), and postgraduate and doctoral programmes in Unani Medicine. The Ministry of AYUSH declared 11th February, the birthday of Hakim Ajmal Khan, as National Unani Day and instructed the Council to start CCRUM Award Scheme for outstanding contributions in the field of research in Unani Medicine. Consequently, the Council organized a function to celebrate the first National Unani Day and confer CCRUM Award at Central Research Institute of Unani Medicine, Hyderabad on 11 February 2017.

The *Swasthya Rakshan* Programme was launched on the directive of the Ministry of AYUSH in consonance with 'Swachh Bharat Abhiyan' (Clean India Mission) initiated by the Government

of India to accomplish the vision of 'Clean India'. The main objective of the programme is to provide Unani treatment, organize camps for screening and early diagnosis of diseases in rural areas and create awareness among masses about health and hygiene. It was started through Council's 12 institutes/centres covering 60 villages predominantly populated by underprivileged and weaker sections.

The project on integration of Unani Medicine in NPCDCS was launched through the Council's Central Research Institute of Unani Medicine, Lucknow. The project covers 17 Community Health Centres (CHCs), 54 Primary Health Centres (PHCs) and NPCDCS Cell at District Hospital of Lakhimpur Kheri. The objective of the project is to ensure prevention and early diagnosis of lifestyle diseases, reduce complications and drug dependency and supplement NPCDCS in preservation and promotion of health.

The postgraduate and doctoral programmes in Unani Medicine were launched with a view to link education with research and utilize the comprehensive facilities available at the Council's institutes. Under this initiative, MD in Unani Medicine was started in *Mu'āljāt* (Medicine) and *ʿIlm al-Adwiya* (Pharmacology) with seven seats each at Central Research Institute of Unani Medicine, Hyderabad and Regional Research Institute of Unani Medicine, Srinagar in affiliation with Kaloji Narayana Rao University of Health Sciences, Warangal (Telangana) and University of Kashmir, Srinagar respectively. Whereas, PhD in Unani Medicine was also started in the two disciplines with three seats in each at Central Research Institute of Unani Medicine, Hyderabad in affiliation with Jamia Millia Islamia, New Delhi.

The continuing activities also witnessed good outcomes during the reporting period. Under the Survey and Cultivation of Medicinal Plants Programme, ethnopharmacological surveys were conducted in different forest divisions/areas. The areas included Haridwar and Chakrata Forest Divisions, Uttarakhand; Bhadrak, Balasore and Boudh Forest Divisions, Odisha; Kallakurichi Forest Division and Kalakadu Mundanthurai Tiger Reserve (KMTR), Tamil Nadu; Hyderabad and Medak Forest Divisions, Telangana; Guntur Forest Division, Andhra Pradesh; and Bandipora Forest Division, Jammu & Kashmir. As a result of these surveys, 3,140 botanical specimens were collected and 895 plant species were identified. Of the plant specimens collected, herbarium sheets of 2,042 containing their basic details were prepared, and 273 herbarium sheets were digitized. Besides, 564 new index cards were compiled and 455 index cards were updated. The survey team also recorded 606 folk medicinal claims from the tribal inhabitants and other rural folks of the study areas. Besides, 200 kg of raw drugs and 690 saplings of important medicinal species were collected for plantation in the nurseries of the Council. Experimental and large-scale cultivation of some important medicinal species was also undertaken that yielded 295 kg of raw drugs. About 160 common species of medicinal plants used in Unani Medicine were maintained in the nurseries of the Council's centres.

Under the Drug Standardization Research Programme, SOPs for manufacture of 36 Unani formulations and their pharmacopoeial standards were developed. Besides, pharmacopoeial standards for 10 single drugs were developed. Also, 151 samples of single drugs and 34 formulations prepared at the Council's pharmacy were tested for their quality control and the data were documented. The shelf-life studies to fix the expiry of medicines were in progress on four Unani formulations. In addition, redesigning of dosage form of four Unani classical formulations was completed and work on another four was in progress. The activity for

isolation of molecules of different single drugs was also undertaken at Chemical Research Unit, Aligarh. As the Secretariat for Unani Pharmacopoeia Committee (UPC), the Council initiated rearranging the contents of National Formulary of Unani Medicine (NFUM) as per the new format provided by Pharmacopoeia Commission of Indian Medicine and Homoeopathy (PCIM&H). It also completed revisiting and reviewing of Unani Pharmacopoeia of India (UPI), Part-I (Single Drugs) and UPI Part-II (Formulations) and initiated rearranging the contents of Part-I as per the new format provided by the PCIM&H. The UPI-II, Volume-III was printed during the year by the PCIM&H.

Under the Clinical Research Programme, preclinical safety evaluation studies, clinical studies and validation of safety and efficacy of classical / pharmacopoeial formulations / regimen therapies / fundamentals of Unani Medicine continued. Besides, research under new intramural research (IMR) policy and collaborative research continued.

During the reporting period, preclinical safety and pharmacological studies on 13 classical Unani drugs including one modified form were undertaken.

In clinical research, eight studies on different diseases continued. Four randomized controlled trials (RCTs) - one each on *Dhayābītus Sukkarī Qism-i Thāni* (Diabetes Mellitus Type-II), *Daḡḡ al-Dam Qawī Lāzimī* (Essential Hypertension), *Waram al-Kabid* (Infective Hepatitis) and *Baras* (Vitiligo) continued. Clinical validation of 34 Unani pharmacopoeial formulations in 30 diseases also continued. Clinical validation of another 25 Unani pharmacopoeial formulations in 25 diseases was initiated. Besides, clinical validation of seven Unani pharmacopoeial fast-acting drugs in seven diseases continued and clinical validation of another five formulations in five diseases was initiated.

Various regimen therapy procedures were also performed on a total of 8,513 patients of different diseases. *Hijāma bilā Shart* (Dry Cupping) was performed on 2,984 patients, *Hijāma bi'l Shart* (Wet Cupping) on 867, *Hijāma bi'l Nār* (Fire Cupping) on 195, *Hijāma Muzliqa* (Moving Cupping) on 3,056, *Ta'liq al-'Alaq* (Leeching) on 593, *Ḥammām al-Bukhār* (Steam Bath) on 27, *Dalk Mu'tadil* (Moderate Massage) on 704, *Ḥammām Yābis* (Sauna) on 20, *Naṭūl* (Fomentation) on 41 and *Inkibāb* (Vaporization) on 26 patients.

With a view to scientifically validate the fundamentals of Unani Medicine like the concepts of humors and temperaments, six genetic studies continued and clinical assessment of temperament of 5,211 patients was done and susceptibility of acquiring diseases in relation to the temperament of the patients was studied.

Under the recently adopted intramural research policy, six projects continued from the previous year and four new projects were initiated.

The Council also undertakes research in collaboration with other prestigious institutes like All India Institute of Medical Sciences, New Delhi, Jawaharlal Nehru Medical College, AMU, Aligarh, Jamia Millia Islamia, Vallabhbai Patel Chest Institute and Jamia Hamdard, New Delhi. During the reporting period, five studies continued and four new studies were initiated. The Council also has collaborations with the institutes of Indian Council of Medical Research, especially Institute of Cytology and Preventive Oncology, Noida; National Institute for Research in Tuberculosis, Chennai; and National Institute of Nutrition, Hyderabad.

Under the Literary Research Programme, Urdu translation of Persian book *Mujarrabāt-i Rizāi* was published while the vetting of its English translation was completed. The Council was also able to publish the second volume of 'Standard Unani Treatment Guidelines for Common Diseases' which covers 60 diseases including many lifestyle disorders. Contrary to the first volume, a list of basic investigations has also been given. The proceedings of 'National Seminar on Hakim Ajmal Khan's Multidimensional Personality and Enduring Contributions' organized by the Council during 12-13 February 2016 was also published as *Nuqush-i Ajmal* comprising 29 papers. Vetting of Urdu translation of Persian book *Muḥīt-i A'zam*, Volume-IV and Urdu translation of Arabic book *Kitāb Manāfi' al-Aghdhiya wa Daf-i Maḍārrihā* and Persian book *Qarābādīn-i Jalālī* continued during the reporting period. The work on the monographs – *Adwiya Qalbiyya* (Drugs acting on Heart), *Adwiya Kabidiyya* (Drugs acting on Liver), *Adwiya Kulawiyya* (Drugs acting on Kidneys), *Hijāma* (Cupping Therapy) and Cosmetology in Unani Medicine continued. For distribution in 'Swasthya Rakshan Programme' and NPCDCS, the publicity material on various topics was compiled and published. The work of abstracting *Jahan-i Tib's* articles in English continued and 110 articles were abstracted during the reporting period.

Research-oriented healthcare services continued at GOPDs and special OPDs of 21 clinical centres of the Council. During the reporting period, a total of 4,96,859 patients comprising 4,36,173 patients in GOPDs, 27,789 in Geriatric OPDs, 13,092 in RCH/ MCH OPDs, and 19,805 in OPDs for Post-trial Access were treated at different centres. Under the Mobile Clinical Research Programme, 29 rural pockets/ urban slums covering over five lakh populations were adopted and a total of 26,800 patients were treated with Unani pharmacopoeial formulations in 638 mobile visits made to these pockets during the reporting period. Apart from providing healthcare, health awareness was also created among the masses through group meetings and public lectures. Under the School Health Programme, 5,472 children from 17 schools were covered, of which health check up was conducted for 5,165 and 2,584 suffering from different ailments were treated in 125 visits. To educate them on healthy living, 35 lectures were also delivered. Also, 24 health camps, in addition to those organized under NPCDCS and SRP, were organized and 18,944 patients were treated in these camps. The Council also participated in a month-long Magh Mela at Sangam, Allahabad (UP) and treated 5,726 patients of different ailments.

The two Unani Medical Centres functioning under the scheme of collocation of AYUSH centres in Dr. RML Hospital and DDU Hospital treated 34,464 patients and 16,039 respectively.

Under the Gender Component Plan for Women, 2,60,099 female patients in different OPDs were treated. Clinical studies on the diseases specific to women such as *Sayalān al-Raḥīm* (Leucorrhoea) and *Sū' al-Qinya* (Anaemia) also continued. Unani physicians also delivered lectures to create health awareness among the females.

Under the Activities in North Eastern Region, 18,286 patients were treated for their common and chronic ailments at the three clinical centres of the Council in the region.

Under the Special Component Plan – Scheduled Caste Sub-Plan (SCSP) and Tribal Sub-Plan (TSP), the Council continued research-oriented healthcare activities to benefit the SC/ ST population at the OPDs of its Institutes/ Units and also through mobile OPDs in the adopted

pockets, besides creating health awareness among the masses. During the reporting period, over 2.19 lakh SC and 0.40 lakh ST populations were covered. A total of 28,945 SC patients were treated at the GOPDs and 7,044 patients in the mobile OPDs. Similarly, 5,901 and 7,425 ST patients were treated in the GOPDs and mobile OPDs respectively.

With a view to disseminating the research findings, 105 research papers were presented at the national and international seminars / conferences and / or published in scientific journals.

During the reporting period, 53 publications including health awareness literature were also brought out. Publication of the Council's bi-monthly bulletin CCRUM Newsletter, quarterly Urdu journal *Jahan-i Tib*, quarterly English journal Hippocratic Journal of Unani Medicine, and publicity material continued.

Besides organizing National Seminar on Skin Diseases and Cosmetology in Unani Medicine, the Council organized seven such other events. Long-term training programmes on research methodology were organized at the Council's central and regional research institutes. The researchers of the Council also participated in various national / international seminars / events in different disciplines for their exposure to the latest updates in their respective fields. Under the capacity building programme, the Council's researchers also attended 31 training programmes / workshops organized by other scientific organizations.

The Council organized exhibitions and clinics in 29 Arogya fairs / expos and similar events to propagate Unani system of medicine, highlight its activities and achievements, provide free-of-cost diagnosis and treatment to the ailing visitors and create awareness among them about health and hygiene.

The Council continued promotion of the official language and organized Hindi Pakhwada at the Headquarters and different centres. Three workshops on Hindi language were also organized.

In the years to come, the Council proposes to focus its research activities on the development of drugs to treat emerging diseases like dengue fever besides continuing its ongoing activities and programmes. The emphasis would also be laid on exploiting the strengths and potentials of Unani system of medicine as adjuvant therapy to allopathic treatment in order to reduce the adverse effects of conventional medicines and improve the quality of life of patients suffering from various communicable and non-communicable diseases. Considering the fact that non-communicable diseases are a major global health problem, the Council will make efforts to employ and verify the various time-tested regimens for the safe and effective treatment of certain NCDs available in Unani Medicine and develop new drugs for the purpose. Besides, the work on the development of standard operating procedures for regimen therapies would be prioritized.

New Delhi
21 December 2017



Dr. Anil Khurana
Director General (I/C)

2. MANAGEMENT

The management of the affairs of the Council is entrusted with a Governing Body (GB) consisting of official and non-official members.

2.1 GOVERNING BODY

The constitution of the GB of the Council as on 31 March 2017 was as given below:

President

Minister of State (Independent Charge), Ministry of AYUSH, Government of India

Vice-President

Secretary, Ministry of AYUSH, Government of India

Vice-President (Technical)

Hakim Khurshid Murad Siddique, Bareilly (UP)

Official Members

- Additional Secretary & Financial Advisor, Ministry of Health & Family Welfare/AYUSH, Government of India
- Joint Secretary (Dealing with CCRUM), Ministry of AYUSH, Government of India

Non-Official Members

- Dr. Mohammed Abdul Waheed, Hyderabad
- Hakim Sirajuddin Ahmed, Meerut
- Prof. Hasibunnisa, Bengaluru
- Dr. Madan Singh Jakhar, Faridabad
- Dr. Tasleem Bano, Jaipur
- Dr. Rameshwar Dayal, New Delhi
- Dr. Veena Gupta, New Delhi
- Prof. Arunabha Ray, Delhi
- Dr. Govind K Makharia, New Delhi

Member Secretary

- Director General, Central Council for Research in Unani Medicine

During the reporting period, no meeting of the Governing Body was held.

2.2 STANDING FINANCE COMMITTEE

The composition of the Standing Finance Committee (SFC) of the Council is as follows:

- Joint Secretary : Chairman
Ministry of AYUSH
Government of India
- Financial Advisor : Member
Ministry of AYUSH/Health & Family Welfare
Government of India
or his/her nominee not below the
rank of Section Officer
- One Technical member nominated : Technical Member
by the President of the Council
- Director General, CCRUM : Member-Secretary

During the reporting period, the SFC met thrice; firstly on 27 April 2016, secondly on 09 August 2016 and thirdly on 27 January 2017. Important recommendations made by the SFC at these meetings are as follows:

SFC meeting held on 27 April 2016

- The SFC recommended the proposal for renovation of different sections of the building of RRIUM, Srinagar through CPWD at an estimated cost not exceeding Rs. 28,37,200/-.
- The SFC recommended the proposals for establishment of a pharmacy at CRIUM, Lucknow and upgrading the pharmacy of CRIUM, Hyderabad.
- The SFC recommended the proposal for purchase of medical equipment for CRIUM, Hyderabad.
- The SFC recommended the proposal for appointment of contractual staff at various Institutes/Units of the Council for a period not exceeding one year.
- The SFC considered the proposal for enhancement of remuneration of Pharmacist/Compounder/Laboratory Technician from Rs. 15,000/- per month to Rs. 16,000/- per month prospectively.
- The SFC recommended the proposal for fitting aluminum grills in windows of the first and second floor rooms of the main building at CRIUM, Hyderabad through CPWD at an estimated cost not exceeding Rs. 59,96,568/-.
- The SFC considered the proposal for extension of AYUSH Wellness Centre at Rashtrapati Bhawan and recommended for its continuation till July 2017.
- The SFC recommended the proposal for production of corporate film and audio programs on DAVP rates not exceeding Rs. 15,17,125/- and Rs. 15,000/- (excluding taxes) per episode.
- The SFC recommended the proposal for conducting surveys of medicinal plants in different forest areas during 2016-2017.

SFC meeting held on 09 August 2016

- The SFC considered the annual accounts of the Council for the year 2015-16 and recommended for further processing.
- The SFC gave its nod in principle to the proposal for resuming the provision of Kit Medicines at the OPDs of the Council's peripheral Institutes/Centres and Arogya fairs, health camps, etc.
- The SFC recommended the proposal for fencing and landscaping of herbal garden of RRIUM, Chennai at an estimated cost not exceeding Rs. 4,83,931/-.
- The SFC considered and recommended the proposal for annual maintenance contract (electrical) at a cost not exceeding Rs. 68,11,907/- for maintenance of electrical installations in the Central Councils' Combined Building Complex (CCCBC).
- The SFC considered and recommended the proposal for annual maintenance contract (civil) at a cost not exceeding Rs. 28,74,870/- for annual repairing and maintenance of the CCCBC.

SFC meeting held on 27 January 2017

- The SFC considered the proposal for payment of TA/DA and other allowances to contractual workers and observed that the Council may follow the pattern being followed by other Research Councils in the matter.
- The SFC considered the proposal for enhancement of honorarium/TA to the Honorary Project Officers engaged in the peripheral institutes/units and recommended the enhancement from the existing amount of Rs. 7,000/- to Rs. 10,000/- per month effective from 01 June 2017.
- The SFC recommended the proposal for organization of National Seminar on Skin Diseases and Cosmetology in Unani Medicine at CRIUM, Hyderabad at an estimated cost not exceeding Rs. 30 lakh. The committee desired that efforts should be made to generate some revenue from the event.
- The SFC recommended the establishment of *'Ilāj bi'l Tadbīr* (Regimen Therapy) Unit at CRIUM, Hyderabad and Lucknow and RRIUM, Chennai at a cost not exceeding Rs. 30,85,823/-, Rs. 30,99,723/- and Rs. 68,71,843/- respectively.
- The SFC considered and recommended the extension of Swasthya Rakshan Programme for the 2nd year subject to the availability of funds with the Council.
- The SFC considered the progress made in NPCDCS and recommended its extension for the 2nd year provided that the required funds are made available to the Council.
- The SFC recommended the proposal of yearly budget for PhD programme of the Council through Jamia Millia Islamia at a cost not exceeding Rs. 7,90,000/- per semester.
- The SFC recommended the proposal for continuation of Clinical Research Pilot Project at Imphal, Manipur for a further period of two years alongwith its existing contractual staff effective from 01 May 2017.

2.3 INSTITUTIONAL ETHICS COMMITTEE

It is mandatory that all the proposals on biomedical research involving human participants should be approved by a duly constituted Institutional Ethics Committee (IEC) to protect their welfare and rights. At present, there are 16 Institutional Ethics Committees functioning at various Institutes/Units of the CCRUM. These committees review and approve all the research proposals involving human participants. The committees also examine the compliance with regulatory requirements, applicable guidelines and laws.

Central Research Institute of Unani Medicine (CRIUM), Hyderabad

- Dr. Kaiser Jamil
Research Director
Mahavir Hospital & Research Centre
Hyderabad
Chairperson
- Dr. MUR Naidu
Former Dean
Faculty of Medicine
Nizam's Institute of Medical Sciences
Hyderabad
Member
- Dr. Mushtaq Ahmad
Former Director
CRIUM, Hyderabad
Member
- Dr. Mir Yousuf Ali
Additional Director
Department of AYUSH
Government of Telangana
Member
- Dr. K Nagaiah
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Indian Institute of Chemical Technology
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Member
- Mrs. Sumia Fatima
Assistant Professor
Shadan College of Pharmacy
Hyderabad
Member
- Mr. Syed Taher
Advocate
Hyderabad
Member
- Mr. Shamsheer Ali
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Hyderabad
Member
- In-charge
CRIUM, Hyderabad
Member Secretary

Central Research Institute of Unani Medicine (CRIUM), Lucknow

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Advisor to the Vice Chancellor
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- Dr. Roshan Alam
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Principal, State Takmil-ut-Tib College & Hospital
Lucknow Member
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Specialist Physician
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Lucknow Member
- Dr. Abdul Quddus Khan
Former Senior Lecturer
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Lucknow Member
- Mr. IH Farooqui
Advocate
Assistant Solicitor General of India
Lucknow Bench of Allahabad High Court
Lucknow Member
- Mr. Ateeq Ahmad Bastawee
Secretary
Islamic Fiqh Academy
Lucknow Member
- Mr. MM Ansari
Lucknow Member
- In-charge
CRIUM, Lucknow Member Secretary

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- Dr. Syed MM Ameen
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- Mr. H Sadiq Basha
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Member Secretary

Regional Research Institute of Unani Medicine (RRIUM), Mumbai

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Chairperson

- Prof. Isa Nadvi
Former Head, Department of Preventive and Social Medicine
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Regional Research Institute of Unani Medicine (RRIUM), Srinagar

- Dr. Zahoor Ahmad Wafai
Head, Department of Clinical Pharmacology
Sher-i-Kashmir Institute of Medical Sciences
Srinagar
Chairperson
- Dr. Abdul Kabir Dar
Director General, ISM
Jammu & Kashmir
Member
- Dr. Mohammad Iqbal
Dean
Kashmir Tibbia College
Srinagar
Member
- Prof. Shariq Masoodi
Department of Endocrinology
Sher-i-Kashmir Institute of Medical Sciences
Srinagar
Member

- Prof. Aneesa Shafi
Department of Sociology
University of Kashmir
Srinagar
Member
- Prof. Ghulam Qadir Mir
Department of Law
University of Kashmir
Srinagar
Member
- Mr. Abdul Hameed Banday
Srinagar
Member
- Mr. Ghulam Rasool Butt
Srinagar
Member
- In-charge
RRIUM, Srinagar
Member Secretary

Regional Research Institute of Unani Medicine (RRIUM), Aligarh

- Prof. KMY Amin
Department of Ilmul Advia
Ajmal Khan Tibbiya College
Aligarh Muslim University
Aligarh
Chairperson
- Prof. AB Khan
Former Dean
Faculty of Unani Medicine
Ajmal Khan Tibbiya College
Aligarh Muslim University
Aligarh
Member
- Prof. MMW Amin
Chairman, Department of Ilmul Amraz
Ajmal Khan Tibbiya College
Aligarh Muslim University
Aligarh
Member
- Prof. A Mannan
Department of Moalajat
Ajmal Khan Tibbiya College
Aligarh Muslim University
Aligarh
Member
- Mr. Zakiuddin Khairuwala
Advocate, Civil Court
Aligarh
Member

- Dr. M Laiq Ali Khan
President
Hakim Ajmal Khan Foundation
Kasganj
Member
- Mufti Suhaib Ahmad Khan
Theologian
Madrassa Tameer-e-Millat
Aligarh
Member
- Mr. Abdul Majid Khan
Aligarh
Member
- In-charge
RRIUM, Aligarh
Member Secretary

Regional Research Institute of Unani Medicine (RRIUM), New Delhi

- Prof. Prem Kapoor
Department of Medicine
Hamdard Institute of Medical Sciences & Research
New Delhi
Chairperson
- Dr. KK Sharma
Formerly Head
Department of Pharmacology
Guru Teg Bahadur Hospital
New Delhi
Member
- Prof. MA Jafri
Head, Department of Ilmul Advia
Jamia Hamdard
New Delhi
Member
- Dr. Yasmin Shamsi
Associate Professor
Department of Moalajat
Jamia Hamdard
New Delhi
Member
- Dr. Muzayyana Khatoon
Chief Medical Officer
North MCD Dispensary
New Delhi
Member
- Mr. Farid Ahmad Khan
Advocate, Delhi High Court
New Delhi
Member

- Mr. Ata-ur-Rahman
Programme Manager
Mamta Health Institute for Mother & Child
New Delhi
Member
- Dr. Aslam Javed
Managing Director
Unani Herbal
New Delhi
Member
- Mr. Mohd Qasim Ansari
National Council for Promotion of Urdu Language
New Delhi
Member
- In-charge
RRIUM, New Delhi
Member Secretary

Regional Research Institute of Unani Medicine (RRIUM), Kolkata

- Dr. Tapas Bera
Associate Professor
NRS Medical College
Kolkata
Chairperson
- Dr. Israr Ahmad Ansari
Chief Medical Officer (Unani)
CGHS
Kolkata
Member
- Dr. Hakimuddin Akhtar
Consultant Physician
BM Birla Heart Research Centre
Kolkata
Member
- Mr. Rajiv Kumar Pandey
Legal Expert
Kolkata
Member
- Dr. Pardeep Kumar Dubey
Member
Association of Protection
for Democratic Human Rights of India
Kolkata
Member
- Hakim Abdul Jaleel
Honorary Consultant
RRIUM
Kolkata
Member

- Mr. Nadeem Ahamad
Member
Islamia Hospital
Kolkata
- In-charge
RRIUM, Kolkata

Regional Research Institute of Unani Medicine (RRIUM), Patna

- Prof. Alauddin Ahmad
Former Vice-Chancellor
Jamia Hamdard
New Delhi
- Dr. MP Tripathi
Sri Guru Gobind Singh Hospital
Patna
- Dr. Arvind Kumar
Senior Medical Officer
Sri Guru Gobind Singh Hospital
Patna
- Dr. Md. Zahid Iqbal
Reader
Government Tibbi College
Patna
- Mr. Haroon Rasheed
Programme Manager for Social Development
Government of Bihar
- Mr. Syed Shah Shamimuddin
Former Head
Department of Arabic, Oriental College
Patna
- Mr. Mohd. Qasim Chand
Patna
- In-charge
RRIUM, Patna

Regional Research Institute of Unani Medicine (RRIUM), Bhadrak

- Prof. Debashish Hota
Head, Department of Pharmacology
AIIMS, Bhubaneswar

- Dr. Mohammad Kamal Khan
Medical Officer (Unani)
Government Unani Dispensary
Bhadrak
Member
- Dr. Sayed Mozammil Ali
Medical Officer (Unani)
Government Unani Dispensary
Balasore
Member
- Mr. Shaikh Zulfiqar Ali
Advocate
Bhadrak District Court
Member
- Mr. SM Farooque
Chairman, Fellowship (NGO)
Bhadrak
Member
- Mr. Mohammad Abdul Bari
Bhadrak
Member
- Mr. Shaikh Anwar Hussain
Bhadrak
Member
- In-charge
RRIUM, Bhadrak
Member Secretary

Regional Research Centre (RRC), Silchar

- Dr. Pinaki Chakravarty
Associate Professor
Department of Pharmacology
Silchar Medical College & Hospital
Silchar
Chairperson
- Dr. Mahbub Alam Khan
Department of Radiology
SM Dev Civil Hospital
Silchar
Member
- Dr. Suhel Uddin
Consultant
New Life Line Hospital
Karimganj
Member
- Dr. Mehboob Hussain Choudhury
Resident, Badarpur Hospital
Karimganj
Member
- Mr. Ramizur Rahman Barlaskar
Advocate
Silchar Bar Association
Silchar
Member

- Mr. Samsul Ahmed Laskar
Secretary
Multipurpose Community Centre
Silchar
Member
- Mr. Sirajuddin Barbhuiya
Superintendent
Senior Madarsa
Silchar
Member
- Mr. Nazrul Islam Barbhuiya
Silchar
Member
- In-charge
RRC, Silchar
Member Secretary

Regional Research Centre (RRC), Allahabad

- Dr. Tariq Mahmood
Associate Professor
Moti Lal Nehru Medical College
Allahabad
Chairperson
- Dr. PK Sinha
Former Chief Medical Officer Allahabad &
President, Vikalp Sewa Samiti
Allahabad
Member
- Dr. Naeem Ahmad
Reader
State Unani Medical College
Allahabad
Member
- Dr. Rakesh Kumar Chaurasia
Associate Professor
Moti Lal Nehru Medical College
Allahabad
Member
- Mr. Farooq Ahmad Khan
Advocate
Allahabad High Court
Allahabad
Member
- Prof. Pradeep Bhargava
Director
Govind Ballabh Pant Social Sciences Institute
Allahabad
Member
- Mr. Anwar Azam Islahi
Allahabad
Member

- Mr. Mohammad Anees
Managing Director, Dulhan Palace
Allahabad Member
- In-charge
RRC, Allahabad Member Secretary

Clinical Research Unit (CRU), Bhopal

- Prof. S Nafeesa Bano
Head, Department of Obs & Gyanae
HSZH Government Unani Medical College
Bhopal Chairperson
- Dr. SM Abbas Zaidi
Lecturer
Department of Moalajat
HSZH Government Unani Medical College
Bhopal Member
- Dr. Bhawana Bhimte
Associate Professor
Department of Biochemistry
Gandhi Medical College
Bhopal Member
- Mr. Zafar Hassan
Social Worker
Bhopal Member
- Mr. Dileep Kumar Sharma
Advocate
Bhopal Member
- Mr. Mathew John
Bhopal Member
- In-charge
CRU, Bhopal Member Secretary

Clinical Research Unit (CRU), Meerut

- Dr. Azhar Javed
Consultant Physician
City Health Care Centre
Khatauli, Uttar Pradesh Chairperson
- Dr. Pradeep Jain
Consultant Physician City Hospital
Meerut Member

- Dr. Hira Lal Bhalla
Associate Professor
Subharti Medical College
Meerut
Member
- Dr. Mehboob Ali
Lecturer
Allama Iqbal Unani Medical College
Muzaffar Nagar
Member
- Mr. Mohammad Aslam
Advocate
Collectorate of Meerut
Member
- Mr. Laiqur Rehman Khan
Secretary
Bhartiya Grameen Seva Sansthan
Meerut
Member
- Mr. Afifullah
Urdu & Arabic Expert
Meerut
Member
- Mr. Sarfraz Ahmad
Meerut
Member
- In-charge
CRU, Meerut
Member Secretary

Clinical Research Unit (CRU), Kurnool

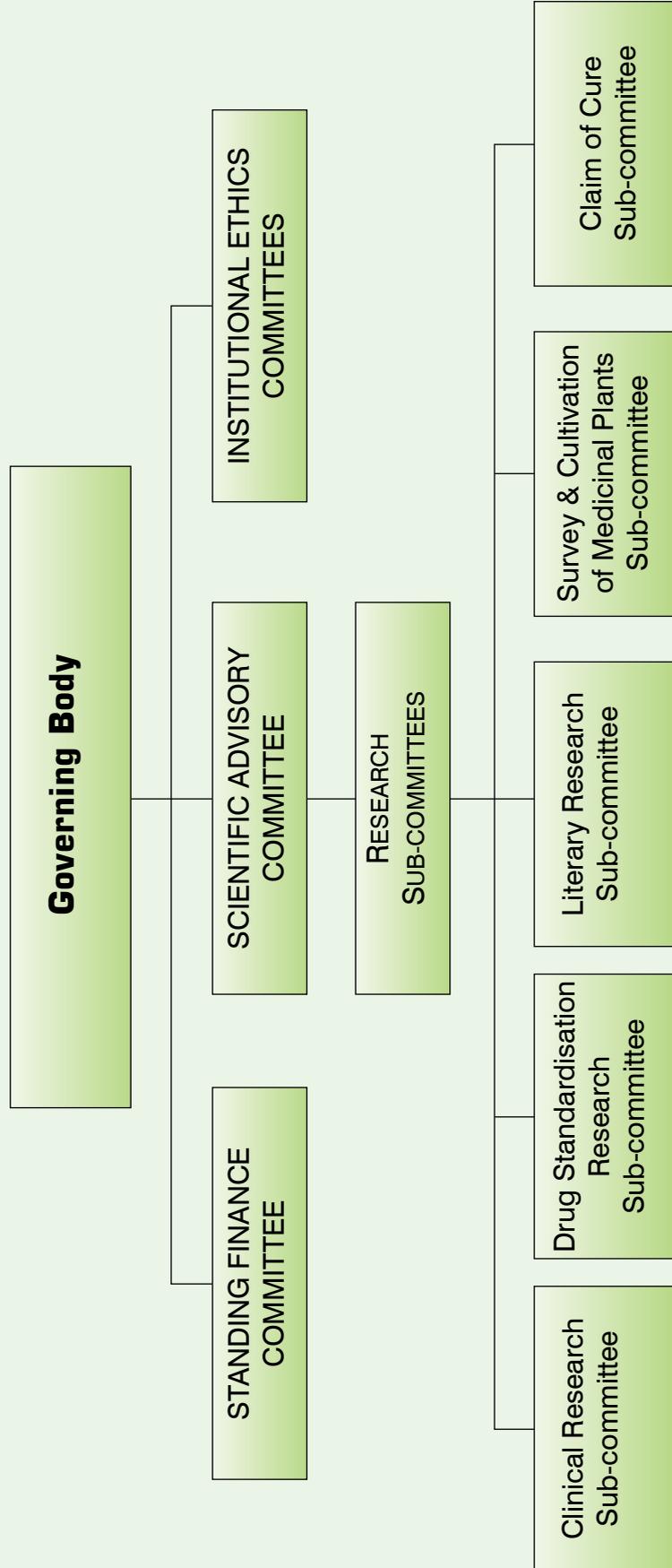
- Dr. Habibullah
Principal
Dr. Abdul Haq Unani Medical College
Kurnool
Chairperson
- Mr. AS Omair Javed
Advocate
Kurnool
Member
- Dr. Abdul Haq
Former Professor
Osmania College
Kurnool
Member
- Mr. H Mohammad Iqbal
Kurnool
Member
- Dr. Abdul Rahim Quazi
Former Chief Medical Officer (Unani)
Central Government Health Services
Kurnool
Member

- Mr. Syed Zakir Ahmed Rasheedi
Kurnool Member
- In-charge
CRU, Kurnool Member Secretary

Clinical Research Unit (CRU), Kerala

- Dr. KT Ajmal
Managing Director
Calicut Unani Hospital
Kozhikode Chairperson
- Dr. SN Veenasree
Head, Department of Pharmacology
Government Medical College
Ernakulum Member
- Dr. MA Lukman
Jeeva Unani Hospital
Ernakulum Member
- Mr. TK Naser
Aluva, Ernakulum Member
- Mr. MK Abu
President
Edathala Service Cooperative Bank Ltd. Member
- Mr. Layaq Ali
Edathala Member
- Mr. Jamal Moulavi
Edathala Member
- In-charge
CRU, Edathala, Kerala Member Secretary

Management of the Council



2.4 SCIENTIFIC ADVISORY COMMITTEE

The Scientific Advisory Committee (SAC) of the Council consists of the following:

- | | |
|--|------------------|
| • Dr. MA Waheed
Hyderabad | Chairman |
| • Dr. (Mrs.) Yasmeen Shamsi
New Delhi | Member |
| • Hakim Syed Imamuddin Ahmed
Chennai | Member |
| • Prof. Mushtaque Ahmed
Hyderabad | Member |
| • Prof. S Shakir Jamil
New Delhi | Member |
| • Prof. Alauddin Ahmad
Patna | Member |
| • Dr. Anurag Srivastava
New Delhi | Member |
| • Dr. Ruchika Kaul Ghanekar
Pune | Member |
| • Prof. Subhash Padhye
Pune | Member |
| • Director General, CCRUM | Member Secretary |

During the reporting period, the SAC met on 28 May 2016 and 21 January 2017. Important recommendations of the committee are as follows:

SAC meeting held on 28 May 2016

- The SAC considered 20 protocols for research projects on validation of Unani pharmacopoeial drugs and recommended them with certain modifications.
- The SAC considered the IMR projects received from different centres of the Council and directed to get them evaluated through a committee of experts.
- The SAC recommended translation of *Iksir-i Azam* (Persian) into Urdu language through outsourcing.
- The SAC recommended four proposals for collaborative projects received from researchers at Aligarh Muslim University and Jamia Hamdard. The titles of the projects are as follows:
 - ❖ To study the efficacy of *Majoon Dabid-ul-Ward* as an adjuvant therapy in lung cancer.
 - ❖ Pharmacological evaluation of a herbal (Unani) formulation for anti-gout, anti-inflammatory and antioxidant activities in experimental rat model.

- ❖ Effect of some natural compounds on the glycation of superoxide dismutase: Implication in the treatment of diabetic complications.
- ❖ Clinical study on anti-inflammatory and immunomodulating effects of *Hijāma bi'l Sharṭ* (wet cupping) in the treatment of knee osteoarthritis.
- The SAC recommended the proposal for upgradation of pharmacy at CRIUM, Hyderabad involving an approximate financial investment of Rs. 2,08,50,000/-. The committee also recommended the proposal for establishment of pharmacies at RRIUM, Chennai and CRIUM, Lucknow.

SAC meeting held on 21 January 2017

- The committee recommended the scheme of awards to be conferred on researchers and academicians of Unani Medicine on the occasion of National Unani Day falling on 11th February, the birth anniversary of Hakim Ajmal Khan. The awards have five categories with a total cash prize of fifteen lakh rupees.
- The committee considered allotment of studies on validation of pharmacopoeial drugs in different diseases like *Itrifal Fauladi* in *Sū' al-Qinya*, *Habb-i-Suranjan* in *Waja' al-Mafāsil* and *Jawarish Bisbasa* in *Siman Mufrit*.
- The SAC considered and recommended the five IMR projects received from different institutes of the Council with the suggestion that they should be evaluated by a committee of experts before their final allotment.
- The SAC considered and recommended the proposal for organizing National Seminar on Skin Diseases and Cosmetology in Unani Medicine at CRIUM, Hyderabad.
- The SAC recommended the proposal for the establishment of 'Ilāj bi'l Tadbīr Units at CRIUM, Hyderabad and Lucknow and RRIUM, Chennai with an estimated cost of Rs. 30,85,823/-, Rs. 30,99,723/- and Rs. 68,71,843/- respectively.
- The committee considered the progress made in the first year of *Swasthya Rakshan* Programme and NPCDCS and recommended the projects for the second year with an estimated cost of Rs. 3,92,49,600/- and Rs. 5,17,01,600/- respectively.
- The committee considered and recommended the proposal for translation of literature on Unani Medicine in Spanish, Russian, French, Chinese, Arabic, Persian, Hindi and English languages through outsourcing on ICCR's approved rates.
- The committee considered and recommended the proposal for expansion of the project on Integration of Unani Medicine in NPCDCS in Aligarh (UP), Dehradun (Uttarakhand) and Karimnagar (Telangana) with a total budgetary requirement of Rs. 4.6 crore.

2.4.1 RESEARCH SUB-COMMITTEES

The SAC is assisted by five research sub-committees, namely Clinical Research Sub-committee, Drug Standardisation Sub-committee, Literary Research Sub-committee, Survey and Cultivation of Medicinal Plants Sub-committee and Claim of Cure Sub-committee. The composition of these sub-committees is as follows:

Clinical Research Sub-committee

- Prof. S Shakir Jamil
New Delhi Chairman
- Prof. Mir Yousuf Ali
Hyderabad Member
- Prof. M Anwar
Aligarh Member
- Prof. DS Arya
New Delhi Member
- Dr. Kashif Hanif
Lucknow Member
- Prof. KMY Amin
Aligarh Member
- Prof. V Srinivas
New Delhi Member
- DDG/AD(U), CCRUM Member Secretary

Drug Standardization Research Sub-committee

- Prof. Mohd Ali
New Delhi Chairman
- Prof. Amir Azam
New Delhi Member
- Dr. Rajeev Kumar Sharma
Ghaziabad Member
- Prof. Naeem A Khan
Aligarh Member
- Prof. MA Jafri
New Delhi Member
- Prof. Abdul Wadood
Bengaluru Member
- Dr. Shamshad Ahmad
Ghaziabad Member
- DDG/AD(U), CCRUM Member Secretary

Literary Research Sub-committee

- Prof. Anis Ahmad Ansari
Aligarh Chairman
- Hakim FR Misbahi
New Delhi Member

- Hakim Abdul Hannan
New Delhi Member
- Hakim Wasim Ahmad
Lucknow Member
- Dr. M Raziul Islam
New Delhi Member
- Dr. Mohammad Akram
University of Delhi, New Delhi Member
- DDG/AD(U), CCRUM Member Secretary

Survey and Cultivation of Medicinal Plants Sub-committee

- Prof. Wazahat Hussain
Aligarh Chairman
- Dr. YS Bedi
Jammu Member
- Hakim Shamsul Afaq
Aligarh Member
- Prof. Shahid Ansari
New Delhi Member
- Dr. SJ Hussain
Hyderabad Member
- Dr. Veena Gupta
New Delhi Member
- Dr. RD Girach
Hyderabad Member
- DDG/AD(U), CCRUM Member Secretary

Claim of Cure Sub-committee

- Hakim Syed Imamuddin Ahmed
Chennai Chairman
- Prof. Khalid Zaman Khan
Aligarh Member
- Prof. Asim Ali Khan
New Delhi Member
- Prof. BS Usmani
Mumbai Member
- Prof. MMW Amin
Aligarh Member

- Prof. M Akhtar Siddiqui
New Delhi Member
- Prof. Ashhar Qadeer
Aligarh Member
- DDG/AD(U), CCRUM Member Secretary

2.5 ORGANIZATIONAL SET-UP

The Council has its Headquarters at New Delhi and a network of 23 centres functioning in different parts of the country. These centres are as follows:

Centre	Number
Central Research Institute of Unani Medicine	02
Regional Research Institute of Unani Medicine	08
Regional Research Centre	02
Clinical Research Unit	06
Hakim Ajmal Khan Institute for Literary & Historical Research in Unani Medicine	01
Drug Standardization Research Institute	01
Drug Standardization Research Unit	01
Chemical Research Unit (Grant-in-aid)	01
Clinical Research Pilot Project	01

The Council's centres are based in different States. The following is the State-wise institutional network of the Council.

Andhra Pradesh

- Clinical Research Unit (CRU), Kurnool

Assam

- Regional Research Centre (RRC), Silchar with an extension centre at Karimganj

Bihar

- Regional Research Institute of Unani Medicine (RRIUM), Patna

Delhi

- Regional Research Institute of Unani Medicine (RRIUM), New Delhi
- Hakim Ajmal Khan Institute for Literary & Historical Research in Unani Medicine (HAKILHRUM), New Delhi
- Drug Standardization Research Unit (DSRU), New Delhi
- Unani Medical Centre (extension centre of RRIUM, New Delhi), Dr. Ram Manohar Lohia Hospital, New Delhi

- Unani Speciality Centre (extension centre of RRIUM, New Delhi), Deen Dayal Upadhyay Hospital, New Delhi

Jammu & Kashmir

- Regional Research Institute of Unani Medicine (RRIUM), Srinagar

Karnataka

- Clinical Research Unit (CRU), Bengaluru

Kerala

- Clinical Research Unit (CRU), Edathala (Alwaye) with an extension centre at Kumblanghi

Madhya Pradesh

- Clinical Research Unit (CRU), Bhopal
- Clinical Research Unit (CRU), Burhanpur

Maharashtra

- Regional Research Institute of Unani Medicine (RRIUM), Mumbai

Manipur

- Clinical Research Pilot Project, Imphal

Odisha

- Regional Research Institute of Unani Medicine (RRIUM), Bhadrak

Tamil Nadu

- Regional Research Institute of Unani Medicine (RRIUM), Chennai

Telangana

- Central Research Institute of Unani Medicine (CRIUM), Hyderabad

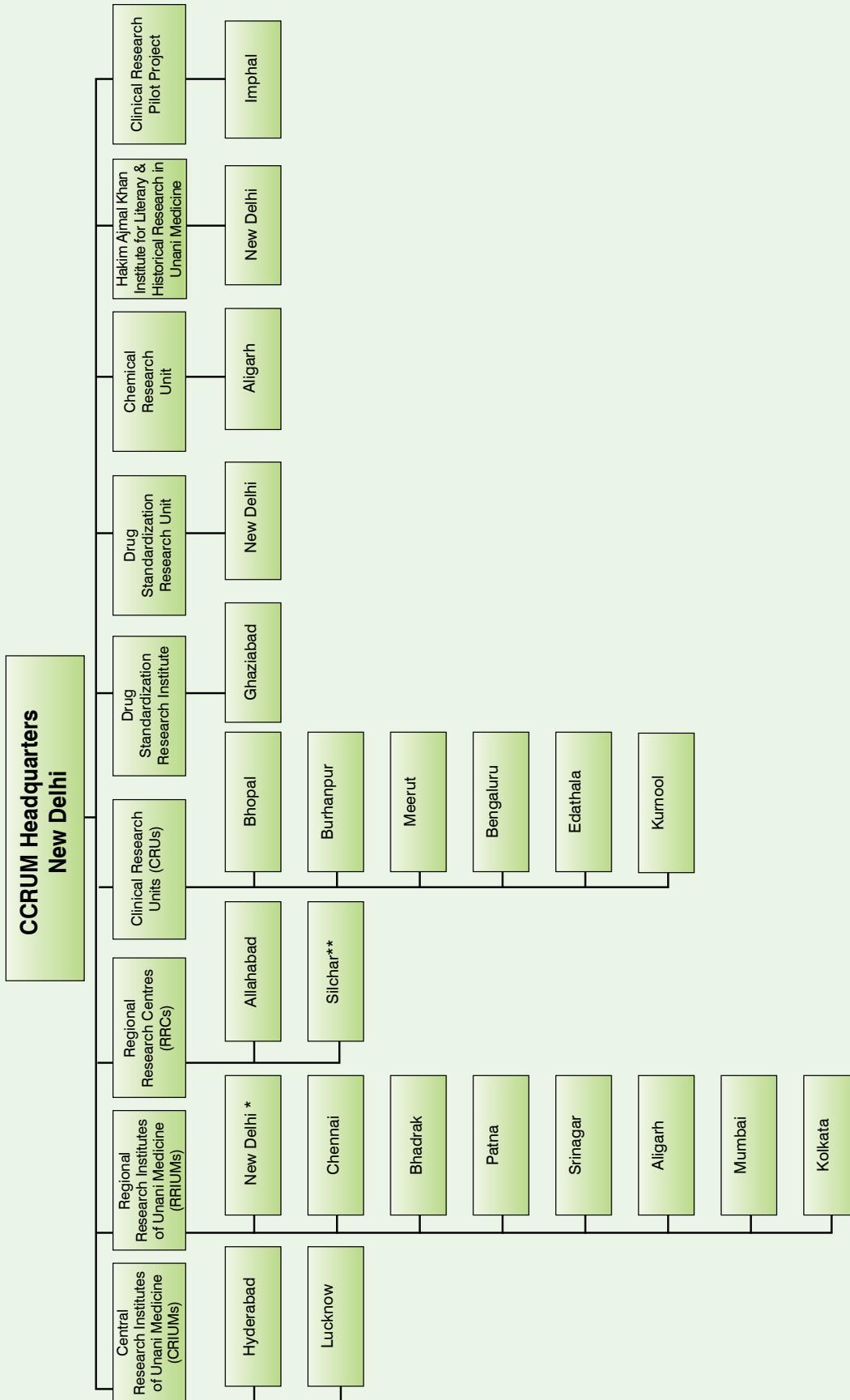
Uttar Pradesh

- Central Research Institute of Unani Medicine (CRIUM), Lucknow
- Regional Research Institute of Unani Medicine (RRIUM), Aligarh
- Drug Standardization Research Institute (DSRI), Ghaziabad
- Regional Research Centre (RRC), Allahabad
- Clinical Research Unit (CRU), Meerut
- Chemical Research Unit (Grant-in-aid), Aligarh

West Bengal

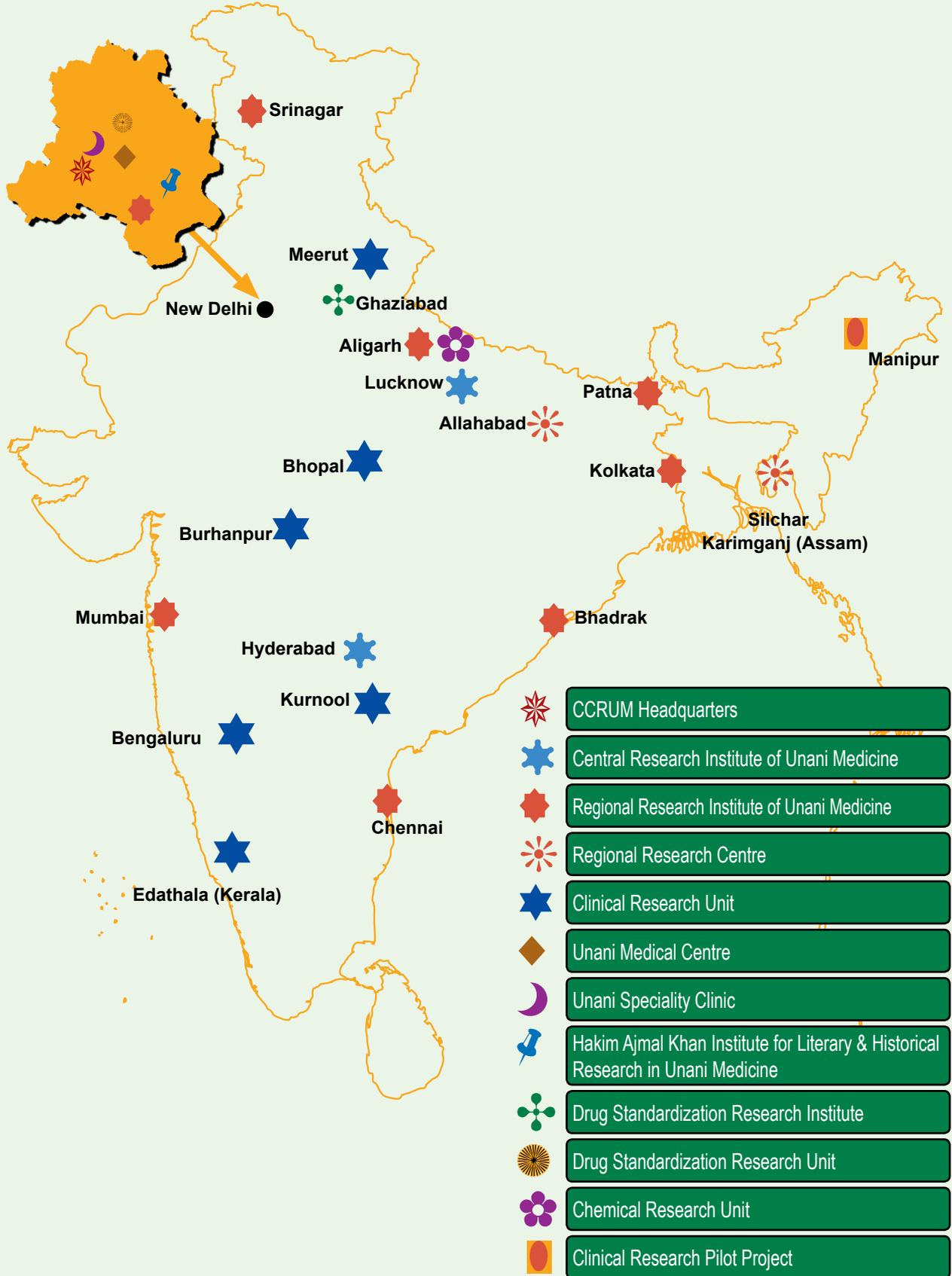
- Regional Research Institute of Unani Medicine (RRIUM), Kolkata

Organizational Set-up of the Council

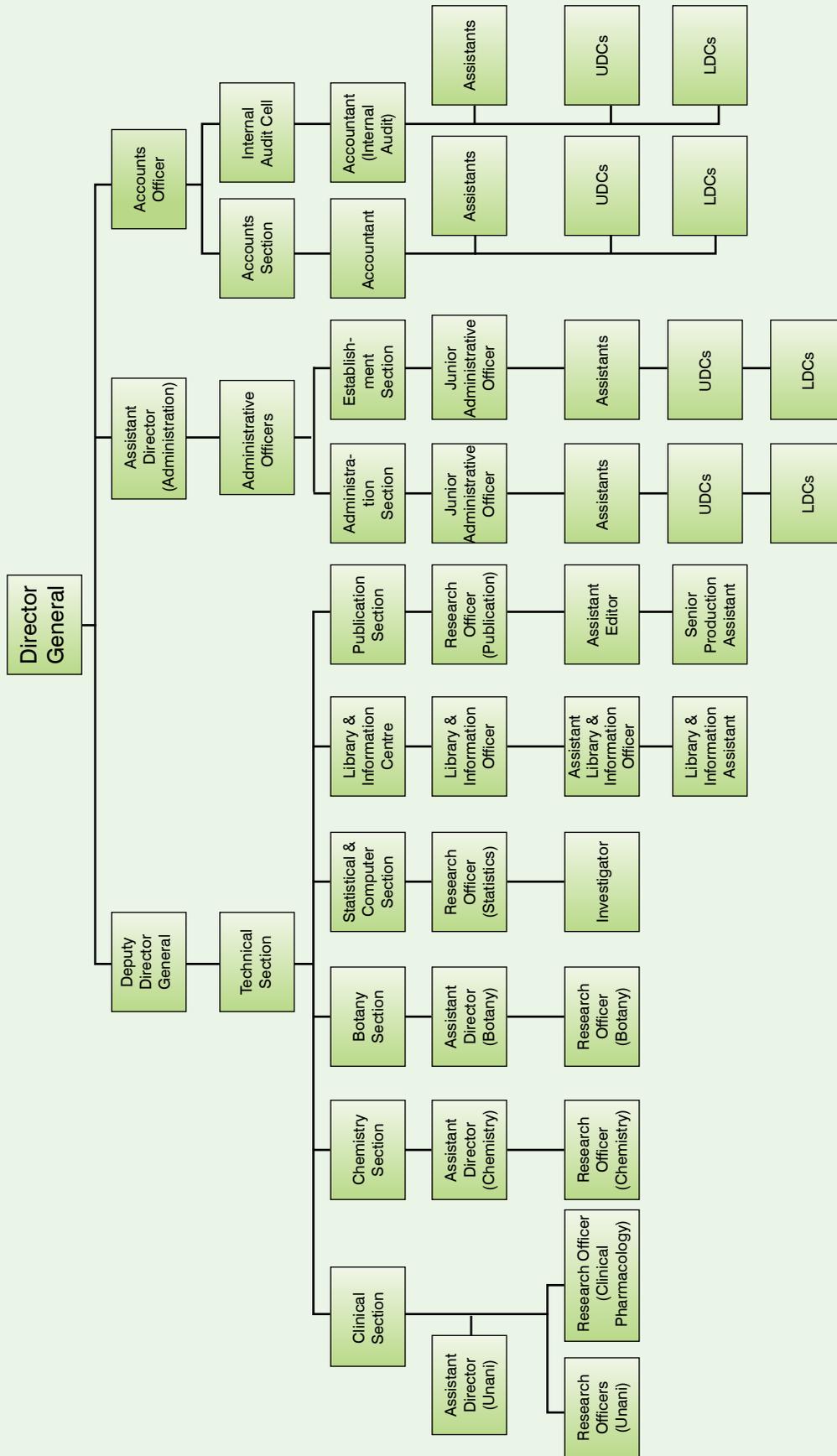


* With two extension centres in New Delhi
**With an extension centre in Karimganj

Institutional Network of CCRUM



Organizational Structure at the Headquarters



2.6 BUDGET (ACTUAL EXPENDITURE)

The centre-wise actual expenditure of the Council during 2016-17 was as follows:

(Rs. in thousands)

S. No.	Name of State and Centre	Non-plan	Plan	Total
1.	Andhra Pradesh			
	(i) CRU, Kurnool	2,280	31	2,311
2.	Assam (NER)			
	(i) CRU, Karimganj	-	7,720	7,720
3.	Bihar			
	(i) RRIUM, Patna	13,565	22,240	35,805
4.	Karnataka			
	(i) CRU, Bengaluru	6,462	431	6,893
5.	Jammu & Kashmir			
	(i) RRIUM, Srinagar	31,887	22,606	54,493
6.	Kerala			
	(i) CRU, Alwaye	3,438	4,628	8,066
7.	Madhya Pradesh			
	(i) CRU, Burhanpur	5,243	815	6,058
	(ii) CRU, Bhopal	-	6,708	6,708
8.	Maharashtra			
	(i) RRIUM, Mumbai	10,081	19,485	29,566
9.	Manipur (NER)			
	(i) Clinical Research Pilot Project	-	1,178	1,178
10.	New Delhi			
	(i) HAKILHRUM, New Delhi	18,830	1,832	20,662
	(ii) RRIUM, New Delhi	41,167	33,831	74,998
	(iii) CCCBC, New Delhi	-	30,385	30,385
	(iv) Headquarters, New Delhi	66,566	49,813	1,16,379

S. No.	Name of State and Centre	Non-plan	Plan	Total
	(v) DSRU, New Delhi	13,180	773	13,953
	(vi) UMC (RML), New Delhi	-	87	87
11.	Odisha			
	(i) RRIUM, Bhadrak	32,990	13,081	46,071
12.	Tamil Nadu			
	(i) RRIUM, Chennai	55,035	14,390	69,425
13.	Telangana			
	(i) CRIUM, Hyderabad	94,398	53,703	1,48,101
14.	Uttar Pradesh			
	(i) DSRI, Ghaziabad	14,537	1,140	15,677
	(ii) CRIUM, Lucknow	-	82,709	82,709
	(iii) RRC, Allahabad	9,219	4,575	13,794
	(iv) RRIUM, Aligarh	16,785	40,028	56,813
	(v) CRU, Meerut	-	24,642	24,642
15.	West Bengal			
	(i) RRIUM, Kolkata	-	17,917	17,917
16.	Other Expenditure			
	(i) Pension fund transfer	1,01,700	-	1,01,700
	(ii) Contribution to NPS	8,735	3,376	12,111
	(iii) CGHS Contribution	3,619	492	4,111
	(iv) Seminar/Workshop	-	9,584	9,584
	(v) Health Mela	-	3,651	3,651
	(vi) Training Programme	-	379	379
	(vii) Arogya	-	2,146	2,146
	(viii) EMR	-	217	217
	(ix) UPC	-	6	6
	(x) Collaborative Research Projects	-	3,140	3,140

S. No.	Name of State and Centre	Non-plan	Plan	Total
(xi)	Contribution to DST Projects	-	-	-
(xii)	Advance for Construction of Building	-	52,880	52,880
(xiii)	Council's Publication (Priced)	-	392	392
(xiv)	Medical Advance	29	-	29
(xv)	NPCDCS	-	27,657	27,657
(xvi)	Advance to Govt. Servants	-	-	-
(xvii)	Scooter	-	306	306
(xviii)	Car	-	360	360
(xix)	HBA	-	380	380
(xx)	Computer	-	752	752
(xxi)	DLIS	120	-	120
(xxii)	Leave Salary Cont.	-	-	-
(xxiii)	Ethical Committee	-	60	60
(xxiv)	GIA to CRU Aligarh	-	300	300
(xxv)	Swasthya Rakshan Parikshan Programme	-	11,242	11,242
(xxvi)	Exhibition	-	1,095	1,095
Grand Total S. No. 1 to 16		5,49,866	5,73,163	11,23,029

3. TECHNICAL REPORT

3.1 INTRAMURAL RESEARCH

3.1.1 CENTRE-WISE ACTIVITIES

CENTRE	ACTIVITIES
Central Research Institute of Unani Medicine (CRIUM), Hyderabad	<ul style="list-style-type: none"> • Survey and Cultivation of Medicinal Plants Programme • Drug Standardization Research Programme • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs o Validation of Regimen Therapies o Validation of Fundamentals • Research-oriented Healthcare <ul style="list-style-type: none"> o General Outpatient Department (GOPD) Programme o Mobile Clinical Research Programme • School Health Programme • Swasthya Rakshan Programme
Central Research Institute of Unani Medicine (CRIUM), Lucknow	<ul style="list-style-type: none"> • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs o Validation of Regimen Therapies • Research-oriented Healthcare <ul style="list-style-type: none"> o General Outpatient Department (GOPD) Programme o Mobile Clinical Research Programme • School Health Programme • Swasthya Rakshan Programme • Integration of Unani Medicine in NPCDCS
Regional Research Institute of Unani Medicine (RRIUM), Chennai	<ul style="list-style-type: none"> • Survey and Cultivation of Medicinal Plants Programme • Drug Standardization Research Programme • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs o Validation of Unani Pharmacopoeial Fast-acting Drugs o Validation of Regimen Therapies • Research-oriented Healthcare

CENTRE	ACTIVITIES
Regional Research Institute of Unani Medicine (RRIUM), Bhadrak	<ul style="list-style-type: none"> o General Outpatient Department (GOPD) Programme o Mobile Clinical Research Programme • School Health Programme • Swasthya Rakshan Programme • Survey and Cultivation of Medicinal Plants Programme • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs o Validation of Unani Pharmacopoeial Fast-acting Drugs o Validation of Regimen Therapies • Research-oriented Healthcare <ul style="list-style-type: none"> o General Outpatient Department (GOPD) Programme o Mobile Clinical Research Programme • School Health Programme • Swasthya Rakshan Programme
Regional Research Institute of Unani Medicine (RRIUM), Patna	<ul style="list-style-type: none"> • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs o Validation of Unani Pharmacopoeial Fast-acting Drugs o Validation of Regimen Therapies • Research-oriented Healthcare <ul style="list-style-type: none"> o General Outpatient Department (GOPD) Programme o Mobile Clinical Research Programme • School Health Programme • Swasthya Rakshan Programme
Regional Research Institute of Unani Medicine (RRIUM), Aligarh	<ul style="list-style-type: none"> • Survey and Cultivation of Medicinal Plants Programme • Drug Standardization Research Programme • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs o Pharmacological Research Programme • General Outpatient Department (GOPD) Programme • Swasthya Rakshan Programme

CENTRE	ACTIVITIES
Regional Research Institute of Unani Medicine (RRIUM), Mumbai	<ul style="list-style-type: none"> • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs o Validation of Unani Pharmacopoeial Fast-acting Drugs o Validation of Regimen Therapies • Research-oriented Healthcare <ul style="list-style-type: none"> o General Outpatient Department (GOPD) Programme o Mobile Clinical Research Programme • Swasthya Rakshan Programme
Regional Research Institute of Unani Medicine (RRIUM), Srinagar	<ul style="list-style-type: none"> • Survey and Cultivation of Medicinal Plants Programme • Drug Standardization Research Programme • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs o Pharmacological Research Programme o Validation of Regimen Therapies • Research-oriented Healthcare <ul style="list-style-type: none"> o General Outpatient Department (GOPD) Programme o Mobile Clinical Research Programme • School Health Programme • Swasthya Rakshan Programme
Regional Research Institute of Unani Medicine (RRIUM), Kolkata	<ul style="list-style-type: none"> • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs o Mobile Clinical Research Programme • General Outpatient Department (GOPD) Programme • Swasthya Rakshan Programme
Regional Research Institute of Unani Medicine (RRIUM), New Delhi	<ul style="list-style-type: none"> • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs o Validation of Regimen Therapies • General Outpatient Department (GOPD) Programme • Unani Speciality Clinics at Allopathic Hospitals • Swasthya Rakshan Programme
Regional Research Centre (RRC), Allahabad	<ul style="list-style-type: none"> • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs

CENTRE	ACTIVITIES
Regional Research Centre (RRC), Silchar with Extension Centre at Karimganj	<ul style="list-style-type: none"> o Mobile Clinical Research Programme • General Outpatient Department (GOPD) Programme • School Health Programme • Swasthya Rakshan Programme • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs o Validation of Unani Pharmacopoeial Fast-acting Drugs • General Outpatient Department (GOPD) Programme • Swasthya Rakshan Programme
Clinical Research Unit (CRU), Bengaluru	<ul style="list-style-type: none"> • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs • General Outpatient Department (GOPD) Programme
Clinical Research Unit (CRU), Meerut	<ul style="list-style-type: none"> • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs • General Outpatient Department (GOPD) Programme
Clinical Research Unit (CRU), Bhopal	<ul style="list-style-type: none"> • Clinical Research Programme • General Outpatient Department (GOPD) Programme
Clinical Research Unit (CRU), Burhanpur	<ul style="list-style-type: none"> • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs o Mobile Clinical Research Programme • General Outpatient Department (GOPD) Programme
Clinical Research Unit (CRU), Edathala	<ul style="list-style-type: none"> • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs • General Outpatient Department (GOPD) Programme
Clinical Research Unit (CRU), Kurnool	<ul style="list-style-type: none"> • Clinical Research Programme <ul style="list-style-type: none"> o Validation of Unani Pharmacopoeial Drugs o Validation of Unani Pharmacopoeial Fast-acting Drugs • General Outpatient Department (GOPD) Programme

CENTRE	ACTIVITIES
Drug Standardization Research Unit (DSRU), New Delhi	• Drug Standardization Research Programme
Drug Standardization Research Institute (DSRI), Ghaziabad	• Drug Standardization Research Programme
Hakim Ajmal Khan Institute for Literary and Historical Research in Unani Medicine (HAKILHRUM), New Delhi	• Literary Research Programme
Chemical Research Unit (CRU) (Grant-in-aid), Aligarh	• Chemical Investigations of Unani Medicinal Plants

3.1.2 PROGRAMME-WISE ACTIVITIES

3.1.2.1 SURVEY AND CULTIVATION OF MEDICINAL PLANTS PROGRAMME

The Council has undertaken a programme for extensive surveys of medicinal plants in different parts of the country, primarily with a view to collect and identify medicinal plants and record basic data on ethno-pharmacological uses of plants from the tribal and other rural folks of the study area. The broad objectives of the programme are:

- To survey, collect and identify medicinal plants in different forest zones of the country;
- To study distribution, availability, ethno-pharmacological uses and threats of medicinal plants;
- To carry out experimental and field-scale cultivation of medicinal plants;
- To maintain a herbarium of medicinal plants and raw drugs for demonstration purposes;
- To maintain a demonstrable herbal garden;
- To document folk knowledge on medicinal uses of plants;
- To collect samples of genuine drugs from the forests for pharmacopoeial standardization; and
- To develop nursery of medicinal plants for demonstration purpose with a view to popularize them among masses.

This programme is carried out at the following research centers:

- Central Research Institute of Unani Medicine, Hyderabad
- Regional Research Institute of Unani Medicine, Chennai
- Regional Research Institute of Unani Medicine, Srinagar
- Regional Research Institute of Unani Medicine, Bhadrak
- Regional Research Institute of Unani Medicine, Aligarh

Ethnopharmacological Surveys

Under this programme, the Council undertook ethno-pharmacological surveys in different forest divisions/areas during the period under report. These include Haridwar and Chakrata Forest

Divisions, Uttarakhand; Bhadrak, Balasore and Boudh Forest Divisions, Odisha; Kallakurichi Forest Division and Kalakadu Mundanthurai Tiger Reserve (KMTR), Tamil Nadu; Hyderabad and Medak Forest Divisions, Telangana; Guntur Forest Division, Andhra Pradesh; and Bandipora Forest Division, Jammu & Kashmir. As a result of the surveys conducted, 3,140 botanical specimens were collected by the surveyors; and 895 plant species were identified.

Herbarium

Plant specimens collected from the study areas, including previous collection, were mounted on herbarium sheets. During the reporting period, 2,042 such herbarium sheets were prepared and information pertaining to plant's botanical name, family, local name, Unani name (wherever available), date of collection, brief morphological features, medicinal / other uses of plant were recorded on each herbarium sheet. Besides, 564 new index cards were compiled and 455 index cards were updated.

The survey team members during the field studies collected 690 saplings of important medicinal species for plantation in the nurseries attached to the institutes.

The survey teams also collected 200 kg of raw drugs and sent them to the pharmacy section of CRIUM, Hyderabad for preparation of Unani formulations and to Pharmacopoeial Laboratory of Indian Medicine, Ghaziabad for developing standard repository.

Digitization of Herbarium Specimens

This activity was included in the programme for the first time during 2015–2016. Under this activity, 273 herbarium sheets were digitized by the Council's research centres at Aligarh and Chennai.

Folk Claims

The surveyors enquired from the local communities about traditional uses of plants after obtaining oral informed consent. This information was systematized taxonomically, and efforts were made to develop a database for comparative analysis of the information recorded so far. As a result, 606 folk medicinal claims were recorded from the tribal inhabitants and other rural folks of the study areas. The Council publishes this information in the form of books providing details comprising, botanical name and family, synonym, local name, Unani name, habit and habitat, wild or cultivated, medicinal efficacy claimed and name of the tribe, locality, collection number, part(s) used, mode of application, and biodynamic notes.

Experimental and Field-Scale Cultivation of Medicinal Plants

Under this activity, the Council took up cultivation of some important medicinal plants used in Unani medicines. These include Atrilal (*Ammi majus* L.), Afsantin (*Artimisia absinthium* L.), Babchi (*Psoralea corylifolia* L.), Gulnar Farsi (*Punica granatum* Linn. abortive var.), Gurmarbuti (*Gymnema sylvestre* (Retz.) R Br. ex Schult), Khatmi (*Althaea officinalis* L.), Khulanjan (*Alpinia galanga* Willd.), Unsul (*Urgenia indica* Kunth.), Sudab (*Ruta graveolens* Linn.), Nagdon (*Artemisia nilagirica* (Clarke) Pamp), Dirmana Turki (*Artemisia maritima* L.),

Jadwar (*Delphinium denudatum* Wall.ex Hook.f. & Thoms), Asgandh (*Withania somnifera* (L.) Dunal), etc. As a result of the field-scale cultivation, 295 kg of raw drugs were obtained and supplied to the pharmacy section of CRIUM, Hyderabad for preparation of Unani formulations.

Herbal Garden and Nursery of Medicinal Plants

With a view to popularize medicinal plants among the masses, the Council maintained about 160 common species in its Ibn al-Baytar Herbal Garden at CRIUM, Hyderabad and nurseries developed at Aligarh, Bhadrak, Chennai, Hyderabad and Srinagar. Some of the important and interesting species grown under this activity include: Amla (*Phyllanthus emblica* L.), Anar (*Punica granatum* L.), Ashok (*Saraca asoca* (Roxb.) Wilde.), Atrilal (*Ammi majus* L.), Afsantin (*Artemisia absinthium* L.), Arusa (*Adhatoda vasica* Nees.), Aspaghul (*Plantago ovata* Forsk.), Asal al-Sus (*Glycyrrhiza glabra* L.), Asrol (*Rauvolfia serpentina* (L.) Benth. ex Kurz.), Bijasar (*Pterocarpus marsupium* Roxb.), Belgiri (*Aegle marmelos* (L.) Correa.), Babchi (*Psoralea corylifolia* L.), Banafsha (*Viola odorata* L.), Bhangra (*Eclipta alba* (L.) Hassk.), Brinjasif (*Achillea millefolium* L.), Fufal (*Areca catechu* L.), Gheekwar (*Aloe vera* (L.) Burm.f.), Gulnar Farsi (*Punica granatum* L. abortive var.), Gurmarbuti (*Gymnema sylvestre* R. Br.), Hina (*Lawsonia inermis* L.), Irsa (*Iris ensata* Thunb), Jadwar (*Delphinium denudatum* Wall. ex Hook.f. & Thoms.), Keora (*Pandanus tectorious* Soland. ex Parkinson.), Kaju (*Anacardium occidentale* L.), Khulanjan (*Alpinia galanga* Willd.), Konch (*Mucuna pruriens* L.), Mako (*Solanum nigrum* L.), Marorphali (*Helicteres isora* L.), Muqil (*Commiphora mukul* (Hook ex Stocks) Engl.), Palas (*Butea monosperma* (Lam.) Taub.), Qinnab (*Cannabis sativa* L.), Qurtum (*Carthamus tinctorius* L.), Rasan (*Inula racemosa* C.B. Clarke), Sadabahar (*Vinca rosea* L.), Sandal Surkh (*Pterocarpus santalinus* Lf.), Satawar (*Asparagus racemosus* Willd.), Sudab (*Ruta graveolens* L.), Tulsi (*Ocimum sanctum* L.), Turbud (*Operculina turpethum* (L.) S. Manso), Waj (*Acorus calamus* L.), etc.

3.1.2.2 DRUG STANDARDIZATION RESEARCH PROGRAMME

The Drug Standardization Research Programme is mainly concerned with evolving pharmacopoeial standards for single drugs and compound formulations of Unani Medicine included in various volumes of *National Formulary of Unani Medicine* and *Essential Drugs List* for their incorporation in *Unani Pharmacopoeia of India*. The work on compound formulations includes development of standard operating procedures (SOPs) for their manufacture followed by the development of their pharmacopoeial standards. Besides, standardization of investigational drugs for clinical trials at the Council and estimation of heavy metals, microbial load, aflatoxin content and pesticidal residues in the drugs are also undertaken as a part of this programme. Chemical investigations of Unani medicinal plants are also being carried out under this programme. The standardization work is carried out in accordance with the format approved by the Unani Pharmacopoeia Committee of the Government of India through the following research centres:

- Drug Standardization Research Institute (DSRI), Ghaziabad
- Central Research Institute of Unani Medicine (CRIUM), Hyderabad
- Regional Research Institute of Unani Medicine (RRIUM), Chennai
- Regional Research Institute of Unani Medicine (RRIUM), Srinagar

- Regional Research Institute of Unani Medicine (RRIUM), Aligarh
- Drug Standardization Research Unit (DSRU), New Delhi
- Chemical Research Unit (Grant-in-Aid), AMU, Aligarh

During the reporting period, the following works were carried out:

- Development of standard operating procedures (SOPs) for manufacture of compound Unani formulations and their pharmacopoeial standards
- Development of pharmacopoeial standards of single drugs
- Quality control of research drugs
 1. Quality control of single drugs
 2. Quality control of compound formulations
- Development of Unani Pharmacopoeia of India
- Shelf-life Studies of Unani Formulations
- Redesigning of dosage forms of Unani formulations

Development of Standard Operating Procedures (SOPs) for Manufacture of Compound Formulations and their Pharmacopoeial Standards

Under this programme, SOPs for manufacture of the following 36 Unani formulations were developed followed by the development of their pharmacopoeial standards:

- | | |
|---------------------------------|-----------------------------|
| • Anquriya Kabir | • Marham-e-Hina |
| • Dawa-ul-Misk Sada | • Qairooti Arad Karsana |
| • Habb Bohat-us-Saut Haad | • Qurs-e-Afsantin |
| • Habb Bohat-us-Saut Muzmin | • Qurs-e-Asrofin |
| • Habb Mudirr-e-Bawl | • Qurs-e-Deedan |
| • Habb-e-Hindi Chashm | • Qurs-e-Ward |
| • Habb-e-Kaknaj | • Qurs-e-Ziabetes Sada |
| • Habb-e-Pachlona | • Roghan Kamila |
| • Habb-e-Sara | • Roghan-e-Qust |
| • Habb-e-Shabyar | • Safoof-e-Amla |
| • Habb-e-Shadnaj | • Safoof-e-Dama Halদিwala |
| • Habb-e-Sual | • Safoof-e-Habis |
| • Kohal Chikni Dawa | • Safoof-e-Mukhliyasā |
| • Kohal-e-Roshnai | • Safoof-e-Ziabetes Sada |
| • Kohal-e-Sadaf | • Sanoon Mukhrij-e-Rutoobat |
| • Kohal-ul-Jawahir | • Sharbat Zufa Murakkab |
| • Laooq Sapistan Kheyarshambari | • Shiyaf Abyaz |
| • Majoon Mochras | • Zaroor-e-Qula |

Development of Pharmacopoeial Standards of Single Drugs

Under the programme, pharmacopoeial standards of the following 10 single drugs were developed:

- Hasha (*Thymus serpyllum* L.)
- Habb-e-Neel (*Ipomoea hedracea* L.)
- Habb-e-Ghaar (*Lauras nobilis* L.)
- Gul-e-Machkan (*Pterospermum suberifolium* Lam.)
- Kali Zeeri (*Centratherum anthelminticum* Kuntz.)
- Zarawand Madaharaj (*Aristolochia rotunda* L.)
- Barg-e-Sudarshan (*Crinum latifolium* L.)
- Biranjasif (*Achillea millifolium* L.)
- Zuft Baloot (*Aesculus hippocastanum* L.)
- Kabab-e-Khandan (*Zanthoxylum armatum* DC.)

Quality Control of Research Drugs

(A) Quality Control of Single Drugs

During the reporting period, the following 151 samples of various single drugs were tested for their quality control:

- Afsantin (*Artemisia absinthium* L.)
- Aftimoon (*Cuscuta reflexa* Roxb.)
- Alsi (*Linum usitatissimum* L.)
- Alu Bukhara (*Prunus domestica* L.)
- Anardana (*Punica granatum* L.)
- Aqarqarha (*Anacyclus pyrethrum* DC.)
- Arq-e-Gulab (*Rosa damascena* Mill.) (8 samples)
- Asal (Honey) (*Apis mellifera* L.) (5 samples)
- Asal Khalis (*Apis mellifera* L.)
- Asgandh (*Withania somnifera* (L) Dunal) (2 samples)
- Asal al-Sus (*Glycyrrhiza glabra* L.) (2 samples)
- Badiyan (*Foeniculum vulgare* Mill.)
- Babchi (*Psoralea corylifolia* L.) (13 samples)
- Badranjboya (*Nepeta hindostana* (Roth.) Haines.)
- Bajra (*Pennisetum glaucum* R.Br.)
- Barg-e-Sana (*Cassia angustifolia* Vahl.)
- Behidana (*Cydonia oblonga* Mill.)
- Behman Surkh (*Salvia haematodes* L.)
- Beikh-e-Badiyan (*Foeniculum vulgare* Mill.)

- Beikh-e-Izkhar (*Cymbopogon citratus* L.)
- Belgiri (*Aegle marmelos* (L.) Corr)
- Bhangra (*Eclipta alba* (L.) Hassk)
- Bisbasa (*Myristica fragrans* Houtt.)
- Bisfayej (*Polypodium vulgare* L.) (2 samples)
- Charela (*Parmelia perlata* Ach.)
- Chiniya Gond (Light yellow Gum)
- Chirayata Shireen (*Swertia chirayita* (Roxb. ex Flem.) Karsten.)
- Chobchini (*Smilax china* L.) (2 samples)
- Damul Akhwain (*Dracaena cinnabari* Balf. f.) (2 samples)
- Filfil Daraz (*Piper longum* L.)
- Filfil Safaid (*Piper nigrum* L.)
- Gandana (*Allium ascalonicum* L.)
- Gil-e-Armani (*Aluminium silicate*) (2 samples)
- Gul-e-Babuna (*Matricaria chamomilla* L.)
- Gul-e-Banafsha (*Viola odorata* L.)
- Gulnar (*Punica granatum* L.) (Abortive variety)
- Halela Siyah (*Terminalia chebula* (Gaertn) Retz.) (2 samples)
- Heel Kalan (*Amomum subulatum* Roxb.) (2 samples)
- Heel Khurd (*Elettaria cardamomum* Maton.)
- Hiltet (*Ferula foetida* L.)
- Hulba (*Trigonella foenum-graecum* L.)
- Irsa (*Iris ensata* Thunb.) (2 samples)
- Isapghol (*Plantago ovata* Forsk.) (2 samples)
- Jadwar (*Delphinium denudatum* Wall. ex Hook. f. & Thoms)
- Kafoor (*Cinnamomum camphora* Nees. & Eberm.) (2 samples)
- Kaifal (*Myrica esculentum* Buch-Ham.)
- Kamela (*Malotus philippensis* (Lam.) Muell-Arg.)
- Khaskhas Safaid (*Papaver somniferum* L.)
- Khubazi (*Malva sylvestris* L.)
- Khulanjan (*Alpinia galanga* willd.)
- Kishmish (*Vitis vinifera* L.)
- Kishneez Khushk (*Coriandrum sativum* L.)
- Maghz-e-Karanjwa (*Caesalpinia bonduc* (L.) Roxb.)
- Maghz-e-Tukhm Karanj (*Pongamia pinnata* (L.) Pierre)
- Majeeth (*Rubia cordifolia* L.)
- Mako Khushk (*Solanum nigrum* L.)
- Mochras (*Salmalia malabarica* (DC.)S. & E.)

- Murdar Sang (*Monooxide of Lead*) (2 samples)
- Namak-e-Sang (*Sodium chloride*) (2 samples)
- Narkachoor (*Zingiber zerumbet* Rosc. ex Sm.) (2 samples)
- Naushadar (*Amonium chloride*) (3 samples)
- Nishasta-e-Gandum (*Triticum aestivum* L.) (2 samples)
- Panwar (*Cassia tora* L.)
- Post Halela Zard (*Terminalia chebula* (Gaertn) Retz.)
- Post Amla (*Phyllanthus emblica* L.)
- Qaranful (*Syzygium aromaticum* (L.) Merr. & Perry)
- Qust Shireen (*Saussurea costus* (Falc) Lipsch.)
- Raal Safaid (*Vateria indica* L.)
- Roghan-e-Arand (*Ricinus communis* L.) (5 samples)
- Roghan-e-Kunjad (*Sesamum indicum* L.) (7 samples)
- Roghan-e-Sarson (*Brassica nigra* L.) (6 samples)
- Sad Kufi (*Cyperus rotundus* L.)
- Sadaf Sadiq (*Pinctada margaritifera* L.)
- Samagh Arabi (*Acacia nilotica* (L.) Willd. ex Del.)
- Samagh Kateera (*Cochlospermum religiosum* (L.) Alston)
- Sapistan (*Cordia dichotoma* Forst.f.)
- Saqmonia (*Convolvulus scammonia* L.)
- Satavar (*Asparagus racemosus* Willd.)
- Sat-e-Pudina (*Mentha arvensis* L.)
- Shahatra (*Fumaria indica* (Haussk) pugsley) (2 samples)
- Sham-e-Hanzal (*Citrullus colocynthis* (L.) Schrad.)
- Suranjan (*Colchicum luteum* Baker.)
- Tabasheer (*Bambusa bambos* Druce)
- Taj (Saleekha) (*Cinnamomum cassia* Blume)
- Tukhm-e-Hummaz (*Rumex vesicarius* L.)
- Tukhm-e-Katan (*Linum usitatissimum* L.)
- Tukhm-e-Khatmi (*Althaea officinalis* L.) (2 samples)
- Tukhm-e-Panwad (*Cassia tora* L.)
- Tukhm-e-Raihan (*Ocimum sanctum* L.)
- Turbud Safaid (*Operculina turpethum* (L.), Silva Manso)
- Vidhara (*Argyreia nervosa* (Burm.f.) Boj.)
- Waj Turki (*Acorus calamus* L.)
- Zanjabeel (*Zingiber officinale* L.)
- Zeera Siyah (*Carum carvi* L.)

(B) Quality Control of Compound Formulations

During the reporting period, the following 34 compound formulations prepared at the Pharmacy of CRIUM, Hyderabad were tested for quality control:

- Habb-e-Asgandh
- Habb-e-Bawaseer Damiya
- Habb-e-Bawasheer Amya
- Habb-e-Hilteet
- Habb-e-Suranjan
- Habb-e-Surfa
- Habb-e-Tinkar
- Itrifal Ustukhuddoos
- Itrifal Zamani
- Jawarish Bisbasa
- Jawarish Zanjabeel
- Jawarish Shahi
- Khameera Abresham Sada
- Khameera Banafsha
- Khameera Gaozaban Sada
- Khamira Sandal Sada
- Laooq-e-Badam
- Laooq-e-Katan
- Laooq-e-Khyarshambr
- Laooq-e-Sapistan
- Majoon Dabeedul Ward
- Majoon IQ
- Majoon IQ (P)
- Majoon Muqawwi-e-Rahim
- Majoon-e-Najah
- Majoon-e-Chobchini
- Majoon-e-Pyaz
- Roghan-e-Kahu
- Roghan-e-Laboob Sada
- Safoof Habisuddam
- Safoof-e-Teen
- Sanoon Mukhrij-e-Rutubat
- Sharbat-e-Deenar
- Sharbat-e-Sadar

Isolation of Molecules

Phytochemical extraction and isolation of the following chemical compounds / molecules from Unani drugs was undertaken at Chemical Research Unit, Aligarh:

- 3- β -hydroxyl- Δ -12 - Ursine – 28-oic acid
- Altholactone
- 1, 2-di-O-galloyl- β - D-glucopyranoside
- Betulin
- Pyrogallal
- Ethyl gallate
- 3, 4, 8,9,10-pentahydroxydibenzo[b, d] pyran-6-one

Development of Unani Pharmacopoeia of India

The Council, after being designated as the Secretariat for the Unani Pharmacopoeia Committee (UPC) by the Ministry of AYUSH, organized meetings of UPC and its Sub-committees. During the reporting period, the Council initiated rearranging the contents of National Formulary of Unani Medicine (NFUM) as per the new format provided by the Pharmacopoeia Commission of Indian Medicine and Homoeopathy (PCIM&H) which was in progress at the end of the

year. It completed revisiting and reviewing of Unani Pharmacopoeia of India (UPI), Part-I (Single Drugs) and UPI Part-II (Formulations) and initiated rearranging the contents of Part-I as per the new format provided by the PCIM&H. The UPI-II, Volume-III was printed during the year by the PCIM&H.

Shelf-life Studies of Unani Formulations

The Council on the directives of Ayurvedic, Siddha and Unani Drugs Technical Advisory Board (ASUDTAB) initiated shelf-life studies of Unani formulations in order to fix their expiry. The protocol of shelf-life studies was prepared by the Council and approved by the UPC, and studies on four Unani formulations – *Itrifal Zamani*, *Jawarish Bisbasa*, *Majoon Peyaz* and *Khamira Gaozaban* were in progress at the CRIUM, Hyderabad during the reporting period.

Redesigning of Dosage Forms of Unani Formulations

During the reporting period, the Council undertook the redesigning of Unani formulations in order to reduce their volume / size and increase their bioavailability. This work was initiated in collaboration with the Faculty of Pharmacy, Jamia Hamdard, New Delhi and National Institute of Pharmaceutical Education and Research (NIPER), Hyderabad. During the reporting period, redesigning of four new Unani classical formulations was completed and work on another four formulations – *Khamira Gaozaban*, *Jawarish Kamuni*, *Khamira Abresham Sada* and *Jawarish Anarain* – was in progress.

3.1.2.3 CLINICAL RESEARCH PROGRAMME

Preclinical Studies

Preclinical safety and pharmacological studies on 13 classical Unani drugs including modified form of one drug were undertaken at the Council's pharmacological units. During the reporting period, the following studies were undertaken:

Safety evaluation of *Khamira-e-Banafsha* (KB) at CRIUM, Hyderabad

Sub-chronic oral toxicity study (90-day repeated dose) of *Khamira-e-Banafsha* (KB) in rats was conducted at CRIUM, Hyderabad as per the OECD Test Guideline 408. Sprague Dawley rats of about 5-6 weeks were randomly divided into two groups (10 male and 10 female in each group). Group-I served as control and was orally administered with distilled water. KB was orally administered at a limit dose of 2,000 mg/kg bw/day to group-II. The animals were periodically observed for clinical sign of toxicity, mortality, morbidity, body weight changes and feed consumption. At the end of the study, haematology, clinical biochemistry, electrolytes, gross pathology, relative organ weight and histological examination were performed.

Treatment with KB showed no significant differences in clinical signs of toxicity, body weight gain, feed consumption, and haematology and biochemistry profile except few changes in total bilirubin, ALP and cholesterol level which were clinically not significant as the values were still in the normal physiological range. No changes were observed in the gross necropsy and relative organ weight of the control and KB treated rats. These observations conclude that

KB is safe up to the tested dose level. Based on the 90-day repeated dose oral toxicity study data, No Observed Adverse Effect Level (NOAEL) of KB may be considered >2000 mg/kg bw in both male and female rats.

Safety evaluation of *Sharbat-e-Deenar* (SDR) at CRIUM, Hyderabad

A 90-day repeated dose oral toxicity study of *Sharbat-e-Deenar* (SDR) was conducted at CRIUM, Hyderabad as per the OECD Test Guideline 408. Sprague Dawley rats of about 5-6 weeks were randomly divided into four groups (10 male and 10 female in each group). Group-I served as control and received distilled water orally. SDR was orally administered at three dose levels i.e., 04, 10 and 20 ml/kg bw/day for 90 days. The animals were periodically observed for clinical signs of toxicity, mortality, morbidity, body weight changes and feed consumption throughout the experiment. At the end of the study, blood samples were collected under isofluorane anaesthesia from retro-orbital plexus. Blood samples were subjected to haematology, clinical biochemistry and electrolytes analysis. All the animals were sacrificed and necropsy was performed. No mortality or morbidity was reported in any group throughout the study. No gross pathological findings were observed between the control and drug treated rats.

Safety evaluation of *Majoon-e-Najah* (MN) at CRIUM, Hyderabad

Chronic toxicity (180-day) study of *Majoon-e-Najah* (MN) was initiated at CRIUM, Hyderabad. Ninety rats of about 5-6 weeks were randomly divided into three groups (15 male and 15 female in each group). Group-I served as control and administered with aqueous suspension of 0.3% carboxymethyl cellulose orally. MN was administered orally at two dose levels viz. 1,000 mg/kg bw/day and 2,000 mg/kg bw/day. The rats were periodically observed for clinical signs of toxicity, mortality, morbidity, change in body weight and feed consumption. No mortality or morbidity was observed and the study continued at the end of the reporting period.

Safety evaluation of *Jawarish-e-Bisbasa* (JBS) at CRIUM, Hyderabad

Sub-chronic toxicity study (90-day repeated dose) of *Jawarish-e-Bisbasa* (JBS) was initiated at CRIUM, Hyderabad as per the OECD Test Guideline 408. Sixty Sprague Dawley rats of about 5-6 weeks were randomly divided into three groups (10 male and 10 female in each group). Group-I served as control and received distilled water orally as vehicle. JBS was administered orally at two dose levels i.e., 1,000 mg/kg bw/day and a limit dose of 2,000 mg/kg bw/day for 90 days. The animals were periodically observed for clinical signs of toxicity, mortality, morbidity, change in body weight and feed consumption. The study continued and no mortality or morbidity was observed during the reporting period.

Safety evaluation of *Kushta-e-Faulad* at CRIUM, Hyderabad

Sub-chronic toxicity study (90-day repeated dose) of *Kushta-e-Faulad* (KF) was conducted at CRIUM, Hyderabad as per the OECD Test Guideline 408. Eighty rats of about 5-6 weeks were randomly divided into four groups (10 male and 10 female in each group). KF was administered orally in the form of aqueous suspension in 0.3% CMC at three dose levels i.e., 06, 30 and 60 mg/kg bw/day. The animals were periodically observed for clinical sign of toxicity, mortality, morbidity, change in body weight and feed consumption. At the end, haematology, clinical chemistry, electrolytes, gross pathology, relative organ weight and histological examinations were performed.

The result showed no significant changes in body weight gain, feed consumption and clinical signs of systemic toxicity. Haematological parameters did not reveal any significant differences as compared to the control group except few changes in biochemical parameters which were clinically not significant as the values were still in the normal physiological range. Gross necropsy performed at the termination of the study revealed no alteration in the organs of any KF-treated or control groups. Relative organ weight of the control and KF treated groups were found to be comparable. The study demonstrated no toxicologically significant alteration in physiological parameters, haematology and biochemical profile, hence KF may be considered safe up to the highest tested dose level of 60 mg/kg bw in rats.

Safety evaluation of *Majoon-e-Kundur* (MK) at CRIUM, Hyderabad

Chronic toxicity study of *Majoon-e-Kundur* (MK) was carried out on Sprague Dawley rats of both sexes. Sixty rats were divided into two groups (15 per sex per group). MK was administered at a single limit dose of 2000 mg/kg bw/day orally for 180 days. Thereafter, blood samples were collected for haematological and biochemical analysis and animals were sacrificed and organs were harvested for weight determination, and histopathological evaluation was performed. The animals in MK-treated group did not reveal any abnormal behaviour or clinical signs indicative of systemic toxicity. There was no toxicologically significant alteration in body weight, feed intake, haematological and biochemical parameters, and relative organ weights of the control and MK-treated rats of either sex. There was no toxicologically significant observation with respect to clinical signs of toxicity, haematology, clinical bio-chemistry, organ weight and gross necropsy findings in the MK-treated and control rats. No Observed Adverse Effect Level (NOAEL) of MK may be considered >2000 mg/kg bw in Sprague Dawley rats.

Safety evaluation of *Jawarish-e-Shahi* (JS) at CRIUM, Hyderabad

Chronic oral toxicity of *Jawarish-e-Shahi* (JS) was conducted at CRIUM, Hyderabad. Sixty Sprague Dawley rats were divided into two groups (15 rats of either sex in each group). JS was administered at a limit dose of 2000 mg/kg bw/day orally for 180 days. Thereafter, blood samples were collected for haematological and biochemical analysis; animals were sacrificed and organs were harvested for weight determination and histopathological evaluation was performed. The animals in the JS-treated group did not show any abnormal behaviour or clinical sign indicative of systemic toxicity. There was no toxicologically significant alteration in haematological and biochemical parameters and relative organ weights of control and JS treated rats of either sex. There was no toxicologically significant observation with respect to clinical signs of toxicity, haematology, clinical chemistry, organ weight and gross necropsy findings in the JS treated rats and control animals. No Observed Adverse Effect Level (NOAEL) of JS may be considered >2000 mg/kg bw in Sprague Dawley rats.

Safety evaluation of *Itrifal Ustukhuddus* and its modified sugar-free tablet version at CRIUM, Hyderabad

Sub-chronic oral toxicity (90-day) study was carried out at CRIUM, Hyderabad to understand the comparative toxicity profile of *Itrifal Ustukhuddus* (IU) and its modified sugar-free tablet version (SFIU). The study was carried out on Sprague Dawley rats of both sexes. The animals were divided into six groups (n=10 per sex per group). Classical formulation of IU was

administered at the doses of 1028 and 2000 mg/kg bw/day orally and SFIU was administered at the doses of 357(X), 1070 (3X) and 1783 (5X) mg/kg bw/day orally respectively. After the completion of the treatment, the animals were subjected to rotarod test. Blood samples were collected for haematological and biochemical analysis, animals were sacrificed, subjected to gross necropsy, organ weight was recorded and organs were harvested for histopathological evaluation.

The animals in groups treated with IU and SFIU did not show any abnormal behaviour or clinical sign indicative of systemic toxicity. No toxicologically significant alteration was observed in haematological and biochemical parameters and relative organ weights of the control and IU or SFIU treated rats of either sex. No changes in neuromuscular coordination were observed in rotarod test. Further, no adverse finding was observed in gross necropsy and histopathology. Both SFIU and IU were found to be safe in Sprague Dawley rats and No Observed Adverse Effect Level (NOAEL) of SFIU and IU in Sprague Dawley rats may be considered >1783 mg/kg bw and >2000 mg/kg bw respectively.

Safety evaluation of *Habb-e-Kabid Naushadri* at RRIUM, Aligarh

Sub-chronic oral toxicity of aqueous suspension of *Habb-e-Kabid Naushadri* was conducted at RRIUM Aligarh. Albino rats of either sex weighing 100-150 gm were randomly divided into four groups of 10 animals (5 male and 5 female) in each. Group-I served as control which received distilled water orally for 90 days, while group-II, group-III and group-IV animals orally received aqueous suspension of *Habb-e-Kabid Naushadri* at the doses of 103mg/kg bw, 514mg/kg bw and 1027mg/kg bw per day respectively. The animals were observed for general behaviour changes in skin and fur, mucous membrane, tremors, convulsion, salivation, etc. On the 91st day, blood of all the four groups of animals was collected and analyzed for haematological and biochemical parameters. No statistically significant changes were observed in haematological and biochemical parameters. No change was observed in gross behaviour and no mortality reported. Hence, these results suggest that the drug is safe for oral administration at the dose level, of 103mg/kg, 514mg/kg and 1027mg/kg bw.

Safety evaluation of *Habb-e-Hindi Zeeqi* at RRIUM, Aligarh

Sub-chronic oral toxicity of aqueous suspension of *Habb-e-Hindi Zeeqi* was conducted at RRIUM, Aligarh. Albino rats of both sexes weighing 100-150g were divided into four groups of 10 animals (5 male and 5 female) each. Group-I served as control which received distilled water orally for 90 days, while group-II, group-III and group-IV animals received aqueous suspension of *Habb-e-Hindi Zeeqi* in the doses of 26mg/kg bw, 128mg/kg bw and 257mg/kg bw per day respectively. The animals were observed for general behaviour changes in skin and fur, mucous membrane, tremors, convulsion, salivation, etc. On the 91st day, blood of all the three groups of animals was collected and analyzed for haematological and biochemical parameters. No statistically significant changes were observed in haematological and biochemical parameters. No change was observed in gross behaviour and no mortality reported. There were no changes in organ weight in both male and female rats as compared to the control group. Hence, these results suggest that the drug is safe for oral administration at the dose levels of 26 mg/kg, 128 mg/kg and 257mg/kg bw.

Safety evaluation of *Habb-e-Tinkar* at RRIUM, Srinagar

Sub-acute oral toxicity (28-day repeated dose) study of *Habb-e-Tinkar* was conducted at the dose level of 1000 mg/kg bw in both male and female Wistar rats. The animals were randomly divided into four groups. Group-I and group-II being the male and female controls were orally given distilled water (vehicle) for 28 days. Group-III and group-IV being the drug treated male and female rats were orally administered *Habb-e-Tinkar* at the dose of 1000 mg/kg bw per day.

The cage side observation of rats was carried out for any behavioural and neurological changes for next 24 hours after the administration of the drug. The physiological parameters such as body weight change, water consumption and feed consumption were recorded on weekly basis. The rats were sacrificed after 28 days of daily oral drug administration.

Blood was collected from dorsal vena cava after opening the abdomen for haematological and biochemical analysis. The rats were dissected, organs were collected and observed for any macroscopic as well as morphological changes and the individual organ weight was also recorded.

There were no significant changes in body weight, feed and water consumption, gross behavior and their haematological and biochemical parameters as compared with the respective male and female control groups. The result of the study shows that the drug is safe for oral administration at the tested dose level.

Safety evaluation of *Habb-e-Suranjan* at RRIUM, Srinagar

Sub-chronic oral toxicity (90-day repeated dose) study of *Habb-e-Suranjan* was conducted at the dose level of 2440mg /kg bw in both male and female Wistar rats. The animals were randomly divided into four groups. Group-I and group-II being the male and female controls were orally given distilled water (vehicle) for 90 days. Group-III and group-IV being the drug treated male and female rats were orally administered *Habb-e-Suranjan* at the dose of 2440mg /kg bw per day.

The rats were observed carefully for any behavioural and neurological changes for next 24 hours after the administration of the drug and twice daily thereafter till the completion of the experiment. The physiological parameters such as body weight change, water consumption and feed consumption were recorded on weekly basis. On the 91st day after overnight fasting, blood was collected from dorsal vena cava after opening the abdomen for haematological and biochemical parameters. The rats were dissected, organs were collected and observed for any macroscopic and morphological changes, individual organ weight was recorded, and tissue was collected for histopathological examination.

There were no significant changes in body weight, feed and water consumption, gross behavior and their haematological and biochemical parameters as compared with the respective male and female control groups. The result of the study shows that the drug *Habb-e-Suranjan* is safe for oral administration at the tested dose level.

Effect of co-administration of Unani pharmacopoeial formulations (UPF) Qurs Tabasheer Sartani (QTS) and Arq Hara Bhara (AHB) with anti tuberculosis (CAT-I) drugs in adult Wistar Albino rats at RRIUM, Srinagar

The anti tubercular therapy (ATT) study was conducted to determine the hepatoprotective effect of two Unani pharmacopoeial formulations – *Qurs Tabasheer Sartani* and *Arq Hara Bhara* against the known anti tubercular therapy (ATT) in Albino Wistar rats. The study was conducted for 14 days, 60 days and 180 days respectively. In each study, the rats were randomly divided into four groups (sex ratio 50%). Group-I served as the control received RO water only while Group-II received only UPF. Group-III received only CAT-I and group-IV received CAT-I and UPF in combination. The body weight of rats was recorded after every two days and the feed and water consumption was recorded alternately throughout the study. The calculation for dosage of drugs was carried out as per the newly recorded body weight. The data pertaining to body weight, feed consumption, water consumption and oral dosing of all the groups were recorded on Data Recording Sheets (DRS's).

Tissues of 60 and 180 days ATT study were fixed in 10% formalin followed by tissue processing which was carried out on automatic tissue processor. Tissue blocks were prepared and labelled. Finally, all the tissue blocks as well as fixed wet tissues were sent to RRIUM, Chennai on their request.

Clinical Studies

The Clinical Research Programme of the Council deals with the methods of diagnosis and treatment of diseases and aims at critical appraisal of the theory of pathogenesis, symptomatology, clinical methods of diagnosis, principles and methods of treatment, and the drug and diet therapies peculiar to Unani Medicine. Under this programme, clinical studies on different diseases were undertaken with a view to develop safe and effective Unani treatments. Besides, clinical validation of safety and efficacy of Unani pharmacopoeial formulations was conducted. Clinical validation of Unani pharmacopoeial fast-acting drugs was also undertaken in different diseases.

This programme continued at the following centres:

- Central Research Institute of Unani Medicine (CRIUM), Hyderabad
- Central Research Institute of Unani Medicine (CRIUM), Lucknow
- Regional Research Institute of Unani Medicine (RRIUM), Chennai
- Regional Research Institute of Unani Medicine (RRIUM), Bhadrak
- Regional Research Institute of Unani Medicine (RRIUM), Patna
- Regional Research Institute of Unani Medicine (RRIUM), Aligarh
- Regional Research Institute of Unani Medicine (RRIUM), Mumbai
- Regional Research Institute of Unani Medicine (RRIUM), Srinagar
- Regional Research Institute of Unani Medicine (RRIUM), Kolkata

- Regional Research Institute of Unani Medicine (RRIUM), New Delhi
- Regional Research Centre (RRC), Allahabad
- Regional Research Centre (RRC), Silchar/Karimganj
- Clinical Research Unit (CRU), Bengaluru
- Clinical Research Unit (CRU), Meerut
- Clinical Research Unit (CRU), Bhopal
- Clinical Research Unit (CRU), Burhanpur
- Clinical Research Unit (CRU), Edathala
- Clinical Research Unit (CRU), Kurnool

CENTRE-WISE ALLOCATION OF DISEASES FOR CLINICAL STUDIES ON SAFETY AND EFFICACY OF UNANI DRUGS

Centre	Diseases
Central Research Institute of Unani Medicine (CRIUM), Hyderabad	<i>Baraṣ</i> (Vitiligo), <i>Dhayābīṭus Sukkarī Qism-i Thāni</i> (Diabetes Mellitus Type-II), <i>Ḍagḥ al-Dam Qawī Lāzimī</i> (Essential Hypertension), <i>Nazla Muzmin</i> (Chronic Rhinosinusitis), <i>Kathra Shaḥm al-Dam</i> (Hyperlipidaemia), <i>Dā' al-Ṣadaf</i> (Psoriasis), <i>Nisyān</i> (Amnesia), <i>Ḍu'f al-Dimāgh</i> (Cerebrasthenia), <i>Ḥaṣā al-Kulya</i> (Nephrolithiasis), <i>Khafaqān</i> (Palpitation), <i>Taḥajjur al-Mafāṣil</i> (Osteoarthritis), <i>Kathra al-Ṭamth</i> (Heavy Menstrual Bleeding), <i>Ḍīq al-Nafas</i> (Bronchial Asthma), <i>Litha Dāmiya</i> (Bleeding Gums)
Central Research Institute of Unani Medicine (CRIUM), Lucknow	<i>Dhayābīṭus Sukkarī Qism-i Thāni</i> (Diabetes Mellitus Type-II), <i>Siman Mufriṭ</i> (Obesity), <i>Baraṣ</i> (Vitiligo), <i>Sū' al-Qinya</i> (Anaemia), <i>Dīdān al-Am'ā'</i> (Helminthiasis), <i>Sū' al-Ḥaḍm</i> (Dyspepsia), <i>Sayalān al-Raḥim</i> (Leucorrhoea), <i>Niqris</i> (Gout), <i>Nisyān</i> (Amnesia), <i>Khafaqān</i> (Palpitation), <i>Nazla Muzmin</i> (Chronic Rhinosinusitis), <i>Ḍīq al-Nafas</i> (Bronchial Asthma), <i>Sur'a al-Inzāl</i> (Premature Ejaculation), <i>Nazla</i> (Common Cold), <i>Ḍu'f al-Dimāgh</i> (Cerebrasthenia)
Regional Research Institute of Unani Medicine (RRIUM), Chennai	<i>Nazla</i> (Common Cold), <i>Ṣudā'</i> (Headache), <i>Dhayābīṭus Sukkarī Qism-i Thāni</i> (Diabetes Mellitus Type-II), <i>Qulā'</i> (Stomatitis), <i>Waja' al-Asnān</i> (Toothache), <i>Niqris</i> (Gout), <i>Ḥaṣā al-Kulya</i> (Nephrolithiasis), <i>Sharā Muzmin</i> (Chronic Urticaria), <i>Kalaf</i> (Melasma), <i>Waram al-Ḥalaq</i> (Pharyngitis), <i>Bawāsir 'Amiya</i> (Non Bleeding Piles), <i>Khushūna al-Ḥalaq</i> (Sore Throat), <i>Ḍu'f al-Ishtihā'</i> (Anorexia)

Centre	Diseases
Regional Research Institute of Unani Medicine (RRIUM), Bhadrak	<i>Dā' al-Fīl</i> (Lymphatic Filariasis), <i>Jarab</i> (Scabies), <i>Buthūr al-Jild</i> (Macules / Pustules), <i>Waja' al-Asnān</i> (Toothache), <i>Ḥaṣā al-Kulya</i> (Nephrolithiasis), <i>Sharā Muzmin</i> (Chronic Urticaria), <i>Waram al-Ḥalaq</i> (Pharyngitis), <i>Bawāsīr Dāmiya</i> (Bleeding Piles), <i>Ḍu'f al-Ishtihā'</i> (Anorexia), <i>Dīdān al-Am'a'</i> (Intestinal Worms), <i>Qulā'</i> (Stomatitis), <i>Khushūna al-Ḥalaq</i> (Sore Throat), <i>Zahīr</i> (Dysentery), <i>Waja' al-Mafāṣil</i> (Rheumatoid Arthritis)
Regional Research Institute of Unani Medicine (RRIUM), Patna	<i>Dā' al-Fīl</i> (Lymphatic Filariasis), <i>Waja' al-Mafāṣil</i> (Rheumatoid Arthritis), <i>Sayalān al-Raḥim</i> (Leucorrhoea), <i>Qulā'</i> (Stomatitis) <i>Waja' al-Asnān</i> (Toothache), <i>Waram al-Ḥalaq</i> (Pharyngitis), <i>Sharā Muzmin</i> (Chronic Urticaria), <i>Jarab</i> (Scabies), <i>Ḍu'f al-Ishtihā'</i> (Anorexia), <i>Nazla</i> (Common Cold), <i>Khafaqān</i> (Palpitation), <i>Ḍīq al-Nafas</i> (Bronchial Asthma), <i>Sū' al-Qinya</i> (Anaemia)
Regional Research Institute of Unani Medicine (RRIUM), Aligarh	<i>Baraṣ</i> (Vitiligo), <i>Dhayābītus Sukkarī Qism-i Thānī</i> (Diabetes Mellitus Type-II), <i>Dagḥt al-Dam Qawī Lāzimī</i> (Essential Hypertension), <i>Sayalān al-Raḥim</i> (Leucorrhoea), <i>Ḍu'f al-Ishtihā'</i> (Anorexia), <i>Khafaqān</i> (Palpitation), <i>Sū' al-Qinya</i> (Anaemia), <i>Niqris</i> (Gout), <i>Waja' al-Mafāṣil</i> (Rheumatoid Arthritis), <i>Nazla Muzmin</i> (Chronic Rhinosinusitis), <i>Siman Mufrit</i> (Obesity), <i>Litha Dāmiya</i> (Bleeding Gums), <i>Kathra al-Ṭamth</i> (Heavy Menstrual Bleeding), <i>Su'al Yābis</i> (Dry Cough), <i>Sahar</i> (Insomnia), <i>Niqris</i> (Gout)
Regional Research Institute of Unani Medicine (RRIUM), Mumbai	<i>Dagḥt al-Dam Qawī Lāzimī</i> (Essential Hypertension), <i>Waja' al-Mafāṣil</i> (Rheumatoid Arthritis), <i>Ḍu'f al-Dimāgh</i> (Cerebrasthenia), <i>Qulā'</i> (Stomatitis), <i>Waja' al-Asnān</i> (Toothache), <i>Su'al Yābis</i> (Dry Cough), <i>Waram al-Ḥalaq</i> (Pharyngitis), <i>Sharā Muzmin</i> (Chronic Urticaria), <i>Bawāsīr 'Amiya</i> (Non-Bleeding Piles), <i>Siman Mufrit</i> (Obesity), <i>Kathra al- Ṭamth</i> (Heavy Menstrual Bleeding), <i>Ḍu'f al-Ishtihā'</i> (Anorexia)
Regional Research Institute of Unani Medicine (RRIUM), Srinagar	<i>Baraṣ</i> (Vitiligo), <i>Dagḥt al-Dam Qawī Lāzimī</i> (Essential Hypertension), <i>Ḥaṣā al-Kulya</i> (Nephrolithiasis), <i>Su'al Yābis</i> (Dry Cough), <i>Jarab</i> (Scabies), <i>Kathra al-Ṭamth</i> (Heavy Menstrual Bleeding), <i>Nazla Muzmin</i> (Chronic Rhinosinusitis), <i>Khafaqān</i> (Palpitation), <i>Waja' al-Mafāṣil</i> (Rheumatoid Arthritis), <i>Ḍīq al-Nafas</i> (Bronchial Asthma), <i>Ḍu'f al-Ishtihā'</i> (Anorexia)

Centre	Diseases
Regional Research Institute of Unani Medicine (RRIUM), Kolkata	<i>Bawāsīr Dāmiya</i> (Bleeding Piles), <i>Dīdān al-Am‘ā’</i> (Helminthiasis), <i>Nazla Muzmin</i> (Chronic Rhinosinusitis), <i>Su‘āl Yābis</i> (Dry Cough), <i>Khushūna al-Ḥalaq</i> (Sore Throat)
Regional Research Institute of Unani Medicine (RRIUM), New Delhi	<i>Baraṣ</i> (Vitiligo), <i>Dhayābītus Sukkarī Qism-i Thāni</i> (Diabetes Mellitus Type-II), <i>Ḍagḥ al-Dam Qawī Lāzimī</i> (Essential Hypertension), <i>Zaḥīr</i> (Dysentery), <i>Su‘āl Yābis</i> (Dry Cough), <i>Sū’ al-Qinya</i> (Anaemia), <i>Ḥaṣā al-Kulya</i> (Nephrolithiasis), <i>Sayalān al-Raḥim</i> (Leucorrhoea), <i>Khafaqān</i> (Palpitation), <i>Ḍu‘f al-Ishtihā’</i> (Anorexia), <i>Nazla Muzmin</i> (Chronic Rhinosinusitis), <i>Waja’ al-Mafāṣil</i> (Rheumatoid Arthritis)
Regional Research Centre (RRC), Allahabad	<i>Dhayābītus Sukkarī Qism-i Thāni</i> (Diabetes Mellitus Type-II), <i>Ḥaṣā al-Kulya</i> (Nephrolithiasis), <i>Khafaqān</i> (Palpitation), <i>Ishāl</i> (Diarrhoea), <i>Ḍīq al-Nafas</i> (Bronchial Asthma), <i>Jarab</i> (Scabies), <i>Bawāsīr ‘Amiya</i> (Non-Bleeding Piles), <i>Zaḥīr</i> (Dysentery), <i>Su‘āl</i> (Cough)
Clinical Research Unit (CRU), Bengaluru	<i>Dā’ al-Ṣadaf</i> (Psoriasis), <i>Dhayābītus Sukkarī Qism-i Thāni</i> (Diabetes Mellitus Type-II), <i>Sū’ al-Qinya</i> (Anaemia), <i>Ḍu‘f al-Ishtihā’</i> (Anorexia), <i>Waram al-Kabid</i> (Hepatitis), <i>Waja’ al-Mafāṣil</i> (Rheumatoid Arthritis)
Clinical Research Unit (CRU), Meerut	<i>Ḍu‘f al-Ishtihā’</i> (Anorexia), <i>Su‘āl Yābis</i> (Dry Cough), <i>Sū’ al-Ḥaḍm</i> (Dyspepsia), <i>Zaḥīr</i> (Dysentery), <i>Ḍīq al-Nafas</i> (Bronchial Asthma), <i>Nazla Muzmin</i> (Chronic Rhinosinusitis), <i>Sur‘a al-Inzāl</i> (Premature Ejaculation) <i>Sū’ al-Qinya</i> (Anaemia), <i>Khafaqān</i> (Palpitation), <i>Waja’ al-Mafāṣil</i> (Rheumatoid Arthritis)
Clinical Research Unit (CRU), Bhopal	<i>Nār Fārsī</i> (Eczema), <i>Dā’ al-Ṣadaf</i> (Psoriasis), <i>Ḥaṣā al-Kulya</i> (Nephrolithiasis), <i>Sahar</i> (Insomnia), <i>Su‘āl Yābis</i> (Dry Cough), <i>Sudā’</i> (Headache), <i>Zaḥīr</i> (Dysentery)
Clinical Research Unit (CRU), Burhanpur	<i>Niqris</i> (Gout), <i>Ḥaṣā al-Kulya</i> (Nephrolithiasis), <i>Su‘āl Yābis</i> (Dry Cough), <i>Waram al-Kabid</i> (Hepatitis), <i>Buthūr al-Jild</i> (Macules/ Pustules)
Clinical Research Unit (CRU), Edathala	<i>Sayalān al-Raḥim</i> (Leucorrhoea), <i>Sahar</i> (Insomnia), <i>Nazla</i> (Common Cold)
Clinical Research Unit (CRU), Kurnool	<i>Ḍu‘f al-Ishtihā’</i> (Anorexia), <i>Bawāsīr</i> (Piles), <i>Qulā’</i> (Stomatitis), <i>Zaḥīr</i> (Dysentery), <i>Litha Dāmiya</i> (Bleeding Gums), <i>Ghathayān</i> (Nausea), <i>Waram al-Kabid</i> (Hepatitis), <i>Sharā</i> (Urticaria)

AMRĀD-I JILD (SKIN DISORDERS)

BARAŞ (VITILIGO)

Clinical studies on *Baraş* (Vitiligo) continued at Central Research Institute of Unani Medicine (CRIUM), Hyderabad. During the reporting period, the following studies were conducted:

Evaluation of therapeutic efficacy of a combination of coded Unani drugs UNIM-001 and UNIM-003 in *Baraş* (Vitiligo) patients (CRIUM, Hyderabad)

Therapeutic efficacy of a combination of two coded Unani drugs, UNIM-001 and UNIM-003, was evaluated in 3,612 patients of *Baraş* (Vitiligo). The drug UNIM-001 was given in the dose of two tablets (500 mg each) twice daily with water one hour after meals. Besides, paste of UNIM-003 was applied locally on the affected parts early in the morning followed by sun exposure for 10-15 minutes. The paste was washed off after 30 minutes of the application. The treatment was given for three months initially, which was extended till the maximum repigmentation was achieved.

During the reporting period, 1,099 new patients were registered, whereas 2,513 continued from the previous year bringing the total patients studied to 3,612. Out of them, 441 patients completed the study. The repigmentation was 100% in one (0.2%) patient, 71-90% in 20 (4.5%) patients, 51-70% in 38 (8.6%) patients, 41-50% in 47 (10.7%) patients, and $\leq 40\%$ in 321 (72.8%) patients whereas 14 (3.2%) patients showed no response. A total of 864 patients dropped out of the study whereas 2,307 were under study. The drugs showed significant therapeutic effects in arresting the exacerbation in the existing size of the patches and appearance of new patches, besides re-pigmenting the depigmented patches to a variable degree ranging from 50 to 100% depending upon the chronicity of the disease and the part of the body affected. No drug intolerance/ adverse effects were reported.

Evaluation of therapeutic efficacy of a combination of coded Unani drugs UNIM-004 and UNIM-005 in *Baraş* (Vitiligo) patients (CRIUM, Hyderabad)

Therapeutic efficacy of a combination of two coded Unani drugs, UNIM-004 and UNIM-005, was evaluated in 7,808 patients of *Baraş* (Vitiligo). The drug UNIM-004 was given in the dose of two tablets (500 mg each) twice daily with water one hour after meals. Besides, paste of UNIM-005 was applied locally on the affected parts early in the morning followed by sun exposure for 10-15 minutes. The paste was washed off after 30 minutes of the application. The treatment was given for a period of three months initially, which was extended till the maximum repigmentation was achieved.

During the reporting period, 3,474 new patients were registered, whereas 4,334 patients continued from the previous year, bringing the total patients studied to 7,808. Out of them, 521 patients completed the study. Of them, three (0.6%) patients showed 100% repigmentation, seven (1.3%) patients showed 71-90%, 15 (2.9%) patients showed 51-70%, 21 (4.0%) patients showed 41-50% and 438 (84.1%) patients showed $\leq 40\%$ repigmentation, whereas 37 (7.1%) patients showed no response. A total of 1,867 patients dropped out of the study and 5,420 patients were under study. No drug intolerance/ adverse effects were reported. However, itching and blister formation were reported in some patients with sensitive skin. This was managed by diluting the concentration of the paste and applying coconut oil on the affected parts.

Preliminary screening of combinations of coded Unani drugs UNIM-044(O) + UNIM-044(L), UNIM-045(O) + UNIM-045(L), UNIM-046(O) + UNIM-046(L) and UNIM-047(O) + UNIM-047(L) with *Mundij-Mushil* therapy in *Baraş* (Vitiligo) patients (CRIUM, Hyderabad)

Preliminary screening of coded Unani drugs UNIM-044(O)+UNIM-044(L), UNIM-045(O)+UNIM-045(L), UNIM-046(O)+UNIM-046(L) and UNIM-047(O)+UNIM-047(L) with *Mundij-Mushil* therapy was conducted in 47 patients of *Baraş* (Vitiligo). The patients were divided into four treatment groups. In each group, the patients were first subjected to *Mundij-Mushil* therapy followed by treatment with the oral and local drugs. In *Mundij-Mushil* therapy, *Mundij-i Balgham* was given till the *Nudj* appeared in urine followed by *Mushil* and *Tabrīd* drugs for six days alternately.

After the completion of *Mundij-Mushil* therapy, the patients of the respective groups were treated with UNIM-044(O), UNIM-045(O), UNIM-046(O), and UNIM-047(O) in the dose of two capsules (500 mg each) orally twice daily along with local application of UNIM-044(L), UNIM-045(L), UNIM-046(L) and UNIM-047(L) on the affected parts early in the morning followed by sun exposure for 10-15 minutes. The paste was washed off after 30 minutes of the application. After *Mundij-Mushil* therapy, the treatment was given for a period of three months initially, which was extended till the maximum repigmentation was achieved.

In group-I, eight patients continued from the previous year were studied, of which six completed the study. Of them, five (83.3%) patients showed $\leq 40\%$ repigmentation whereas one (16.7%) patient showed no response. Two patients dropped out of the study. The test drugs UNIM-044(O) and UNIM-044(L) were found well-tolerated and no adverse effects were observed.

In group-II, 22 patients continued from the previous year, of which 12 completed the study. Of them, one (8.3%) patient showed 41-50% repigmentation, five (41.7%) patients showed $\leq 40\%$ repigmentation, whereas six (50%) patients showed no response. Ten patients dropped out of the study. The test drugs UNIM-045(O) and UNIM-045(L) were found well-tolerated and no adverse effects were observed.

In group-III, seven patients continued from the previous year, of which five completed the study. Of them, four (80.0%) patients showed $\leq 40\%$ repigmentation whereas one (20%) patient showed no response. Two patients dropped out of the study. No adverse effects were found.

In group-IV, 10 patients continued from the previous year, of which nine completed the study. Of them, five (55.6%) patients showed $\leq 40\%$ repigmentation whereas four (44.4%) showed no response. One patient dropped out of the study. No adverse effects were found.

Evaluation of therapeutic efficacy of *Mundij-Mushil* drugs (UNIM-040 + UNIM-041 + UNIM-042) in *Baraş* (Vitiligo) patients (CRIUM, Hyderabad)

Therapeutic efficacy of *Mundij-Mushil* drugs (UNIM-040 + UNIM-041 + UNIM-042) was evaluated in the patients of *Baraş* (Vitiligo). The *Mundij* drugs were given till the appearance of *Nudj* in urine followed by *Mushil* and *Tabrīd* drugs for six days alternately. During the reporting period, 173 new patients were registered, whereas 28 patients continued from the previous year, bringing the total patients studied to 201. Out of them, 177 patients completed the study. In these patients, *Nudj* appeared in urine in 2-3 weeks of the treatment. There was definite sign

of repigmentation either in the form of islands of pigmentation or perilesional pigmentation or both. One (0.6%) patient showed 41-50% repigmentation, the process of repigmentation started in 142 (80.2%) patients, whereas 34 (19.2%) patients showed no response. No drug intolerance / side effects were reported. After the completion of *Mundij-Mushil* therapy, the patients were given the oral and local drugs. Ten patients dropped out of the study whereas 14 patients were under study.

DĀ' AL-ŞADAF (PSORIASIS)

Clinical study on *Dā' al-Şadaf* (Psoriasis) continued at CRIUM, Hyderabad. During the reporting period, the following study was conducted:

Trial of coded Unani drugs UNIM-401(O) + UNIM-403(L) with and without *Mundij-Mushil* therapy in *Dā' al-Şadaf* (Psoriasis) patients (CRIUM, Hyderabad)

Preliminary screening of coded Unani drugs UNIM-401(O) + UNIM-403(L) with and without *Mundij-Mushil* therapy was carried out in 197 patients of *Dā' al-Şadaf* (Psoriasis) in two groups. In group-I, the patients were first subjected to *Mundij-Mushil* therapy followed by the treatment with UNIM-401(O) + UNIM-403(L). In group-II, the patients were treated with UNIM-401(O) + UNIM-403(L) only. *Mundij-i Sawdā'* was given till the *Nudj* appeared in urine followed by *Mushil* and *Tabrīd* drugs for six days alternately. After the completion of *Mundij-Mushil* therapy, UNIM-401(O) was given in the dose of two capsules (500 mg each) orally twice daily before meals along with local application of UNIM-403(L) on the affected parts for a period of three months initially, which was extended up to six months.

During the reporting period, five new patients were registered in group-I, whereas 48 continued from the previous year, bringing the total patients studied to 53. Out of them, 31 completed the study, of which 20 (64.5%) patients were relieved, nine (29.0%) partially relieved and one (3.3%) patient showed fair response, whereas one (3.2%) patient showed no response. Twenty-two patients dropped out of the study.

In group-II, 73 new patients were registered, whereas 71 continued from the previous year, bringing the total patients studied to 144. Out of them, 63 completed the study, of which 22 (34.9%) were relieved, 22 (34.9%) partially relieved, 15 (23.8%) showed fair response, whereas four (6.4%) patients showed no response. Eighty-one patients dropped out of the study.

AMRĀD-I TARSĪLĪ (COMMUNICABLE DISEASES)

Clinical study on *Amrād-i Tarsīlī* (communicable diseases) namely *Dā' al-Fīl* (Lymphatic Filariasis) continued at RRIUM, Bhadrak during the reporting period.

DĀ' AL-FĪL (LYMPHATIC FILARIASIS)

Comparative clinical trial of two combinations of coded Unani drugs UNIM-268 + UNIM-270 + UNIM-271 + UNIM-272 and UNIM-269 + UNIM-270 + UNIM-271 + UNIM-272 with and without *Mundij-Mushil* therapy in *Dā' al-Fīl* (Lymphatic Filariasis) patients (RRIUM, Bhadrak)

Therapeutic efficacy of two combinations of coded Unani drugs UNIM-268 + UNIM-270 + UNIM-271 + UNIM-272 and UNIM-269 + UNIM-270 + UNIM-271 + UNIM-272 with and without *Mundij-Mushil* therapy was compared in 65 patients of *Dā' al-Fil* (Lymphatic Filariasis) in four treatment groups.

In group-I, the patients were given UNIM-268 in the dose of two tablets (500 mg each) orally twice daily along with *Natūl* (irrigation) of UNIM-271 followed by local application of the paste of UNIM-270 and UNIM-272 on the affected part at bedtime for 80 days.

In group-II, the patients were first subjected to *Mundij-Mushil* therapy followed by the treatment with the combination of the drugs as in group-I. The *Mundij* drugs were given till the appearance of *Nudj* in urine followed by *Mushil* and *Tabrīd* drugs alternately for six days. Thereafter, the treatment was given as in group-I.

In group-III, the patients were given UNIM-269 in the dose of two tablets (500 mg each) orally twice daily along with *Natūl* (irrigation) of UNIM-271 followed by local application of the paste of UNIM-270 and UNIM-272 on the affected parts at bedtime. The treatment was given for a period of 80 days.

In group-IV, the patients were first subjected to *Mundij-Mushil* therapy followed by the treatment with the combination of the drugs as in group-III. The *Mundij* drugs were given till the appearance of *Nudj* in urine followed by *Mushil* and *Tabrīd* drugs alternately for six days. Thereafter, the treatment was given as in group-III.

In group-I, nine new patients were registered, whereas 14 continued from the previous year, bringing the total patients studied to 23. Out of them, 16 completed the study. Of them, three (18.7%) patients were cured, 11 (68.8%) relieved and two (12.5%) partially relieved. Seven patients dropped out of the study.

In group-II, eight new patients were registered, whereas two continued from the previous year, bringing the total patients studied to 10. Out of them, four completed the study. Of them, one (25.0%) patient was cured and three (75.0%) relieved. Six patients dropped out of the study.

In group-III, eight new patients were registered, whereas 14 continued from the previous year, bringing the total patients studied to 22. Out of them, seven completed the study. Of them, two (28.6%) patients were cured, four (57.1%) relieved and one (14.3%) partially relieved. Fifteen patients dropped out of the study.

In group-IV, eight new patients were registered, whereas two continued from the previous year, bringing the total patients studied to 10. Out of them, seven completed the study. Of them, two (28.7%) patients were cured, four (57.1%) relieved and one (14.2%) partially relieved. Three patients dropped out of the study.

MARAD-I TAJĀWĪF-I ANF (DISEASE OF SINUS)

ILTIHĀB TAJĀWĪF AL-ANF (SINUSITIS)

The following clinical study on *Iltihāb Tajāwīf al- Anf* (Sinusitis) continued at CRIUM, Hyderabad during the reporting period:

Evaluation of therapeutic efficacy of coded Unani drugs UNIM-054(O) and UNIM-055(V) with and without *Mundij-Mushil* therapy in *Iltihāb Tajāwif al-Anf* (Sinusitis) patients (CRIUM, Hyderabad)

Therapeutic efficacy of coded Unani drugs UNIM-054(O) and UNIM-055 (V) with and without *Mundij-Mushil* therapy was evaluated in 49 patients of *Iltihāb Tajāwif al-Anf* (Sinusitis) in two groups. In group-I, the patients were first subjected to *Mundij-Mushil* therapy followed by the treatment with UNIM-054(O) and UNIM-055 (V). *Mundij-i Balgham* was given till *Nudj* appeared in urine followed by *Mushil* and *Tabrīd* drugs for six days alternately. After the completion of *Mundij-Mushil* therapy, UNIM-054 was given in the dose of two capsules (500 mg each) orally twice daily. Steam inhalation of UNIM-055 was also given at bedtime. In group-II, the patients were given UNIM-054(O) and UNIM-055 (V) as in group-I. The treatment was given for 90 days in both groups, excluding *Mundij-Mushil* therapy period in group-I. The patients were also advised to follow prescribed diet schedule.

In group-I, 17 new patients were registered, whereas 16 continued from the previous year, bringing the total patients studied to 33. Out of them, 12 completed the study. Of them, six (50%) patients were cured, three (25%) relieved, one (8.3%) partially relieved, whereas two (16.7%) showed no response. Twenty-one patients dropped out of the study. No drug intolerance / side effects were reported.

In group-II, 13 new patients were registered, whereas three continued from the previous year, bringing the total to 16 patients. Out of them, nine completed the study. Of the completed cases, three (33.3%) patients were cured, one (11.2%) relieved and three (33.3%) partially relieved, whereas two (22.2%) showed no response. Seven patients dropped out of the study.

AMRĀD-I GHAYR TARSĪLĪ (NON-COMMUNICABLE DISEASES)

KATHRA SHAḤM AL-DAM (HYPERLIPIDAEMIA)

The following clinical study on *Kathra ShaḤm al-Dam* (Hyperlipidaemia) continued at CRIUM, Hyderabad during the reporting period.

Preliminary study of a coded Unani drug UNIM-763 in *Kathra ShaḤm al-Dam* (Hyperlipidaemia) patients (CRIUM, Hyderabad)

Preliminary screening of a coded Unani drug UNIM-763 was carried out in 41 patients of *Kathra ShaḤm al-Dam* (Hyperlipidaemia). The drug UNIM-763 was given in the dose of two capsules (500 mg each) orally twice daily after meals. The treatment was given for a period of 90 days initially, which was extended up to six months. The patients were also advised to follow prescribed diet schedule.

During the reporting period, 18 new patients were registered, whereas 23 continued from the previous year bringing the total to 41 patients. Out of them, 13 completed the study. Of the completed cases, nine (69.2%) were relieved and four (30.8%) showed no response. Twenty-eight patients dropped out of the study.

Multi-centric Randomized Controlled Trials

A multi-centric, single blind, randomized, parallel group, controlled study to compare the efficacy and safety of coded Unani formulations UNIM-001+UNIM-003 with Psoralen in the treatment of *Baras* (Vitiligo) (CRIUM, Hyderabad; RRIUMs, Aligarh, New Delhi and Srinagar)

A multi-centric clinical study to compare the efficacy and safety of coded Unani formulations UNIM-001 + UNIM-003 with Psoralen was carried out in the patients of *Baras* (Vitiligo) at CRIUM, Hyderabad; and RRIUMs, Aligarh, New Delhi and Srinagar. The patients were divided into two groups. Group-I received UNIM-001 orally in the dose of two tablets (800 mg each) twice daily one hour after meals and UNIM-003 for local application on the affected area, whereas group-II received two tablets (10 mg each) of Psoralen orally twice daily and Psoralen in lotion form for local application on the affected area. The total treatment duration was eight months.

During the reporting period, 242 new patients were registered, whereas 194 patients continued from the previous year, bringing the total to 436 patients. Out of them, 179 patients completed the study. Out of the completed cases, 18 (10.1%) patients were relieved, 133 (74.3%) partially relieved and 28 (15.6%) showed no response. A total of 159 patients dropped out of the study whereas 98 patients were under study. The test drugs were found well-tolerated and no adverse effects were observed.

A multi-centric, single blind, randomized, parallel group study to compare the efficacy and safety of coded Unani formulation UNIM-221 with Metformin in the patients of *Dhayābīṭus Sukkarī Qism-i Thāni* (Diabetes Mellitus Type-II) (CRIUMs, Hyderabad and Lucknow; RRIUMs, Aligarh and New Delhi)

A multi-centric clinical study to compare the efficacy and safety of a coded Unani formulation UNIM-221 with Metformin was carried out in the patients of *Dhayābīṭus Sukkarī Qism-i Thāni* (Diabetes Mellitus Type-II) at CRIUMs, Hyderabad and Lucknow; and RRIUMs, Aligarh and New Delhi. The patients were divided into two groups; group-I received UNIM-221 in the dose of 10 gm twice daily half an hour before meals, while group-II received anti-diabetic drug Metformin 500 mg twice daily. The total treatment duration was 12 weeks.

During the reporting period, 222 new patients were registered, whereas 60 patients continued from the previous year, bringing the total to 282 patients. Out of them, 112 patients completed the study. Of the completed cases, 11 (9.8%) patients were relieved, 70 (62.5%) partially relieved and 31 (27.7%) showed no response. A total of 110 patients dropped out of the study and 60 patients were under study. The test drug was found well-tolerated and no adverse effects were observed.

A multi-centric, single blind, randomized, parallel group study to compare the efficacy and safety of coded Unani formulation UNIM-904 with Amlodipine in the patients with *Ḍagḥ al-Dam Qawī Lāzimī* (Essential Hypertension) (CRIUM, Hyderabad; RRIUMs, Aligarh, Srinagar, Mumbai and New Delhi)

A multi-centric clinical study to compare the efficacy and safety of a coded Unani formulation UNIM-904 with Amlodipine was carried out in the patients of *Ḍagħṭ al-Dam Qawī Lāzimī* (Essential Hypertension) at CRIUM, Hyderabad; and RRIUMs, Aligarh, Srinagar, Mumbai and New Delhi. The patients were divided into two groups; group-I received UNIM-904 (granules) in the dose of five gm twice daily half an hour before meals, while group-II received standard anti-hypertensive drug Amlodipine 5 mg once daily before breakfast. The total treatment duration was 12 weeks.

During the reporting period, 261 new patients were registered, whereas 50 continued from the previous year, bringing the total to 311 patients. Out of them, 150 patients completed the study. Of the completed cases, 46 (30.6%) patients were relieved, 94 (62.7%) partially relieved and 10 (6.7%) showed no response. A total of 112 patients dropped out of the study, whereas 49 patients were under study. The test drug was found well-tolerated and no adverse effects were observed.

A multi-centric, single blind, randomized, parallel group study to compare the efficacy and safety of coded Unani formulation UNIM-118 with Silymarin in the patients with *Waram al-Kabid* (Acute Hepatitis A/B/C/E & Chronic Active Hepatitis B/C) (CRIUM, Hyderabad; RRIUM, Chennai)

A multi-centric clinical study to compare the efficacy and safety of a coded Unani formulation UNIM-118 with Silymarin in the patients of *Waram al-Kabid* (Acute Hepatitis A/B/C/E & Chronic Active Hepatitis B/C) was carried out at CRIUM, Hyderabad and RRIUM, Chennai. The patients were divided into two groups. Group-I received UNIM-118 in the dose of two tablets (500 mg each) thrice daily after meals, while group-II received Silymarin one tablet (70 mg) thrice daily after meals. The total treatment duration was eight weeks for Acute Hepatitis A/ B/C/E and 12 weeks for Chronic Active Hepatitis B and C.

During the reporting period, no new case was registered in the study. So far, four patients in the test group and three in the control group have completed the study.

Validation of Unani Pharmacopoeial Drugs

Clinical validation of a Unani pharmacopoeial formulation *Qurs-e-Deedan* in *Dīdān al-Am'ā'* (Helminthiasis) (CRIUM, Lucknow; RRIUMs, Bhadrak and Kolkata)

A study on validation of a Unani pharmacopoeial formulation *Qurs-e-Deedan* in the patients of *Dīdān al-Am'ā'* (Helminthiasis) was carried out at CRIUM, Lucknow; and RRIUMs, Bhadrak and Kolkata. The patients received *Qurs-e-Deedan* in the dose of one tablet (250 mg) orally twice daily before meals for two weeks.

During the reporting period, 33 patients were studied, of which 28 completed the study. Out of the completed cases, 16 (57.2%) patients were completely relieved, nine (32.1%) partially relieved and three (10.7%) showed no response. No patients were under study and five patients dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Jawarish Ood Shireen* in *Du'f al-Ishtihā'* (Anorexia) (RRIUM, Bhadrak; CRUs, Meerut and Kurnool)

A study on validation of a Unani pharmacopoeial formulation *Jawarish Ood Shireen* in the patients of *Du'f al-Ishtihā'* (Anorexia) was carried out at RRIUM, Bhadrak; and CRUs, Meerut and Kurnool. The patients received *Jawarish Ood Shireen* in the dose of five gram orally twice daily before meals for two weeks.

During the reporting period, 53 patients were studied, of which 39 completed the study. Out of the completed cases, three (7.7%) patients were relieved, 34 (87.2%) partially relieved and two (5.1%) showed no response. No patients were under study and 14 patients dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Sharbat-e-Ejaz* in *Su'āl Yābis* (Dry Cough) (RRIUMs, Mumbai, New Delhi and Srinagar; CRU, Meerut)

A study on validation of a Unani pharmacopoeial formulation *Sharbat-e-Ejaz* in the patients of *Su'āl Yābis* (Dry Cough) was carried out at RRIUMs, Mumbai, New Delhi and Srinagar; and CRU, Meerut. The patients received *Sharbat-e-Ejaz* in the dose of 20 ml mixed with 40 ml of lukewarm water orally twice daily for two weeks.

During the reporting period, 74 patients were studied, of which 45 completed the study. Out of the completed cases, 29 (64.4%) patients were relieved and 16 (35.6%) partially relieved. No patients were under study and 29 patients dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of Unani pharmacopoeial formulations *Itrifal Shahtara* and *Marham Kharish Jadeed* in *Jarab* (Scabies) (RRIUMs, Bhadrak and Srinagar; CRU, Bhopal)

A study on validation of Unani pharmacopoeial formulations *Itrifal Shahtara* and *Marham Kharish Jadeed* in the patients of *Jarab* (Scabies) was carried out at RRIUMs, Bhadrak and Srinagar; and CRU, Bhopal. The patients received *Itrifal Shahtara* in the dose of six gm orally twice daily after meals along with local application of *Marham Kharish Jadeed* for two weeks. The patients were advised to wash the affected area with *Aab-i-Neem* before applying *Marham*.

During the reporting period, 90 patients were studied, of which 45 completed the study. Out of the completed cases, 13 (28.9%) patients were relieved, 28 (62.2%) partially relieved and four (8.9%) showed no response. Three patients were under study and 42 dropped out of the study. The test drugs were found well-tolerated and no adverse effects were observed.

Clinical validation of Unani a pharmacopoeial formulation *Majoon Chobchini* in *Jarab* (Scabies) (RRIUMs, Bhadrak and Patna; RRC, Allahabad)

A study on validation of a Unani pharmacopoeial formulation *Majoon Chobchini* in the patients of *Jarab* (Scabies) was carried out at RRIUMs, Bhadrak and Patna; and RRC Allahabad. The patients received *Majoon Chobchini* in the dose of five gram orally twice daily after meals for four weeks.

During the reporting period, 138 patients were studied; of which 95 patients completed the study. Out of the completed cases, 53 (55.8%) patients were relieved, 35 (36.8%) partially relieved and seven (7.4%) showed no response. Thirteen patients were under study and 30 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Qurs-e-Ziabetus Khas* in *Dhayābītus Sukkarī Qism-i Thāni* (Diabetes Mellitus Type-II) (CRIUM, Hyderabad; RRIUM, Chennai; RRC, Allahabad; CRU, Bengaluru)

A study on validation of a Unani pharmacopoeial formulation *Qurs-e-Ziabetus Khas* in the patients of *Dhayābītus Sukkarī Qism-i Thāni* (Diabetes Mellitus Type-II) was carried out at CRIUM, Hyderabad; RRIUM, Chennai; RRC, Allahabad; and CRU, Bengaluru. The patients received *Qurs-e-Ziabetus Khas* in the dose of two tablets orally twice daily half an hour before meals for 12 weeks.

During the reporting period, 133 patients were studied, of which 81 completed the study. Out of the completed cases, 17 (21.0%) were relieved, 38 (46.9%) partially relieved and 26 (32.1%) patients showed no response. Seventeen patients were under study and 35 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of Unani pharmacopoeial formulations *Majoon-e-Suranjan* and *Habb-e-Azaraqī* in *Niqris* (Gout) (CRIUM, Lucknow; RRIUMs, Aligarh and Chennai; CRU, Burhanpur)

A study on validation of Unani pharmacopoeial formulations *Majoon-e-Suranjan* and *Habb-e-Azaraqī* in the patients of *Niqris* (Gout) was carried out at CRIUM, Lucknow; RRIUMs, Aligarh and Chennai; and CRU, Burhanpur. The patients received *Majoon-e-Suranjan* five gm and *Habb-e-Azaraqī* one pill twice daily after meals for eight weeks.

During the reporting period, 84 patients were studied; of which 53 completed the study. Out of the completed cases, 39 (73.6%) patients were relieved, four (7.5%) partially relieved and 10 (18.9%) showed no response. Four patients were under study and 27 dropped out of the study. The test drugs were found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Dawaul Misk Motadil Sada* in *Khafaqān* (Palpitation) (RRIUM, Aligarh; RRC, Allahabad; CRU Burhanpur)

A study on validation of a Unani pharmacopoeial formulation *Dawaul Misk Motadil Sada* in the patients of *Khafaqān* (Palpitation) was carried out at RRIUM, Aligarh; RRC, Allahabad; and CRU Burhanpur. The patients received *Dawaul Misk Motadil Sada* five gm orally twice daily for four weeks.

During the reporting period, 103 patients were studied, of which 62 completed the study. Out of the completed cases, 30 (48.4%) patients were relieved, 27 (43.5%) partially relieved and five (8.1%) showed no response. Two patients were under study and 39 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Safoof Hajrul Yahoood* in *Haṣā al-Kulya* (Nephrolithiasis) (CRIUM, Hyderabad; RRIUMs, Chennai, New Delhi and Srinagar)

A study on validation of a Unani pharmacopoeial formulation *Safoof Hajrul Yahoood* in the patients of *Haṣā al-Kulya* (Nephrolithiasis) was carried out at CRIUM, Hyderabad; and RRIUMs, Chennai, New Delhi and Srinagar. The patients received *Safoof Hajrul Yahoood* five gm orally twice daily for eight weeks.

During the reporting period, 168 patients were studied, of which 81 completed the study. Out of the completed cases, 26 (32.1%) patients were relieved, 28 (34.6%) partially relieved and 27 (33.3%) showed no response. Twenty-two patients were under study and 65 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Habb-e-Tursh Mushtahi* in *Du'f al-Ishtihā'* (Anorexia) (RRIUMs, Mumbai, Srinagar and Aligarh)

A study on validation of a Unani pharmacopoeial formulation *Habb-e-Tursh Mushtahi* in the patients of *Du'f al-Ishtihā'* (Anorexia) was carried out at RRIUMs, Mumbai, Srinagar and Aligarh. The patients received *Habb-e-Tursh Mushtahi* one pill (250 mg) orally thrice daily for two weeks.

During the reporting period, 265 patients were studied, of which 157 completed the study. Out of the completed cases, 112 (71.4%) patients were relieved, 41 (26.1%) partially relieved and four (2.5%) showed no response. Six patients were under study and 102 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of Unani pharmacopoeial formulations *Safoof Pathar Phori* and *Sharbat-e-Bazoori Motadil* in *Haṣā al-Kulya* (Nephrolithiasis) (RRC, Allahabad; CRU Bhopal)

A study on validation of Unani pharmacopoeial formulations *Safoof Pathar Phori* and *Sharbat-e-Bazoori Motadil* in the patients of *Haṣā al-Kulya* (Nephrolithiasis) was carried out at RRC, Allahabad; and CRU Bhopal. The patients received *Safoof Pathar Phori* three gm and *Sharbat-e-Bazoori Motadil* 25 ml orally twice daily for eight weeks.

During the reporting period, 46 patients were studied, of which 22 completed the study. Out of the completed cases, 14 (63.6%) patients were relieved and eight (36.4%) partially relieved. Nine patients were under study and 15 patients dropped out of the study. The test drugs were found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Sharbat-e-Belgiri* in *Zahīr* (Dysentery) (RRIUM, New Delhi; CRUs, Meerut and Bhopal)

A study on validation of a Unani pharmacopoeial formulation *Sharbat-e-Belgiri* in the patients of *Zahīr* (Dysentery) was carried out at RRIUM, New Delhi; and CRUs, Meerut and Bhopal. The patients received *Sharbat-e-Belgiri* 25 ml orally twice daily for two weeks.

During the reporting period, 104 patients were studied, of which 57 completed the study. Out of the completed cases, 36 (63.1%) patients were relieved, 12 (21.1%) partially relieved and

nine (15.8%) patients showed no response. Three patients were under study and 44 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Damawī* in *Sū' al-Qinya* (Anaemia) (CRIUM, Lucknow; RRIUMs, New Delhi and Aligarh)

A study on validation of a Unani pharmacopoeial formulation *Damawī* in the patients of *Sū' al-Qinya* (Anaemia) was carried out at CRIUM, Lucknow; and RRIUMs, New Delhi and Aligarh. The patients received *Damawī* two tablets once daily for eight weeks.

During the reporting period, 229 patients were studied, of which 66 completed the study. Out of the completed cases, 14 (21.2%) patients were relieved, 43 (65.2%) partially relieved and nine (13.6%) showed no response. Fifty-two patients were under study and 111 patients dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Itrifal Muqawwi Dimagh* in *Nisyān* (Amnesia) (CRIUMs, Hyderabad and Lucknow; RRIUM, Mumbai)

A study on validation of a Unani pharmacopoeial formulation *Itrifal Muqawwi Dimagh* in the patients of *Nisyān* (Amnesia) was carried out at CRIUMs, Hyderabad and Lucknow; and RRIUM, Mumbai. The patients received *Itrifal Muqawwi Dimagh* five gm orally twice daily for eight weeks.

During the reporting period, 161 patients were studied; of which 93 completed the study. Out of the completed cases, three (3.2%) patients were relieved, 33 (35.5%) partially relieved and 57 (61.3%) showed no response. Fourteen patients were under study and 54 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of Unani pharmacopoeial formulations *Majoon Jograj Gugal* and *Roghan Malkangani* in *Waja' al-Mafāšil* (Rheumatoid Arthritis) (CRIUM, Lucknow; RRIUM, Patna; CRU, Meerut)

A study on validation of Unani pharmacopoeial formulations *Majoon Jograj Gugal* and *Roghan Malkangani* in the patients of *Waja' al-Mafāšil* (Rheumatoid Arthritis) was carried out at CRIUM, Lucknow; RRIUM, Patna; and CRU, Meerut. The patients received *Majoon Jograj Gugal* five gm twice daily and *Roghan Malkangani* for local application on the affected joints for 12 weeks.

During the reporting period, 170 patients were studied, of which 126 completed the study. Out of the completed cases, 31 (24.6%) patients were relieved, 70 (55.6%) partially relieved and 25 (19.8%) showed no response. No patients were under study and 44 patients dropped out of the study. The test drugs were found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Zimad-e-Bars* in *Kalaf* (Melasma) (RRIUM, Chennai)

A study on validation of a Unani pharmacopoeial formulation *Zimad-e-Bars* in the patients of *Kalaf* (Melasma) was carried out at RRIUM, Chennai. The patients were given *Zimad-e-Bars* for local application on the affected parts twice daily for eight weeks.

During the reporting period, eight patients were studied, of which six completed the study. Out of the completed cases, one (16.7%) patient was relieved, four (66.6%) were partially relieved and one (16.7%) showed no response. Two patients dropped out of the study and no patients were under study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Majoon Supari Pak* in *Sayalān al-Rahīm* (Leucorrhoea) (CRIUM, Hyderabad; RRIUMs, Patna and Aligarh)

A study on validation of a Unani pharmacopoeial formulation *Majoon Supari Pak* in the patients of *Sayalān al-Rahīm* (Leucorrhoea) was carried out at CRIUM, Hyderabad; and RRIUMs, Patna and Aligarh. The patients received *Majoon Supari Pak* seven gm twice daily for eight weeks.

During the reporting period, 205 patients were studied, of which 143 patients completed the study. Out of the completed cases, 31 (21.7%) patients were relieved, 96 (67.1%) partially relieved and 16 (11.2%) showed no response. Eight patients were under study and 54 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Habb-e-Asgand* in *Waja' al-Mafāsil* (Rheumatoid Arthritis) (RRIUMs, New Delhi, Mumbai, Aligarh; CRU, Bengaluru)

A study on validation of a Unani pharmacopoeial formulation *Habb-e-Asgand* in *Waja' al-Mafāsil* (Rheumatoid Arthritis) was carried at RRIUMs, New Delhi, Mumbai and Aligarh; and CRU, Bengaluru. The patients received *Habb-e-Asgand* one tablet twice daily for six weeks.

During the reporting period, 165 patients were studied, of which 56 completed the study. Out of the completed cases, 10 (17.8%) patients were relieved, 30 (53.6%) partially relieved and 16 (28.6%) showed no response. Fifty-one patients were under study and 58 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Habb-e-Bawaseer Damiya* in *Bawāsīr* (Piles) (RRIUMs, Bhadrak and Kolkata; CRU, Kurnool)

A study on validation of a Unani pharmacopoeial formulation *Habb-e-Bawaseer Damiya* in the patients of *Bawāsīr* (Piles) was carried out at RRIUMs, Bhadrak and Kolkata; and CRU, Kurnool. The patients received *Habb-e-Bawaseer Damiya* one tablet twice daily for two weeks.

During the reporting period, 167 patients were studied, of which 131 completed the study. Out of the completed cases, 87 (66.4%) patients were relieved, 39 (29.8%) partially relieved and five (3.8%) showed no response. Three patients were under study and 33 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Safoof-e-Habis-ud-Dam* in *Kathra al-Ṭamth* (CRIUM, Hyderabad; RRIUMs, Aligarh, Chennai and Srinagar)

A study on validation of a Unani pharmacopoeial formulation *Safoof-e-Habis-ud-Dam* in *Kathra al-Ṭamth* (Heavy Menstrual Bleeding) was carried out at CRIUM, Hyderabad; and RRIUMs, Aligarh, Chennai and Srinagar. The patients received *Safoof-e-Habis-ud-Dam* 2.5 gm twice daily for ten days in a month starting from the 1st day of the menstrual cycle for three consecutive months.

During the reporting period, 42 patients were studied, of which 14 completed the study. Out of the completed cases, 11 (78.6%) patients were relieved and three (21.4%) showed no response. Fifteen patients were under study and 13 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Jawarish-e-Shahi* in *Khafaqān* (Palpitation) (CRIUM, Lucknow; RRIUMs, Aligarh and Srinagar)

A study on validation of a Unani pharmacopoeial formulation *Jawarish-e-Shahi* in *Khafaqān* (Palpitation) was carried out at CRIUM Lucknow; and RRIUMs, Aligarh and Srinagar. The patients received *Jawarish-e-Shahi* five gm orally twice daily for two weeks.

During the reporting period, 83 patients were studied, of which 49 completed the study. Out of the completed cases, 24 (49.0%) patients were relieved, 22 (44.9%) partially relieved and three (6.1%) showed no response. Four patients were under study and 30 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Khamira Sandal Sada* in *Khafaqān* (Palpitation) (CRIUM, Hyderabad; RRIUM, New Delhi; CRU, Meerut)

A study on validation of a Unani pharmacopoeial formulation *Khamira Sandal Sada* in the patients of *Khafaqān* (Palpitation) was carried out at CRIUM, Hyderabad; RRIUM, New Delhi; and CRU, Meerut. The patients received *Khamira Sandal Sada* five gm twice daily for two weeks.

During the reporting period, 72 patients were studied, of which 30 completed the study. Out of the completed cases, 18 (60.0%) patients were relieved, eight (26.7%) partially relieved and four (13.3%) showed no response. Twenty patients were under study and 22 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Laooq-e-Badam* in *Khushūna al-Halaq* (Sore Throat) (RRIUMs, Bhadrak, Chennai and Kolkata)

A study on validation of a Unani pharmacopoeial formulation *Laooq-e-Badam* in the patients of *Khushūna al-Halaq* (Sore Throat) was carried out at RRIUMs, Bhadrak, Chennai and Kolkata. The patients received *Laooq-e-Badam* five gm twice daily for two weeks.

During the reporting period, 53 patients were studied, of which 45 completed the study. Out of the completed cases, 33 (73.3%) patients were relieved and 12 (26.7%) partially relieved. No patients were under study and eight dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Itrifal Ustukhuddus* in *Nazla Muzmin* (Chronic Rhinosinusitis) (CRIUMs, Hyderabad and Lucknow; RRIUM, Srinagar)

A study on validation of a Unani pharmacopoeial formulation *Itrifal Ustukhuddus* in the patients of *Nazla Muzmin* (Chronic Rhinosinusitis) was carried out at CRIUMs, Hyderabad and Lucknow; and RRIUM, Srinagar. The patients received *Itrifal Ustukhuddus* seven gm twice daily for six weeks.

During the reporting period, 92 patients were studied, of which 60 completed the study. Out of the completed cases, 36 (60.0%) patients were relieved and 24 (40.0%) partially relieved. Fourteen patients were under study and 18 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Majoon Muqawwi-e-Rahem* in *Sayalān al-Rahīm* (Leucorrhoea) (CRIUM, Lucknow; RRIUMs, New Delhi and Aligarh)

A study on validation of a Unani pharmacopoeial formulation *Majoon Muqawwi-e-Rahem* in the patients of *Sayalān al-Rahīm* (Leucorrhoea) was carried out at CRIUM Lucknow; and RRIUMs, New Delhi and Aligarh. The patients received *Majoon Muqawwi-e-Rahem* five gm twice daily for two weeks.

During the reporting period, 343 patients were studied, of which 219 completed the study. Out of the completed cases, 46 (21.0%) patients were relieved, 137 (62.6%) partially relieved and 36 (16.4%) showed no response. Forty-four patients were under study and 80 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Sharbat-e-Sadar* in *Su'āl* (Cough) (RRIUM, Kolkata; CRU, Burhanpur)

A study on validation of a Unani pharmacopoeial formulation *Sharbat-e-Sadar* in the patients of *Su'āl* (Cough) was carried out at RRIUM Kolkata; and CRU, Burhanpur. The patients received *Sharbat-e-Sadar* 10 ml thrice daily for two weeks.

During the reporting period, 35 patients were studied, of which 32 completed the study. Out of the completed cases, 10 (31.3%) patients were relieved, 16 (50.0%) partially relieved and six (18.8%) showed no response. One patient was under study and two dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Majoon-e-Dabeed-ul-Ward* in *Waram al-Kabid* (Hepatitis) (CRUs, Burhanpur and Kurnool)

A study on validation of a Unani pharmacopoeial formulation *Majoon-e-Dabeed-ul-Ward* in the patients of *Waram al-Kabid* (Hepatitis) was carried out at CRUs, Burhanpur and Kurnool. The patients received *Majoon-e-Dabeed-ul-Ward* five gm twice daily for six weeks.

During the reporting period, 62 patients were studied, of which 44 completed the study. Out of the completed cases, five (11.4%) patients were relieved, 28 (63.6%) partially relieved and 11 (25.0%) showed no response. Eight patients were under study and 10 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Laooq-e-Katan* in *Ḍiq al-Nafas* (Bronchial Asthma) (CRIUM, Lucknow; RRC Allahabad; CRU, Meerut)

A study on validation of a Unani pharmacopoeial formulation *Laooq-e-Katan* in the patients of *Ḍiq al-Nafas* (Bronchial Asthma) was carried out at CRIUM, Lucknow; RRC, Allahabad; and CRU, Meerut. The patients received *Laooq-e-Katan* five gm twice daily for two weeks.

During the reporting period, 21 patients were studied, of which 15 completed the study. Out of the completed cases, five (33.3%) patients were relieved, nine (60.0%) partially relieved and one (6.7%) showed no response. Three patients were under study and three dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Khamira-e-Gaozaban Sada* in *Du'f al-Dimāgh* (Cerebrasthenia) (CRIUMs, Hyderabad and Lucknow; RRIUM, Mumbai)

A study on validation of a Unani pharmacopoeial formulation *Khamira-e-Gaozaban Sada* in the patients of *Du'f al-Dimāgh* (Cerebrasthenia) was carried out at CRIUMs, Hyderabad and Lucknow; and RRIUM, Mumbai. The patients received *Khamira-e-Gaozaban Sada* five gm twice daily for six weeks.

During the reporting period, 57 patients were studied, of which 43 completed the study. Out of the completed cases, 29 (67.4%) patients were relieved, 11 (25.6%) partially relieved and three (7.0%) showed no response. Three patients were under study and 11 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Habb-e-Hilteet* in *Du'f al-Ishtihā'* (Anorexia) (RRIUMs, Chennai, Patna and New Delhi)

A study on validation of a Unani pharmacopoeial formulation *Habb-e-Hilteet* in the patients of *Du'f al-Ishtihā'* (Anorexia) was carried out at RRIUMs, Chennai, Patna and New Delhi. The patients received *Habb-e-Hilteet* one tablet twice daily for two weeks.

During the reporting period, 145 patients were studied, of which 106 completed the study. Out of the completed cases, 49 (46.3%) patients were relieved, 47 (44.3%) partially relieved and 10 (9.4%) showed no response. Nine patients were under study and 30 dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

New Studies

In addition to the above, the following studies under validation of Unani pharmacopoeial drugs were allotted / initiated during the reporting period:

- Clinical validation of a Unani pharmacopoeial formulation *Itrifal Fauladi* in *Sū' al-Qinya* (Anaemia)
- Clinical validation of a Unani pharmacopoeial formulation *Habb-e-Tinkar* in *Du'f al-Ishtihā'* (Anorexia)
- Clinical validation of a Unani pharmacopoeial formulation *Habb-e-Suranjan* in *Waja' al-Mafāṣil* (Rheumatoid Arthritis)
- Clinical validation of a Unani pharmacopoeial formulation *Itrifal Mulayyin* in *Ṣudā' Muzmin* (Chronic Headache)
- Clinical validation of a Unani pharmacopoeial formulation *Safoof-e-Sailan* in *Sayalān al-Raḥīm* (Leucorrhoea)
- Clinical validation of a Unani pharmacopoeial formulation *Habb-e-Bawaseer Amya* in *Bawāsīr 'Amiya* (Non-Bleeding Piles)

- Clinical validation of a Unani pharmacopoeial formulation *Safoof-e-Teen* in *Zahīr* (Dysentery)
- Clinical validation of a pharmacopoeial formulation *Habb-e-Musaffi Khoon* in *Buthūr al-Jild*
- Clinical validation of a pharmacopoeial formulation *Habb-e-Hindi Zeeqi* in *Ḍiḡ al-Nafas*
- Clinical validation of a pharmacopoeial formulation *Habb-e-Khabsal-Hadeed* in *Anaemia*
- Clinical validation of a pharmacopoeial formulation *Jawarish-e-Pudina* in *Ḍuʻf al-Ishtihāʻ*
- Clinical validation of a pharmacopoeial formulation *Khamira Abresham Saada* in *Khafaqān* (Palpitation)
- Clinical validation of a pharmacopoeial formulation *Majoon-e-Hajr-ul-Yahood* in *Ḥaṣā al-Kulya*
- Clinical validation of a pharmacopoeial formulation *Majoon-e-Ispand Sokhtani* in *Surʻa al-Inzāl* (Premature Ejaculation)
- Clinical validation of a pharmacopoeial formulation *Majoon-e-Sangdana Murgh* in *Ḍuʻf-i Miʻda*
- Clinical validation of a pharmacopoeial formulation *Majoon-e-Sohag Sonth* in *Sayalān al-Raḥim*
- Clinical validation of a pharmacopoeial formulation *Roghan-e-Qaranful* in *Wajaʻ al-Asnān*
- Clinical validation of a pharmacopoeial formulation *Roghan-e-Baiza-e-Murgh* in *Dāʻ al-Thaʻlab*
- Clinical validation of a pharmacopoeial formulation *Sharbat-e-Anjabar* in *Kathra al-Ṭamth*
- Clinical validation of a pharmacopoeial formulation *Tiryaaq-e-Nazla* in *Nazla*
- Clinical validation of a pharmacopoeial formulation *Itrifal Kishneez* in *Nazla Muzmin*
- Clinical validation of a pharmacopoeial formulation *Sharbat-e-Khaksi* in *Recurrent Fever*
- Clinical validation of a pharmacopoeial formulation *Habb-e-Mudir* in *Ihtibās al-Ṭamth*
- Clinical validation of a pharmacopoeial formulation *Safoof-e-Amla* in *ʻUsr al-Bawl*
- Clinical validation of a pharmacopoeial formulation *Safoof Chobchini* in *Niqris*

Validation of Unani Pharmacopoeial Fast-Acting Drugs

The Council continued the programme of validating the efficacy and safety of some Unani pharmacopoeial fast-acting drugs in different disease conditions at its various clinical centres.

During the reporting period, clinical validation of seven Unani pharmacopoeial drugs was carried out in seven disease conditions. The summary of the studies is as follows:

Clinical validation of a Unani pharmacopoeial formulation *Zaroor Kath* for symptomatic relief in the patients of *Qulāʻ* (Stomatitis) (RRIUMs, Chennai, Bhadrak and Patna; CRU, Kurnool)

Clinical validation of a Unani pharmacopoeial formulation *Zaroor Kath* was conducted in the patients of *Qulāʻ* (Stomatitis) at RRIUMs, Chennai, Bhadrak and Patna; and CRU, Kurnool.

The study drug *Zaroor Kath* was sprinkled locally on the lesions in the mouth twice daily for seven days.

During the reporting period, 86 patients were studied, of which 75 completed the study. Out of the completed cases, 48 (64.0%) patients were relieved, 25 (33.3%) partially relieved whereas two (2.7%) showed no response. Eleven patients dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Roghan Ikseer* for symptomatic relief in *Waja' al-Asnān* (Toothache) (RRIUMs, Mumbai, Chennai, Bhadrak and Patna; CRU, Kurnool)

Clinical validation of a Unani pharmacopoeial formulation *Roghan Ikseer* was conducted in the patients of *Waja' al-Asnān* (Toothache) at RRIUMs, Mumbai, Chennai, Bhadrak and Patna; and CRU, Kurnool. The study drug *Roghan Ikseer* was applied locally on the aching tooth twice daily for seven days.

During the reporting period, 163 patients were studied, of which 137 completed the study. Out of the completed cases, 110 (80.3%) patients were relieved, 22 (16.1%) partially relieved whereas five (3.6%) showed no response. Twenty one patients dropped out of the study whereas five were under study at the end of the reporting period. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Qurs Asfar* for symptomatic relief in *Sharā* (Urticaria) (RRIUMs, Mumbai, Chennai, Bhadrak and Patna; CRU, Kurnool)

Clinical validation of a Unani pharmacopoeial formulation *Qurs Asfar* was conducted in the patients of *Sharā* (Urticaria) at RRIUMs, Mumbai, Chennai, Bhadrak and Patna; and CRU, Kurnool. The study drug *Qurs Asfar* one tablet (775 mg) was given orally twice daily for 14 days.

During the reporting period, 228 patients were studied, of which 151 completed the study. Out of the completed cases, 80 (53.0%) patients were relieved, 62 (41.0%) partially relieved whereas nine (6.0%) showed no response. Nine patients dropped out of the study whereas 68 were under study at the end of the reporting period. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Sharbat Toot Siyah* in the patients of *Waram al-Halaq* (Pharyngitis) (RRIUMs, Mumbai, Chennai, Bhadrak and Patna; CRU, Kurnool)

Clinical validation of a Unani pharmacopoeial formulation *Sharbat Toot Siyah* was conducted in the patients of *Waram al-Halaq* (Pharyngitis) at RRIUMs, Mumbai, Chennai, Bhadrak and Patna; and CRU, Kurnool. The study drug *Sharbat Toot Siyah* was given orally in the dose of 20 ml twice daily for seven days.

During the reporting period, 87 patients were studied, of which 73 completed the study. Out of the completed cases, 22 (30.1%) patients were relieved, 45 (61.6%) partially relieved whereas six (8.2%) showed no response. One patient was under study and 13 patients dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Roghan Laboob Saba* in the patients of *Sahar* (Insomnia) (CRIUMs, Hyderabad and Lucknow; RRIUM, New Delhi)

Clinical validation of a Unani pharmacopoeial formulation *Roghan Laboob Saba* was conducted in the patients of *Sahar* (Insomnia) at CRIUMs, Hyderabad and Lucknow; and RRIUM, New Delhi. The study drug *Roghan Laboob Saba* was applied locally on scalp at bedtime once a day for seven days.

During the reporting period, 52 patients were studied, of which 48 completed the study. Out of the completed cases, 22 (45.8%) patients were relieved, 14 (29.2%) partially relieved whereas 12 (25.0%) showed no response. Two patients were under study and two dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Habb-e-Surfa* in the patients of *Su'āl* (Cough) (RRC, Allahabad; CRUs, Bhopal and Burhanpur)

Clinical validation of a Unani pharmacopoeial formulation *Habb-e-Surfa* was conducted in the patients of *Su'āl* (Cough) at RRC, Allahabad; and CRUs, Bhopal and Burhanpur. The study drug *Habb-e-Surfa* one tablet (125 mg) was given orally twice daily for seven days.

During the reporting period, 30 patients were studied, of which 15 completed the study. Out of the completed cases, five (29.4%) patients were relieved and 12 (70.6%) partially relieved. Six patients were under study and seven dropped out of the study. The test drug was found well-tolerated and no adverse effects were observed.

Clinical validation of a Unani pharmacopoeial formulation *Laooq Sapistan* in the patients of *Nazla* (Common Cold) (CRIUM, Lucknow; CRUs, Bhopal, Kerala and Meerut; RRC, Silchar)

Clinical validation of a Unani pharmacopoeial formulation *Laooq Sapistan* in the patients of *Nazla* (Common Cold) was conducted at CRIUM, Lucknow; CRUs, Bhopal, Kerala, Meerut; and RRC, Silchar. The study drug *Laooq Sapistan* was given orally in the dose of five gm twice daily for seven days.

During the reporting period, 55 patients were studied, of which 47 completed the study. Out of the completed cases, 21 (44.7%) patients were relieved, 18 (38.3 %) partially relieved and eight (17%) showed no response. Eight patients dropped out of the study and no patients were under study. The test drug was found well-tolerated and no adverse effects were observed.

New Studies

Besides the above, the following studies under validation of Unani pharmacopoeial fast-acting drugs were allotted / initiated during the reporting period:

- Clinical validation of a Unani pharmacopoeial formulation *Sanoon-e-Mukhrij-e-Rutubat* in *Litha Dāmiya* (Bleeding Gums)
- Clinical validation of a Unani pharmacopoeial formulation *Roghan-e-Kahu* in *Sahar* (Insomnia)
- Clinical validation of a Unani pharmacopoeial formulation *Khamira-e-Banafsha* in *Su'āl Yābis* (Dry Cough)

- Clinical validation of a Unani pharmacopoeial formulation *Lauq-e-Khayarshambar* in *Nazla* (Common Cold)
- Clinical validation of a Unani pharmacopoeial formulation *Jawarish-e-Anarian* in *Ghathayān* (Nausea)

Validation of Regimen Therapies

Apart from pharmacotherapy, Unani Medicine also offers *‘Ilāj bi’l-Tadbīr* (Regimen Therapy) such as *Hijāma* (Cupping), *Ta’līq al-‘Alaq* (Leeching), *Dalk* (Massage), *Ḥammām Yābis* (Sauna), *Ḥammām al-Bukhār* (Steam Bath), etc. for certain disease conditions. During the reporting period, various regimen therapy procedures were performed on a total of 8,513 patients with different diseases. These patients showed significant therapeutic effects in subsiding the signs and symptoms of the diseases.

Hijāma bilā Shart (Dry Cupping) was performed on 2,984 patients with different diseases including *Waja’ al-Mafāsil* (Rheumatoid Arthritis), *Taḥajjur al-Mafāsil* (Osteoarthritis), *‘Irq al-Nasā* (Sciatica), *Taḥajjur Mafāsil al-‘Unuq* (Cervical Spondylosis), *Taḥajjur Mafāsil al-Zahr* (Lumbar Spondylosis), *Katif Mujammad* (Frozen Shoulder), *Waja’ al-Zahr* (Backache), *Waja’ al-Katif* (Shoulder Pain), *Waja’ al-‘Unuq* (Neck Pain), *Waja’ al-Rukba* (Knee Pain), *Waja’ al-‘Aqib* (Achillodynia), *Dawālī* (Varicose Veins), *Kathra al-Ṭamth* (Menorrhagia), *‘Uṣr al-Ṭamth* (Dysmenorrhoea), *Ṣudā’* (Headache), *Ṣala’* (Baldness), *Ḥuẓn* (Depression), etc. at CRIUMs, Hyderabad and Lucknow; and RRIUMs, Chennai, Bhadrak, Patna, New Delhi, Aligarh, Srinagar and Mumbai.

Hijāma bi’l Shart (Wet Cupping) was performed on 867 patients with different diseases including *Nār Fārsī* (Eczema), *Buthūr Labaniyya* (Acne Vulgaris), *Dā’ al-Tha’lab* (Alopecia), *Bawāsīr* (Haemorrhoid), *Ḍaght al-Dam Qawī* (Hypertension), *‘Uqr* (Infertility), *Waja’ al-Mafāsil* (Rheumatoid Arthritis), *Taḥajjur al-Mafāsil* (Osteoarthritis), *‘Irq al-Nasā* (Sciatica) and other musculoskeletal disorders at CRIUM, Hyderabad, and RRIUMs, Chennai, Bhadrak, Patna, New Delhi, Srinagar and Mumbai.

Hijāma bi’l Nār (Fire Cupping) was performed on 195 patients with different diseases including *Waja’ al-Mafāsil* (Rheumatoid Arthritis), *Taḥajjur al-Mafāsil* (Osteoarthritis), *‘Irq al-Nasā* (Sciatica), *Waja’ al-Zahr* (Backache), *Katif Mujammad* (Frozen Shoulder), *Waja’ al-Katif* (Shoulder Pain) and *Waja’ al-Rukba* (Knee Pain) at RRIUMs, Chennai, Bhadrak and Patna.

Hijāma Muzliqa (Moving Cupping) was performed on 3,056 patients with different diseases including *Waja’ al-Zahr* (Backache) and *Katif Mujammad* (Frozen shoulder) at RRIUMs, Chennai, Bhadrak and Patna.

Ta’līq al-‘Alaq (Leeching) was performed on 593 patients with different diseases including *Dawālī* (Varicose Veins), *Takhaththur al-Dam* (Deep Vein Thrombosis), *Qadam Dhayābīṭusiyya* (Diabetic Foot), *Khaṣar-wa-Taṣqi’* (Frostbite), *Taḥajjur al-Mafāsil* (Osteoarthritis), *Katif Mujammad* (Frozen Shoulder), *Nār Fārsī* (Eczema), *Dā’ al-Tha’lab* (Alopecia), *Ṣala’* (Baldness) and *Baraṣ* (Vitiligo) at RRIUM, Srinagar.

Ḥammām al-Bukhār (Steam Bath) was performed on 27 patients with different diseases including *Waja’ al-Katif* (Upper Back Pain), *Buthūr al-Jild* (Macules/ Papules/ Pustules), *Qūbā* (Ringworm), *Siman Mufrit* (Obesity) and *Bafā* (Dandruff) at RRIUM, Bhadrak.

Dalk Mu'tadil (Moderate Massage) was performed on 704 patients with different diseases including *Waja' al-Mafāṣil* (Rheumatoid Arthritis), *Taḥajjur al-Mafāṣil* (Osteoarthritis), *Taḥajjur Mafāṣil al-'Unuq* (Cervical Spondylosis), *Katif Mujammad* (Frozen Shoulder), *Waja' al-Zahr* (Backache), *Waja' al-Katif* (Shoulder Pain) and *Waja' al-'Aqib* (Achillodynia) at RRIUMs, Bhadrak, New Delhi and Patna.

Ḥammām Yābis (Sauna) was performed on 20 patients of *Waja' al-Mafāṣil* (Rheumatoid Arthritis) at RRIUM, New Delhi.

Naṭūl (Fomentation) was performed on 41 patients of *Waja' al-Mafāṣil* (Rheumatoid Arthritis) at RRIUM, Chennai.

Inkibāb (Vaporisation) was performed on 26 patients of *Waja' al-Mafāṣil* (Rheumatoid Arthritis) and *Waja' al-Katif* (Frozen Shoulder) at RRIUM, Bhadrak.

Validation of Fundamentals

Theory of *Akhlāt wa Mizāj* (Humours and Temperament)

The objective of the project was to test scientifically the concept of *Akhlāt* (Humours) and *Mizāj* (Temperament), and its relevance to the states of health and disease. This project was undertaken at CRIUM, Hyderabad. The project was aimed at studying the clinical, physiological, pathological, biochemical and genetic parameters of the subjects of different temperaments, conducting clinical assessment of *Mizāj* (Temperament) in different diseases, and scientifically establishing correlation among them.

Genetic studies on the Theory of Humours

Genetic studies on the theory of Humours with special reference to Diabetes Mellitus, Essential Hypertension, Vitiligo, Hepatitis, *Sawdāwī* and other related diseases were carried out, whereas and healthy volunteers served as control. Pharmacogenomic studies of Unani formulations in Vitiligo were also conducted. The studies carried out in each participant included determination of dominant temperament by *Ajnās-i 'Ashara* and special CRF on assessment of temperament, genetic marker studies in relation to temperament, studies of biochemical, physiological and pathological parameters, and pulse wave analysis and its component study in relation to the temperament. During the reporting period, the following studies continued:

Genetic study on the theory of Humours with special reference to Diabetes Mellitus and Essential Hypertension

The study continued on 123 patients of Hypertension and 169 patients of Diabetes Mellitus registered during the previous year. All the patients were of *Damawī* temperament. During the reporting period, polymorphism studies were carried out on eNOS gene in hypertensive patients along with *Damawī* controls and biochemical markers (catalase, glutathione reductase, lipid peroxidase and superoxide dismutase) were studied. The superoxide dismutase was significantly altered ($P < 0.5$) whereas catalase and glutathione reductase altered at $P < 0.01$ level and lipid peroxidase at $P < 0.5$ level. Drug metabolizing genes GST T1 and GSTM1 were also studied in the patients.

In Diabetes Mellitus patients, primers were designed and genotyping was done to see Pro12Ala polymorphism for PPAR gamma gene in the patients and *Damawī* controls. In genotype frequency alleles CC was 78 in the patients compared to 83 in the controls, CG was 22 in the patients compared to 17 in the controls and GG was nil. Apart from these, primers were designed, standardized and polymorphism studies for GSTT1 and GSTM1 (drug metabolizing genes) to see genotype frequency in the patients suffering from Diabetes using gene tool software were carried out. In GSTM1, H/H was 62.0% in the patients whereas 72.6% in the controls while null was 38.0% in the patients and 27.4% in the controls. In the case of GSTT1, genotype frequency of H/H was 79.0% in the patients and 83.3% in the controls, while null was 21.0% in the patients and 16.6% in the controls. The results may vary with the sample size and inference can be drawn only after final analysis and compilation.

Genetic study on the theory of Humours with special reference to Vitiligo

The study continued on 202 patients of Vitiligo registered during the previous year. All the patients were of *Balghamī* temperament. During the reporting period, polymorphism studies were carried out in the Vitiligo patients in relation to the controls. Primers were designed and standardized for NLRP1 gene-rs2670660 (A/G) polymorphism in the *Balghamī* controls. In the genotype frequency of rs2670660 polymorphism in NLRP1 gene, genotype or alleles GA was 49 in the patients whereas 74 in the controls, GG was 15 in the patients and 02 in the controls, AA was 36 in the patients and 24 in the controls.

Apart from the above, drug metabolizing genes (GSTT1 and GSTM1) were also studied in the Vitiligo patients and controls. In GSTM1, H/H was 82.0% and 83.3%, and null was 18.0% and 16.6% in the patients and controls respectively. In GSTT1, H/H was 71.0% in the patients and 96.7% in the controls, whereas null was 29.0% in the patients and 3.3% in the controls. The results may vary with the sample size and inference can be drawn only after final analysis and compilation.

Genetic study on the theory of Humours with special reference to Hepatitis and other *Ṣafrāwī* diseases

The study was carried out on 94 fresh registered and 18 continuing patients of Hepatitis and other *Ṣafrāwī* diseases. In molecular biology study, drug metabolizing was studied to see the genotype frequency of the two genes in the patients along with controls using gene tool software. In GSTM1, H/H was 57.5% in the patients and 93.3% in the controls whereas null was 42.5% and 6.6% in the patients and the controls respectively. In GSTT1, H/H was 60% and 90% and null was 40.0% and 10.0% in the patients and the controls respectively. The biochemical, physiological and pathological parameters were in the physiological range. The correlation of the pulse tracings with the temperament was sometimes concordant and sometimes discordant. The results may vary with the sample size and inference can be drawn only after final analysis and compilation.

Genetic study on the theory of Humours with special reference to Cancer and other *Sawdāwī* diseases

The study was carried out on 17 fresh registered and 96 continuing patients of Cancer and other *Sawdāwī* diseases. In genetic studies, drug metabolizing genes were studied. In GSTT1,

H/H was 76.0% and 78.5% and null was 74.0% and 21.4% in the patients and the controls respectively. In GSTM1, H/H was 70.0% and 78.5% and null was 30.0% and 21.4% in the patients and the controls respectively.

The biochemical, physiological and pathological parameters were in the physiological range. The correlation of the pulse tracings with the temperament was sometimes concordant and sometimes discordant. The results may vary with the sample size and inference can be drawn only after final analysis and compilation.

Genetic study on the theory of Humours with special reference to healthy volunteers

The study was conducted on 87 healthy volunteers who served as control. Of them, 31 were *Damawī*, 19 *Balghamī*, 30 *Şafrāwī* and seven *Sawdāwī*. The allotted sample size for this study is 500 and 311 healthy volunteers have completed it so far.

During the reporting period, drug metabolizing gene was studied on the volunteers. In GSTT1, H/H and null frequencies were 72.6% and 27.4% in *Damawī* volunteers, 83.3% and 16.6% in *Balghamī*, 93.3% and 6.6% in *Şafrāwī* whereas 78.5% and 21.4% in *Sawdāwī* volunteers. In GSTT1, H/H and null were 83.3% and 16.6% in *Damawī* volunteers, 96.7% and 3.3% in *Balghamī*, 90.0% and 10.0% in *Şafrāwī* whereas 78.5% and 21.4% in *Sawdāwī* volunteers. The biochemical, physiological and pathological parameters were in the physiological range. The correlation of the pulse tracings with the temperament was sometimes concordant and sometimes discordant. The results may vary with the sample size and inference can be drawn only after final analysis and compilation.

Pharmacogenomics of Unani formulations in Vitiligo

The study was conducted on Vitiligo patients and controls. Blood samples were collected in paxgene blood RNA tubes from 37 Vitiligo patients and 30 controls. The real time primers were designed for NLRP1, MIF and GAPDH gene as an internal control gene using gene tool software. The isolated RNA was converted into cDNA using reverse transcriptase enzyme; and then the converted cDNA samples were subjected to expression studies using RT-PCR. Expression studies were completed for 30 Vitiligo patients' samples and 30 controls' samples for NLRP1 gene and MIF gene using GAPDH as an internal control.

The expression of NLRP1 gene increased to 1.44 folds in the patients compared to the controls, whereas MIF gene showed a small increase of 0.757 folds in the patients in comparison to the control. Serum levels of TNF- α in the patients and the controls were measured by Enzyme-linked immunosorbent assay (ELISA) using the Immunotech Human TNF- α ELISA kit, kit of Human TNF α . The mean serum TNF- α concentration increased to 64.2 ± 35.2 in the patients as compared to 57.1 ± 11.9 in the controls, but there was no significant difference between the means of the two groups.

Clinical Assessment of Mizāj (Temperament)

During the reporting period, assessment of temperament of 5,211 patients attending the OPD of CRIUM, Hyderabad was done. These included 4,681 patients of *Baraş* (Vitiligo), 78 patients of *Dā' al-Şadař* (Psoriasis), 83 patients of *Sayalān al-Raḥim* (Leucorrhoea), 18 patients of *Kathra Şaḥm al-Dam* (Hyperlipidaemia), 135 patients of *Dhayābīṭus Sukkarī* (Diabetes Mellitus), 10

patients of *Du'f al-Dimāgh* (Cerebroasthenia), 14 patients of *Kathra al-Ṭamth* (Heavy Menstrual Bleeding), nine patients of *Sahar* (Insomnia), five patients of *Khafaqān* (Palpitation), 11 patients of *Nisyān* (Amnesia), seven cases of Hepatitis B healthy carriers, 56 patients of *Ḍagħṭ al-Dam Qawī Lāzimī* (Essential Hypertension), 50 patients of *Iltihāb Tajāwīf al-Anf* (Sinusitis), 19 patients of *Ḥasā al-Kulya* (Nephrolithiasis) and 35 patients of Osteoarthritis.

- In *Baraṣ* (Vitiligo), 758 (16.2%) patients showed *Damawī* (Sanguine) temperament, 3,658 (78.1%) showed *Balghamī* (Phlegmatic) temperament, 216 (4.6%) showed *Ṣafrāwī* (Bilious) temperament and 49 (1.1%) showed *Sawdāwī* (Melancholic) temperament.
- In *Dā' al-Ṣadaḑ* (Psoriasis), 24 (30.8%) patients showed *Damawī* temperament, eight (10.2%) *Balghamī*, six (7.7%) *Ṣafrāwī* and 40 (51.3%) *Sawdāwī*.
- In *Sayalān al-Raḥim* (Leucorrhoea), 24 (28.9%) patients showed *Damawī* temperament, 45 (54.2%) *Balghamī* and 14 (16.9%) *Ṣafrāwī* temperament.
- In *Kathra Shaḥm al-Dam* (Hyperlipidaemia), 16 (88.9%) patients showed *Balghamī* temperament and two (11.1%) *Ṣafrāwī* temperament.
- In *Dhayābītus Sukkarī* (Diabetes Mellitus), 121 (89.6%) patients were of *Damawī* temperament and 14 (10.4%) of *Balghamī* temperament.
- In *Du'f al-Dimāgh* (Cerebroasthenia), two (20.0%) patients were of *Damawī* temperament, seven (70.0%) of *Balghamī* temperament and one (10.0%) of *Sawdāwī* temperament.
- In *Kathra al-Ṭamth* (Heavy Menstrual Bleeding), two (14.3%) patients were of *Damawī* temperament, eight (57.1%) of *Balghamī* and four (28.6%) of *Ṣafrāwī* temperament.
- In *Sahar* (Insomnia), three (33.3%) patients showed *Balghamī* temperament and six (66.7%) *Ṣafrāwī* temperament.
- In *Khafaqān* (Palpitation), three (60.0%) patients were of *Damawī* temperament, one (20.0%) of *Balghamī* and one (20.0%) of *Ṣafrāwī* temperament.
- In *Nisyān* (Amnesia), three (27.3%) patients were of *Damawī* temperament, six (54.5%) of *Balghamī* and two (18.2%) of *Ṣafrāwī* temperament.
- In Hepatitis B healthy carriers, one (14.3%) case was of *Damawī* temperament, three (42.9%) cases were of *Balghamī* and another three (42.9%) cases of *Ṣafrāwī* temperament.
- In *Ḍagħṭ al-Dam Qawī Lāzimī* (Essential Hypertension), 19 (33.9%) patients were of *Damawī* temperament, 24 (42.9%) of *Balghamī*, nine (16.1%) of *Ṣafrāwī*, and four (7.1%) of *Sawdāwī* temperament.
- In *Iltihāb Tajāwīf al-Anf* (Sinusitis), 19 (38.0%) patients were of *Damawī* temperament and 31 (62.0%) of *Balghamī* temperament.
- In *Ḥasā al-Kulya* (Nephrolithiasis), 16 (84.2%) patients belonged to *Damawī* temperament, one (5.3%) to *Balghamī*, and two (10.5%) to *Ṣafrāwī* temperament.
- In *Taḥajjur al-Mafāṣil* (Osteoarthritis), 32 (91.4%) patients belonged to *Damawī* temperament, one (2.9%) to *Balghamī* and two (5.7%) to *Ṣafrāwī* temperament.

In these patients, susceptibility for acquiring diseases in relation to different temperaments was also studied. An interim analysis of data revealed that the individuals of *Balghamī* temperament were more susceptible to *Baraṣ* (Vitiligo) followed by *Damawī*, *Ṣafrāwī* and *Sawdāwī* temperaments. The persons of *Sawdāwī* temperament were susceptible to *Dā' al-Ṣadaḑ*

(Psoriasis) followed by *Damawī* temperament. Similarly, persons of *Balghamī* temperament were more susceptible to *Iltihāb Tajāwīf al-Anf* (Sinusitis) followed by *Damawī* (Sanguine) temperament.

It was also observed that the persons with *Balghamī* temperament were more susceptible than others to *Sayalān al-Rahim* (Leucorrhoea), *Kathra Shaḥm al-Dam* (Hyperlipidaemia), *Kathra al-Ṭamth* (Heavy Menstrual Bleeding), *Ḍagḥ al-Dam Qawī Lāzimī* (Essential Hypertension) and *Nisyān* (Amnesia). The people of *Damawī* temperament were more susceptible to *Khafaqān* (Palpitation), *Ḥaṣā al-Kulya* (Nephrolithiasis), *Taḥajjur al-Mafāṣil* (Osteoarthritis) and *Dhayābīṭus Sukkarī* (Diabetes Mellitus), whereas those with *Ṣafrāwī* temperament were more susceptible than others to *Sahar* (Insomnia) and Hepatitis B healthy carriers.

Research-oriented Healthcare

General Outpatient Department (GOPD) Programme

The CCRUM undertakes GOPD Programme which also includes Geriatric OPD and RCH/ MCH OPD. It is aimed at promoting, protecting and preserving public health through Unani Medicine. Besides, OPDs for Posttrial Access (PTA) is also conducted in order to provide treatment facility to the research patients after completing the trial. During the reporting period, this programme continued at Central Research Institutes of Unani Medicine (CRIUMs), Hyderabad and Lucknow; Regional Research Institutes of Unani Medicine (RRIUMs), Chennai, Bhadrak, Patna, Aligarh, Mumbai, Srinagar, Kolkata and New Delhi; Regional Research Centres, Allahabad and Silchar (with an extension centre at Karimganj); Clinical Research Units (CRUs), Bengaluru, Bhopal, Burhanpur, Meerut, Kurnool and Edathala; Clinical Research Pilot Project, Manipur; Hakim Ajmal Khan Institute for Literary and Historical Research in Unani Medicine, New Delhi; AYUSH Wellness Centre, President's Estate, New Delhi; and All India Institute of Ayurveda, New Delhi. During the reporting period, a total of 4,96,859 patients comprising 4,36,173 patients in GOPDs, 27,789 in Geriatric OPDs, 13,092 in RCH/ MCH OPDs, and 19,805 in OPDs for Posttrial Access were treated at different centres. These patients were also assessed for their temperaments and various other factors responsible for occurrence of the disease, thus generating data for research feedback and Unani treatment was prescribed accordingly. These patients were treated with Unani pharmacopoeial formulations.

Mobile Clinical Research Programme

The Mobile Clinical Research Programme is aimed at providing healthcare to the population residing in rural areas, urban slums, scheduled caste and scheduled tribe pockets, besides reducing the disease burden in the society by creating health awareness among them. This programme is conducted under the scheme of Special Component Plan comprising Scheduled Caste Sub-Plan (SCSP) and Tribal Sub-Plan (TSP). Under this programme, rural areas, urban slums and pockets predominantly inhabited by SC / ST population with no medical facility are covered. The Council's researchers visit the adopted pockets at regular intervals and provide free Unani treatment to the patients at their door steps, and thus serve as a potential source of healthcare delivery to the masses. The cases of different ailments are referred to the Council's institutes / units and also to other hospitals for treatment of specific diseases for clinical research. Besides, health awareness is also created among the population under coverage

particularly the women and senior citizens through health lectures and group meetings on the preventive, promotive and curative health aspects based on the principles of Unani Medicine. They are also made aware of the therapeutic uses of medicinal plants growing in their vicinity in the management of different common / seasonal ailments.

During the reporting period, this programme continued at Central Research Institutes of Unani Medicine (CRIUMs), Hyderabad and Lucknow; Regional Research Institutes of Unani Medicine (RRIUMs), Chennai, Bhadrak, Patna, Kolkata, Mumbai, New Delhi and Srinagar; Regional Research Centre (RRC), Allahabad; and Clinical Research Unit (CRU), Burhanpur. During the reporting period, 29 rural pockets / urban slums covering over five lakh populations were adopted. A total of 26,800 patients were treated with Unani pharmacopoeial formulations in 638 mobile visits made to these pockets. Predominant diseases as observed were Rheumatoid Arthritis, Osteoarthritis, Joint Pain, Piles, Leucorrhoea, Skin Infections, Fever, Cough, Catarrh, etc.

3.1.2.4 LITERARY RESEARCH PROGRAMME

Under the Literary Research Programme, Urdu translation of Persian book *Mujarrabāt-i Rizāi* was published while the vetting of its English translation was completed during the reporting period. The translations would help non-Persian knowing Unani physicians, researchers and scholars access the important prescriptions tested by the author in different ailments in order to incorporate the same in clinic as well as research.

The Council was also able to publish the second volume of 'Standard Unani Treatment Guidelines for Common Diseases' comprising description of 60 commonly occurring diseases. Besides peculiar diseases mentioned in Unani classical literature, e.g. *Du'f-i Mi'da* (Gastric Debility), *Waja' al-Fuwād*, *Sū' al-Qinya*, *Dhūsantāriya Mi'wiyya*, *Sa'fa Raṭba* and *Sa'fa Yābisa*, it also includes many lifestyle disorders, e.g., Hypertension and Obesity. The work can be distinguished through its precise description of etiology, pathogenesis, symptomatology, principles of treatment, pharmacotherapy, regimen therapy and preventive measures for each disease in the light of Unani philosophy. The information has been gathered from classical references only. Contrary to the first volume, a list of basic investigations for each disease has also been given to help Unani practitioners diagnose diseases. A glossary of 111 technical terms frequently used in the volume has been appended.

During the reporting period, the proceedings of 'National Seminar on Hakim Ajmal Khan's Multidimensional Personality and Enduring Contributions' organized by the Council in collaboration with Jamia Millia Islamia, New Delhi during 12-13 February 2016 was also published. The publication entitled *Nuqush-i Ajmal* and spread over 284 pages comprises 29 papers presented in the seminar. A team of research officers from Hakim Ajmal Khan Institute for Literary & Historical Research in Unani Medicine (HAKILHRUM), New Delhi and the Headquarters compiled and edited the papers included in the document. *Nuqush-i Ajmal* is certainly an important addition in the available literature on Hakim Ajmal Khan. The book helps in better understanding the great contributions made by Hakim Ajmal Khan and also brings into light some lesser known aspects of his life and works.

Vetting of Urdu translation of Persian book *Muḥīt-i A'zam*, Volume-IV and Urdu translation of Arabic book *Kitāb Manāfi' al-Aghdhiya wa Daf'-i Maḍārrihā* and Persian book *Qarābādīn-i Jalāli* continued during the reporting period. The work on the monographs – *Adwiya Qalbiyya* (Drugs acting on Heart), *Adwiya Kabidiyya* (Drugs acting on Liver), *Adwiya Kulwiyya* (Drugs acting on Kidneys), *Hijāma* (Cupping Therapy) and Cosmetology in Unani Medicine continued.

For distribution in 'Swasthya Rakshan Programme' and National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS), the publicity material on various topics including Cupping Therapy, Deficient Lactation, Dysmenorrhoea, Healthy Ageing, Lifestyle Diseases, Gout, Palpitation, Healthy Living and Dengue Fever was published.

The work of abstracting *Jahan-i Tib's* articles in English continued and 110 articles were abstracted during the reporting period.

3.2 STUDIES UNDER INTRAMURAL RESEARCH (IMR) POLICY

To utilize full potentials of the scientists working in the different centres and to conduct studies based on region-specific needs, the Council recently adopted a new Intramural Research (IMR) Policy. The policy aims to conduct studies in a time-bound manner. During the reporting period, the following studies under the IMR policy were conducted at Central Research Institute of Unani Medicine, Hyderabad:

Evaluation of therapeutic efficacy and safety of coded Unani drugs PTV-6 (O) + PTV-7 (O) and TA-1 and TA-1 plus (topical) in *Baraş* (Vitiligo) patients of different skin grades

A pilot study to evaluate the safety and efficacy of a combination of coded Unani drugs PTV-6 (O) + PTV-7 (O), and TA-1 (topical) and TA-1 plus (topical) was carried out in Vitiligo patients of different skin grades. In group-I, the patients received PTV-6 (one tablet of 500 mg thrice daily) and PTV-7 (one tablet of 500 mg twice daily) after meals and TA-1 was applied locally on the affected parts early in the morning followed by sun exposure for 10-15 minutes for six months. In group-II, the patients received PTV-6 (O) + PTV-7 (O) and TA-1 plus (topical). The dosage, mode of application and duration of treatment was same as in group-I.

During the reporting period, nine patients continuing from the previous year were studied in group-I, of which one patient completed the study with repigmentation between 1-40%, whereas eight patients dropped out of the study.

In group-II, five patients continuing from the previous year were studied and all of them dropped out of the study. The test drugs were found well-tolerated and no adverse effects were observed. The study was completed with 31 cases in group-I and 30 cases in group-II.

Evaluation of therapeutic efficacy and safety of coded Unani drugs PTH-1, PTH-2 and PTH-3 in Asymptomatic Hepatitis B carriers

A pilot study to evaluate the safety and efficacy of coded Unani drugs PTH-1, PTH-2 and PTH-3 was conducted in Asymptomatic Hepatitis B carriers. The patients were divided into three groups. In group-I, the patients received PTH-1 (two capsules of 500 mg each) thrice

daily after meals. In group-II, the patients received PTH-2 (two capsules of 500 mg each) thrice daily after meals. In group-III, the patients received PTH-3 (two capsules of 500 mg each) thrice daily after meals. The duration of treatment was six months.

During the reporting period, two new patients were registered in group-I, whereas three continued from the previous year bringing the total to five patients. Out of them, two patients completed the study, of which one responded and one showed no response. Two patients were under study and one dropped out of the study.

In group-II, two new patients were registered, whereas four continued from the previous year bringing the total to six patients. Out of them, two patients completed the study and showed no response. Two patients were under study and two dropped out of the study.

In group-III, three new patients were registered, whereas two continued from the previous year bringing the total to five patients. Out of them, two patients were under study and three dropped out of the study.

The test drugs were found well-tolerated and no adverse effects were observed.

Single centre, randomized, single blind, parallel group, comparative study to evaluate the efficacy and safety of coded Unani drugs PTA-2 + PTA-4 and PTA-3 + PTA-4 in Osteoarthritis – A pilot study

A pilot clinical study to compare the efficacy and safety of coded Unani drugs PTA-2 + PTA-4 and PTA-3 + PTA-4 in the patients of Osteoarthritis was carried out. The patients were divided into two groups. Group-I received PTA-2 (one tablet of 500 mg) thrice daily after meals and PTA-4 (Oil form) for local application on the affected parts. Group-II received PTA-3 (one tablet of 500 mg) thrice daily after meals and PTA-4 (Oil form) for local application on the affected parts. The duration of treatment was 12 weeks.

During the reporting period, 19 new patients were registered in group-I, whereas three continued from the previous year bringing the total to 22 patients. Out of them, eight patients completed the study. Of the completed cases, two (25.0%) patients were relieved, five (62.5%) partially relieved and one (12.5%) showed no response. Seven patients were under study and seven dropped out of the study.

In group-II, 16 new patients were registered, whereas one patient continued from the previous year bringing the total to 17 patients. Out of them, eight patients completed the study and were partially relieved. Four patients were under study and five dropped out of the study.

The test drugs were found well-tolerated and no adverse effects were observed.

Evaluation and study of the effect of Unani formulation(s) on various biomarkers in the patients with *Baraş* (Vitiligo)

The study aimed to establish any potential biomarkers in Vitiligo patients and to evaluate the effect of the tested Unani formulations on these biomarkers. The study was conducted in the patients of Vitiligo and healthy volunteers (control). The patients received coded Unani drugs UNIM-001 (two tablets of 800 mg each) orally twice daily and UNIM-003 for local application.

The duration of treatment was eight months. The patients were followed-up clinically every two weeks, whereas biomarker analysis was done at baseline, after four months and eight months.

During the reporting period, 60 Vitiligo patients and 34 healthy individuals fulfilling the criteria were studied. The blood samples from the patients and healthy volunteers were drawn. RNA isolation was completed on the patients as well as healthy volunteers by using Paxgene blood RNA isolation kit and the isolated RNA was converted to cDNA. The PCR conditions (NLRP-1, FOX-p3, MIF and IL22) were standardized and quantitative real time PCR was performed along with GAPDH gene as internal control in the patients as well as healthy volunteers. The biomarker levels TNF α and IL-2 were also measured and compared.

Evaluation of anti-inflammatory activity of Unani formulation(s) – An *in-vitro* and *in-vivo* study

A study to evaluate the *in-vitro* and *in-vivo* anti-inflammatory activity of coded Unani drugs UNIM-301 and UNIM-302 was carried out. The aqueous (AQ), hydro-ethanolic (HE) and methanolic (ME) extracts from both the drugs were lyophilized and used for the study. Antioxidant activities measured by FRAP methods of two Unani formulation extracts were performed. Cell proliferation assay (MTT assay) of extracts of UNIM-301 and UNIM-302 were performed on RAW 264.7 cell lines. The procedure for cell line maintenance, passaging and cryopreservation was standardized. The *in-vivo* studies and acute and sub-acute toxicity studies of UNIM-301 were completed and that of UNIM-302 continued.

Effect of Unani formulation(s) used for treatment of *Baras* (Vitiligo) on melanocytes: An *in-vitro* and *in-vivo* study

An *in-vitro* and *in-vivo* study to evaluate the effect of coded Unani drugs UNIM-001, UNIM-003, UNIM-004 and UNIM-005 on melanocytes was carried out in the patients with *Baras* (Vitiligo). The aqueous (AQ), hydro-ethanolic (HE) and methanolic (ME) extracts from all the four drugs were used for *in-vitro* assay. The FRAP assay, representing antioxidant potential, was performed for all three extracts of all the four drugs. In this study, for FRAP assay, mean values <2 were considered the poor anti-oxidant activity, and mean values >2 were considered strong antioxidant activity. Cell proliferation assay (MTT assay) of extracts of UNIM-001, UNIM-003, UNIM-004 and UNIM-005 was performed on B16F10 cell lines. The *in-vivo* studies and acute and sub-acute toxicity studies continued.

New Studies

In addition to the above, the following four studies were initiated under this policy during the reporting period:

- Control clinical trial to evaluate the efficacy and safety of anti dandruff Unani pharmacopoeial formulation in the treatment of *Hazāz* (Dandruff)
- An open clinical trial of *Safoof-e-Chobchini*, *Sharbat-e-Bazoori* and *Roghan-e-Baboona* in the cases of *Niqris* (Gout)
- Clinical efficacy of combination of *Hijāma bi'l Sharṭ* followed by *Dalk* (Massage) with *Roghan-e-Dafti* and *Inkibāb* (Vapourization) with *Tukhm-e-Soya* in the cases of *Waja' al- Zahr* (Non specific low back pain) - An open prospective clinical trial

- To evaluate the safety and efficacy of Unani pharmacopoeial formulation in the management of *Iltihāb Tajāwif al-Anf* (Sinusitis)

3.3 COLLABORATIVE RESEARCH

Comparison of clinical efficacy and safety of Unani therapy in the form of systemic UNIM-004 & topical UNIM-005 and conventional allopathic therapy in the form of PUVAsoL and topical mometasone cream in the treatment of clinically stable Vitiligo (Department of Dermatology, All India Institute of Medical Sciences (AIIMS), New Delhi)

A randomized controlled clinical trial (RCT) to compare and evaluate the safety and efficacy of conventional allopathic therapy (oral PUVAsoL and topical mometasone) and coded Unani formulations – UNIM-004 (oral) + UNIM-005 (topical) with UVA in the patients with clinically stable Vitiligo was conducted at Department of Dermatology, All India Institute of Medical Sciences (AIIMS), New Delhi. The patients aged 18 years or above with body surface area (BSA) involvement of >2% were included in the study. The exclusion criteria were pregnancy, lactation, significant cardiac / pulmonary / hepato-renal dysfunction, and segmental / lip-tip / universal Vitiligo.

After baseline investigations, the patients were randomly divided into two groups using block randomization method. In group-A (test group), the patients were given Unani formulations - UNIM-004 two tablets (500 mg each) orally twice daily an hour after meals and UNIM-005 lotion for local application once a day, followed 2 hours later by sun exposure between 11 am and 3 pm, starting with 5 minutes with increments of 2 minutes every third sitting till the patient develops mild erythema. In group-B (control group), the patients were given 8-Methoxypsoralen (8-MOP) 20-40 mg (according to body weight) after meals on alternate days, along with sun exposure in the same manner as in test group and topical mometasone cream at night daily. The duration of treatment was 36 weeks in each group. The response was assessed by change in pre-specified outcome measures (VASI, PGA, IGA, color match, DLQI, VIS-22) after 4, 12, 20, 28 and 36 weeks of treatment.

During the reporting period, a total of 371 patients with Vitiligo attending the Dermatology OPD of AIIMS, New Delhi were screened. Fifty-two patients were registered, 27 patients in group-A and 25 patients in group-B. Of which, seven patients in group-A and 10 patients in group-B dropped out of the study, whereas 35 patients were under study.

A randomized clinical trial to study the effects of *Safoof Muhazzil* with *Arq-e-Zeera* and orlistat on biomarkers of obesity (Department of Medicine, Jawaharlal Nehru Medical College, AMU, Aligarh)

A randomized controlled clinical trial (RCT) to compare and evaluate the safety and efficacy of allopathic therapy (orlistat) and Unani formulations – *Safoof Muhazzil* + *Arq-e-Zeera* in the patients of Obesity was conducted at Department of Medicine, Jawaharlal Nehru Medical College, AMU, Aligarh. The patients of Obesity aged 18-60 years with body mass index (BMI) 25-40 kg/m² falling in the category of overweight, class I and class II Obesity were included in the study. After baseline investigations, the patients were randomly allocated into two study groups. In group-A (control group), the patients were given orlistat 120 mg orally twice a day. In group-B (test group), the patients were given 6 gm of *Safoof Muhazzil* with 40 ml of

Arq-e-Zeera in the morning and evening. The duration of treatment was two months in each group. The response was assessed by reduction in BMI, waist-hip ratio (WHR), and abdominal circumference on the 15th, 30th, 45th and 60th day of treatment.

During the reporting period, 114 patients were registered. Of them, 50 patients in group-A and 50 in group-B completed the study. Out of the completed cases, 13.0% belonged to *Damawī*, 11.0% to *Şafrāwī*, 67.0% to *Balghamī*, and 9.0% to *Sawdāwī* temperament. At the end of two months, both groups showed significant reduction in BMI, waist-hip ratio (WHR), and abdominal circumference as compared to their respective baseline values. There was significant improvement in the biochemical parameters with reduction in Leptin, IL-6 & CRP levels and increase in Adiponectin levels. However, reduction was more in the test group as compared to the control group. Eleven patients dropped out of the study while three patients were under study in the test group. The test drugs were found well-tolerated and no adverse effects were observed.

Double blind placebo controlled randomized study on Autism in children using a Unani herbal neuro-restorative supplement and standard rehabilitation therapies (FSMHP-UDAAN for the Disabled, New Delhi)

A randomized placebo controlled clinical trial to assess the efficacy of a polyherbal Unani formulation as a supplement to standard rehabilitation therapies in enhancing quality of life in children with Autism was conducted at Foundation for Spastics & Mentally Handicapped Persons (FSMHP)-UDAAN for the Disabled, New Delhi. Children aged 2-10 years, diagnosed as Autism using the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) Autism criteria were included in the study, after obtaining written informed consent from their parents. Exclusion criteria were other genetic disabilities, cerebral palsy, insufficiency of liver / kidney / marrow functions and chronic uncontrolled illness. The patients were randomly allocated to one of the two study groups. In the test group, the patients were given Unani formulation 2.5-10 gm (according to body weight) orally twice a day on empty stomach along with standard rehabilitation therapies. In the control group, the patients were given an identical placebo in the same dosage along with standard rehabilitations therapies. The duration of treatment was three months in each group.

The response was assessed by improvement in cognitive parameters using internationally approved scales including Childhood Autism Rating Scale (CARS), Vineland Adaptive Behavior Scales (VABS), Vineland Social Maturity Scale (VSMS) and IQ Scales as applicable to a particular child.

A comparative analysis of the subjects who completed their participation sincerely in the study showed that participants who received the test formulation labelled as 1 had significant improvement in domains of Sociability, Sensory / Cognitive Awareness and Health / Physical Behavior (as noted in ATEC scores and Sensory Integration Profiles) as compared to the participants who received the test formulation labelled as 2. In addition, they showed decrease in their CARS score (maximum 4 points) and improved quality of life (as measured by VSMS).

Redesigning of dosage form of *Majoon Dabeed-ul-Ward* and *Majoon Falasfa* into tablet form along with their physico-chemical and pharmacological evaluations (Department of Saidla, Ajmal Khan Tibbiya College, AMU, Aligarh)

The study aimed to redesign the classical dosage form of *Majoon Dabeed-ul-Ward* and *Majoon-e-Falasfa* into tablet form for better patient compliance, to make sugar free formulations with improved stability and efficacy and to evaluate the pharmacological safety and comparative efficacy of classical form as well as redesigned dosage form in animal experimentation. The study was carried out at Department of Saidla, Ajmal Khan Tibbiya College, AMU, Aligarh.

During the reporting period, *Majoon Dabeed-ul-Ward* and *Majoon-e-Falasfa* were redesigned into tablet form from powder of its ingredients as well as from extracts derived from the ingredients of both the *Majoon*. Before tableting, granules were evaluated on pre compression parameters like angle of repose, bulk density, tapped density, carr's index (compressibility), Hausner's ratio. After compression, tablets were coated with moisture barrier film coating (Hydroxypropyl methyl cellulose and polyethylene glycol 400).

The coated tablets were evaluated for their organoleptic character on post compression parameters like weight variation, thickness, hardness, friability, disintegration and dissolution. The pH value of 1% and 10% solution of coated tablets was estimated which indicate suitability with the biological system. Qualitative physicochemical test such as preliminary phytochemical screening was carried out to characterize the constituents presents in the drug and to evaluate its quality whether the drug was exhausted or not. Qualitative assessment by fluorescence analysis was also carried out for pharmacognostic evaluation of ingredients and tablet.

Safety evaluation of the formulated tablets was also performed for the determination of heavy metals, pesticidal residue, aflatoxins and microbial load, etc. TLC and HPLC studies were done to set finger printing for standardization and quality control of the formulated tablets which might help in detection of adulteration and substitutes of ingredients of formulated tablets for future reference.

Investigation on pharmacodynamic and pharmacokinetic interaction of Unani plants *Tinospora cordifolia* and *Eugenia jambolana* (Anti diabetic potential) with hypoglycaemic drug (Department of Pharmaceutical Chemistry, SPP SPTM-SVKM's NMIMS, Mumbai)

A preclinical study to determine the pharmacokinetic and pharmacodynamic interactions of *Tinospora cordifolia* (TC) and *Eugenia jambolana* (EJ) with oral hypoglycaemic drug (metformin) was carried out at Shobhaben Pratapbhai Patel School of Pharmacy & Technology Management (SPPSPTM), SVKM's NMIMS, Mumbai. *Tinospora cordifolia* stem bark and *Eugenia jambolana* seeds were authenticated at Agarkar Research Institute, Pune. Evaluation of pharmacokinetic parameters of metformin (MET) HPLC-ESI/MS-MS method was developed and validated for determination of MET in rat plasma samples. Glibenclamide was used as an internal standard. The retention time for IS (Gli) and MET was found to be 10.12 and 3.4 minutes respectively and mass was confirmed at m/z 130 and 494.20 for MET and Gli respectively. The method was validated for linearity, accuracy, precision and recovery. The calibration curves showed good linear correlation ($r^2=0.991$) between the concentration ranges of 50-10000 ng/ml. The intra and inter-day precision of the method was within the acceptable limits, with R.S.D. < 15%.

The accuracy of the method was found within $\pm 15\%$. The developed method was found to be selective, linear, precise and accurate for quantification. The method was used for quantitative analysis of MET in rat plasma samples obtained from herb-drug interaction studies.

The effect of TC and EJ extracts at a dose of 400 mg/kg on pharmacokinetics of MET was studied in STZ induced diabetic rats. The pharmacokinetic profiles of MET alone and administered along with TC and EJ extracts showed almost superimposable curves. AUC_{0-24hr} , C_{max} , and $t_{1/2}$ of MET treatment group were evaluated on winnolin software and found to be 5216697.97 ± 4080.14 ng*hr/mL, 6768.12 ± 866.83 ng/mL and 0.83 ± 16 h respectively and showed significant reduction ($P < 0.05$) when compared with pharmacokinetic parameters obtained after concomitant administration of EJ extract (AUC_{0-24hr} , C_{max} and T_{max} were found to be 18013.11 ± 218.56 , 4400.383 ± 797.34 and 3 ± 1 respectively) but did not show any significant changes when co-administered with TC extract. The mean values of the control group (MET alone) were compared with that of the extract treated group. $P < 0.05$ was considered as the level of significance.

Pharmacodynamic interaction of Gli when given in combination with TC and EJ extract was determined by estimation of blood glucose parameters, biochemical parameters like aspartate aminotransferase (AST), alanineamino transferase (AST), total cholesterol, triglyceride using ERBA diagnostic kits. Pharmacodynamic interaction of SITA when given in combination with TC and EJ extract were determined by estimation of blood glucose parameters, biochemical parameters like aspartate aminotransferase (AST), alanineamino transferase (AST), total cholesterol, triglyceride using ERBA diagnostic kits. Food intake, water intake and urine output were determined using metabolic cage.

New Studies

Besides the above, the following four new projects were allotted to different institutes during the reporting period:

1. Experimental studies on the hepato-protective and immune-modulatory effects of *Dawa-ul-Kurkum*, a polyherbal Unani preparation, and its cellular and molecular mechanism in rats – Department of Pharmacology, VPCI, University of Delhi
2. Evaluation of the anticancer potential of a Unani pharmacopoeial formulation *Dawa-ul-Kurkum* – Amity Institute of Pharmacy, Amity University
3. Evaluation of *Aftimoon* (*Cuscuta reflexa* Roxb.) plant and its seeds on different human cancer (*Saratan*) cell lines – Jamia Millia Islamia
4. Pharmacokinetics, stability and quality control studies on *Araqiyat* of the Unani Pharmacopoeia of India using HPTLC and GC-MS – Faculty of Pharmacy, Jamia Hamdard, New Delhi

3.4 PUBLICATIONS

3.4.1 BOOKS, MONOGRAPHS, REPORTS, ETC.

During the reporting period, the Council brought out the following books, monographs, reports, etc.:

- Unani Medicine in India – An Overview
- Unani System of Medicine - The Science of Health & Healing (Revised)
- Standard Unani Treatment Guidelines for Common Diseases, Part II
- *Mujarrabat-i Rizai*
- *Nuqush-i Ajmal*
- CCRUM Annual Report – 2015-16 (English)
- CCRUM Annual Report – 2015-16 (Hindi)
- CCRUM Newsletter (Jan – Feb 2016)
- CCRUM Newsletter (Mar – Apr 2016)
- CCRUM Calendar – 2017
- Prevention and Control of *Farṭ Tashaḥḥum al-Dam* (Hyperlipidaemia) through Unani Medicine
- *Unani Chikitsa ke Madhyam se Farṭ Tashaḥḥum al-Dam* (Hyperlipidaemia) *ki Roktham aur Niyantaran*
- *Unani Tib ke Zariye Tashaḥḥum al-Dam* (Hyperlipidaemia) *se Tahaffuz*
- Prevention and Control of *Sakta* (Stroke) through Unani Medicine
- *Unani Chikitsa ke Madhyam se Sakta* (Aaghaat) *ki Roktham aur Niyantaran*
- *Unani Tib ke Zariye Sakta* (Stroke) *se Tahaffuz*
- Prevention and Control of *Saratān* (Cancer) through Unani Medicine
- *Unani Chikitsa ke Madhyam se Saratān* (Cancer) *ki Roktham aur Niyantaran*
- *Unani Tib ke Zariye Saratān* (Cancer) *se Tahaffuz*
- Prevention and Control of *Zagḥṭ al-Dam Qawī* (Hypertension) through Unani Medicine
- *Unani Chikitsa ke Madhyam se Zagḥṭ al-Dam Qawī* (Uchch Raktchaap) *ki Roktham aur Niyantaran*
- *Unani Tib ke Zariye Zagḥṭ al-Dam Qawī* (Hypertension) *se Tahaffuz*
- Prevention and Control of *Zayābīṭus Sukkarī* (Diabetes Mellitus) through Unani Medicine
- *Unani Chikitsa ke Madhyam se Zayābīṭus Sukkarī* (Madhumeh) *ki Roktham aur Niyantaran*
- *Unani Tib ke Zariye Zayābīṭus Sukkarī* (Diabetes Mellitus) *se Tahaffuz*
- Prevention and Control of *Niqris* (Gout) through Unani Medicine
- *Unani Chikitsa ke Madhyam se Niqris* (Gathiya) *ki Roktham aur Niyantaran*
- Prevention and Control of Bronchial Asthma (*Ḍīq al-Nafas*) through Unani Medicine
- *Unani Chikitsa ke Madhyam se Ḍīq al-Nafas* (Dama) *ki Roktham aur Niyantaran*
- Healthy Ageing through Unani Medicine
- *Unani Chikitsa ke Madhyam se Prodhawastha me Swasthya ki Dekhbhal*
- Obesity (*Siman Mufrit*)
- *Unani Chikitsa ke Madhyam se Motapa* (*Siman Mufrit*) *ki Roktham aur Niyantaran*
- Prevention and Control of Lifestyle Diseases through Unani Medicine
- *Unani Chikitsa ke Madhyam se Jeevan Shaili Sambandhit Rogon ki Roktham aur Niyantaran*

- Oral Hygiene through Unani Medicine
- *Unani Chikitsa ke Madhyam se Munh ki Swachchta*
- Prevention and Control of Anaemia (*Faqr al-Dam*) through Unani Medicine
- *Unani Chikitsa ke Madhyam se Raktchheenta (Faqr al-Dam) ki Roktham aur Niyantaran*
- Prevention and Control of Dementia (*Humq*) through Unani Medicine
- *Unani Chikitsa ke Madhyam se Manobhransh (Humq) ki Roktham aur Niyantaran*
- Prevention and Control of Dysmenorrhoea (*'Usr al-Ṭamth*) through Unani Medicine
- *Unani Chikitsa ke Madhyam se Kastprad Rajosraw ('Usr al-Ṭamth) ki Roktham aur Niyantaran*
- Prevention and Control of Deficient Lactation (*Qillat al-Laban*) through Unani Medicine
- *Unani Chikitsa ke Madhyam se Apurn Dugdh Srawan (Qillat al-Laban) ki Roktham aur Niyantaran*
- Prevention and Control of *Khafaqān* (Palpitation) through Unani Medicine
- *Unani Chikitsa ke Madhyam se Khafaqān (Espandan) ki Roktham aur Niyantaran*
- Principles of Healthy Living
- *Swasth Jeevan Yapan ke Siddhant*
- *'Ilāj b'il Hijāmah* (Cupping Therapy)
- Unani Treatment for *Baraṣ* (Vitiligo) – A Success Story
- Managing Dengue through Unani Medicine
- *Dengue Bukhar ka Unani Upchar*
- *Dengue Bukhar aur Unani Tariqa-i Ilaj*
- Unani Treatment for Some Common Disorders

3.4.2 JOURNALS

During the reporting period, the Council published the following journals:

- Hippocratic Journal of Unani Medicine, Volume-11, Issue-1
- Hippocratic Journal of Unani Medicine, Volume-11, Issue-2
- Hippocratic Journal of Unani Medicine, Volume-11, Issue-3
- *Jahan-e-Tib*, Volume-16, Issue-3
- *Jahan-e-Tib*, Volume-16, Issue-4

3.4.3 RESEARCH PAPERS

During the reporting period, following research papers written by the Council's officers were published in reputed journals/ presented in seminars/ conferences:

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- Ahmed T, Husain K, Tariq M, Siddiqui JI, Khalid M, Ahmed MW and Kazmi MH (2017). A review on *Operculina turpethum*: A potent herb of Unani system of medicine, *Journal of Pharmacognosy and Phytochemistry*, 6(1): 23-26.
- Ahmed MW, Ahmed T, Goswami A, Sehar N and Alam MI (2016). Clinical evaluation of Unani pharmacopoeial formulation *Habb-e-Shifa* in *Nazla-e-Har (Common Cold) – A preliminary study*, *Hippocratic Journal of Unani Medicine*, 11(2): 15-24.
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- Alam F (2016). *Ek Fikr-i Shor Angez, Nuqush-i Ajmal*, Central Council for Research in Unani Medicine, New Delhi: 40-45.
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- Ansari AP and Ahmed NZ (2016). Modification in Unani drug dosage forms – Need of the hour, *International Journal of Advances in Pharmacy Medicine and Bioallied Sciences*, 4(1): 22-28.
- Ansari AP, Ahmed NZ, Anwar N and Ahmed K (2016). Razi's unique approach to Amraz-e-Wabaiya (infectious diseases) - An overview, *International Journal of Herbal Medicine*, 4(6): 176-178.
- Arfeen S, Zaman W, Kidwai MR, Naime M and Ahmad W (2016). Clinical evaluation of coded drug UNIM 304, UNIM 312 along with *Munzij (UNIM 308) Mushil (UNIM 309) and Tabreed (UNIM 310) Therapy with cupping in Wajauul Mafasil (Rheumatoid Arthritis)*, *Hippocratic Journal of Unani Medicine*, 11(3): 31-43.
- Dar SA, Akbar S, Ghazanfar K, Hamdani M, Nazir T, Mir MS and Akbar M (2016). Sub-chronic toxicity study of *Kushta Hajrul-Yahood (A herbo-mineral Unani formulation)* in Albino Wistar rat, *Journal of Applied Pharmaceutical Science*, 6(11): 105-113.
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3.5 EXTENSION OF HEALTHCARE SERVICES

3.5.1 SCHOOL HEALTH PROGRAMME

The School Health Programme is aimed at improving the health and hygiene status of school children and to reduce morbidity rate among them through healthcare and health education. Under this programme, the Council's researchers perform visits to selected Primary and Secondary Schools, particularly those in rural areas and urban slums. A baseline health check-up of school children is conducted and those found suffering from any ailment are treated with Unani medicines. Thereafter, health education is provided to them through lectures on different preventive, promotive and curative health aspects, and health related literature is distributed. The children are also educated about the potentialities of the commonly available plants in their vicinity for the management of different diseases. Specific lectures are given on oral hygiene, cleanliness of body and environment, safe drinking water, nutrition, balanced diet, etc.

During the reporting period, this programme continued at CRIUMs, Hyderabad and Lucknow; RRIUMs, Chennai, Bhadrak, Patna, and Srinagar; RRC, Allahabad; and CRU, Burhanpur. The Council's physicians visited 17 schools that were adopted under the School Health Programme particularly those falling in the pockets adopted under Mobile Clinical Research Programme. A total of 5,472 school children were covered under this programme. Out of them, health check up of 5,165 children was conducted; and 2,584 children suffering from different ailments were treated in 125 visits made to these schools. With a view to educate the children on healthy living, 35 lectures were delivered on preventive and promotive health aspects. The most common diseases found among them included Helminthiasis, Skin Infections, Otorrhoea, Cold & Cough and Conjunctivitis.

3.5.2 UNANI MEDICAL CENTRES IN ALLOPATHIC HOSPITALS

Under the scheme of collocation of AYUSH centres in Allopathic hospitals in Delhi, a Unani Medical Centre was established at Dr. Ram Manohar Lohia (RML) Hospital on 14 January 1998

with a view to provide Unani treatment facility to the patients desirous of taking treatment of this system. On public demand, another Unani Specialty Centre started functioning at Deen Dayal Upadhyay (DDU) Hospital, New Delhi on 01 November 2010. These centres are run by the Council. Besides the General Outpatient Department (GOPD) facilities, these centres provide specialized Unani treatment for some selected disorders like Vitiligo, Eczema, Psoriasis, Rheumatoid Arthritis, Bronchial Asthma, Sinusitis, Infective Hepatitis, Diabetes Mellitus, etc. During the reporting period, 34,464 patients were treated at Unani Medical Centre in Dr. RML Hospital and 16,039 patients at Unani Speciality Centre in DDU Hospital, New Delhi. A large number of patients visiting the centres were suffering from chronic diseases. Counseling of patients, particularly the senior citizens, was also done to improve their physical activities and mental health.

3.5.3 HEALTH CAMPS

The Council organized health camps through its Institutes/Units with a view to create health awareness among the masses and to provide treatment through Unani system of medicine. During the reporting period, 24 health camps were organized and 18,944 patients were treated in these camps. Lectures on preventive and promotive health aspects were also delivered by the physicians of the Council. Referral of the patients to the Council's centres as well as other hospitals was also done. The Council also participated in a month-long Magh Mela at Sangam, Allahabad (UP) and treated 5,726 patients of different ailments.

3.5.4 ACTIVITIES UNDER GENDER COMPONENT PLAN FOR WOMEN

The Council continued research and treatment facilities for women under Gender Component Plan. Treatment facilities were made available to women at all clinical centres of the Council. Besides, female patients in the pockets adopted under Mobile Clinical Research Programme were treated by the physicians in the Mobile OPD Scheme. During the reporting period, 2,60,099 female patients in different OPDs were treated. Efficacy of Unani pharmacopoeial formulations was validated under this component. Health lectures / group meetings on preventive and promotive health aspects were also organized in the pockets adopted under Mobile Clinical Research Programme. Besides, published literature on preventive, promotive and curative health aspects was also distributed among the masses. Clinical studies on the diseases specific to female such as *Sayalān al-Raḥim* (Leucorrhoea) and *Sū' al-Qinya* (Anaemia) also continued.

3.5.5 ACTIVITIES IN THE NORTH-EASTERN REGION

The three centres of the Council in the North-Eastern Region – Regional Research Centre, Silchar (with an extension centre at Karimganj) and Clinical Research Pilot Project, Manipur continued Research/GOPD Programmes. During the reporting period, 18,286 patients were treated. The most commonly occurring diseases were *Ḥummā* (Fever), *Ḥummā Ijāmiya* (Malaria), *Ishāl* (Diarrhea), *Zaḥīr* (Dysentery) and *Waja' al-Mafāṣil* (Rheumatoid Arthritis). The patients were treated with Unani pharmacopoeial drugs.

3.5.6 ACTIVITIES UNDER SPECIAL COMPONENT PLAN – SCHEDULED CASTE SUB-PLAN (SCSP) AND TRIBAL SUB-PLAN (TSP)

Under the Special Component Plan – Scheduled Caste Sub-Plan (SCSP) and Tribal Sub-Plan (TSP), the Council continued research oriented medicare activities to benefit the SC/ST population at the OPDs of its Institutes/ Units and also through Mobile OPDs in the adopted pockets, besides creating health awareness among the masses. During the reporting period, over 2.19 lakh SC and 0.40 lakh ST populations were covered. A total of 28,945 SC patients were treated at the GOPDs and 7,044 patients in the Mobile OPDs. Similarly, 5,901 and 7,425 ST patients were treated in the GOPDs and Mobile OPDs respectively.

3.6 SWASTHYA RAKSHAN PROGRAMME

On the lines of 'Swachh Bharat Abhiyan' (Clean India Mission) initiated by the Government of India to accomplish the vision of 'Clean India', the Ministry of AYUSH initiated *Swasthya Rakshan* Programme (SRP) through its national institutes and research councils to protect and promote health. The main objective of the programme is to provide AYUSH treatment and organize camps for screening and early diagnosis of diseases in rural areas. It also aims to create health awareness through health education and distribution of IEC material in local languages for better outreach and compliance.

The CCRUM initiated this programme during 2015–2016 through its 12 institutes/centres: Central Research Institutes of Unani Medicine (CRIUMs), Hyderabad and Lucknow; Regional Research Institutes of Unani Medicine (RRIUMs), Delhi, Mumbai, Kolkata, Chennai, Srinagar, Patna, Aligarh and Bhadrak; and Regional Research Centres (RRCs), Allahabad and Silchar. Five villages predominantly populated by underprivileged and weaker sections nearer to each institute / centre were identified for undertaking the programme.

The programme is undertaken by a team of six personnel comprising two doctors at each centre / institute. The team runs weekly OPD clinic in each village where screening of the visitors is conducted and healthy individuals are made aware about the disease preventive and health promoting measures and importance of hygiene and sanitation, whereas the diseased individuals are provided proper treatment along with awareness services. The team also conducts household survey of the village in order to record health data of the inhabitants. Besides, community awareness programme on sanitation and nutrition is organized through health camps for educating the villagers on strategies for prevention of disease and improving health.

During the reporting period, 60,604 individuals were screened, of which 56,234 were registered and treated with Unani medicines. The number of OPD attendance including 42,441 follow-ups reached 98,675. Most of the patients had joint diseases followed by gastrointestinal disorders and respiratory diseases. The healthy individuals were made aware about strategies for prevention of disease and improving health. As much as 565 health camps were also organized that benefited 24,720 individuals through health screening, awareness lectures and distribution of health literature.

3.7 INTEGRATION OF UNANI MEDICINE IN NPCDCS

The CCRUM, under the aegis of the Ministry of AYUSH, Government of India, launched a pilot project for integration of Unani Medicine in National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases & Stroke (NPCDCS) at Lakhimpur Kheri, Uttar Pradesh. With the objective to ensure prevention and early diagnosis of lifestyle diseases, reduce complications and drug dependency, and supplement NPCDCS in preservation and promotion of health, the CCRUM started this project through its Central Research Institute of Unani Medicine, Lucknow at 17 Community Health Centres (CHCs), 54 Primary Health Centres (PHCs) and NPCDCS Cell at District Hospital of Lakhimpur Kheri. The project was launched on 1 June 2016 by Shri Shripad Yesso Naik, Hon'ble Minister of State (Independent Charge), Ministry of AYUSH, Government of India.

Under this programme, a Lifestyle Clinic was set up at each of the 17 CHCs where after due screening healthy individuals are educated about preventive measures and healthy lifestyle and high risk individuals are offered diet therapy, regimen therapy and Yoga therapy, whereas the diseased people are provided Unani medicinal treatment along with the above therapies. Besides, all the 54 PHCs in the district are covered through health camps for screening, health awareness and propagation of healthy lifestyle. The visitors suffering from any disease covered under the programme are referred to the Lifestyle Clinic for proper treatment.

During the reporting period, 39,698 patients were registered and treated with Unani medicines. The number of OPD attendance including 24,343 follow-ups reached 64,041. Of them, 1467 individuals were enrolled in high risk group of Diabetes Mellitus and 5,564 as diseased, whereas 2,294 were enrolled in high risk group of Hypertension and 5,817 as patients. Similarly, 620 persons were enrolled in high risk group of Hyperlipidaemia and 89 in the diseased group. Besides, 428 health camps were organized that benefitted 6,811 individuals through health screening, awareness lectures and distribution of disease specific health literature.

3.8 LINKING EDUCATION WITH RESEARCH

With a view to link education with research and utilize the comprehensive facilities available at its institutes, the CCRUM, with the approval of the Ministry of AYUSH, Government of India, started postgraduate (MD) and doctoral (PhD) programmes in Unani Medicine.

Postgraduate Programme

The postgraduate programme (MD) in Unani Medicine was started at Central Research Institute of Unani Medicine (CRIUM), Hyderabad and Regional Research Institute of Unani Medicine, Srinagar in affiliation with Kaloji Narayana Rao University of Health Sciences, Warangal (Telangana) and University of Kashmir, Srinagar respectively. The Ministry of AYUSH approved the proposal to start the programme in two disciplines of Unani Medicine namely *Mu'ālajāt* (Medicine) and *Ilm al-Adwiya* (Pharmacology) with seven seats each at the two centres in September 2016. Consequently, the CCRUM issued admission notification for the academic session 2016–2017 after completing the modalities for affiliation with the respective universities. On the basis of online application and entrance test, admission process of 28 students was completed at the two centres by the end of December 2016. The requirement of

teaching faculty was fulfilled by engaging Council's experienced research officers into teaching and also by recruiting senior faculty on contractual basis.

Classes of MD (Unani) Preliminary as per the syllabus prescribed by the Central Council of Indian Medicine were in progress at the end of the reporting period. The students were also engaged in literature review for identification of research problems in order to choose appropriate research topics for their dissertation work.

Doctoral Programme

The CCRUM, after obtaining approval from the Ministry of AYUSH, started doctoral (PhD) programme in two disciplines of Unani Medicine – *Mu'āljāt* (Medicine) and *ʿIlm al-Adwiya* (Pharmacology) with three seats in each at Central Council for Research in Unani Medicine, Hyderabad in affiliation with Jamia Millia Islamia, New Delhi.

A memorandum of understanding to this effect was signed by the CCRUM and Jamia Millia Islamia and various committees of experts in research and academia were constituted to advise and monitor the progress and outcome of the programme. These included Research Advisory Committee, Academic Advisory Committee and Board of Studies. Subsequently, the admission process for the programme was completed by Jamia Millia Islamia under the supervision of its Faculty of Natural Sciences. A pre-PhD course with emphasis on research methodology in *Mu'āljāt* (Medicine) and *ʿIlm al-Adwiya* (Pharmacology) was also designed and the classes started accordingly.

4. INFORMATION, EDUCATION AND COMMUNICATION

4.1 LIBRARY SERVICES

The Council has a Library and Information Centre (LIC) at the Headquarters that aims to collect and preserve scattered literature on Unani system of medicine, and to disseminate information to the researchers, academicians and practitioners of Unani Medicine.

During the reporting period, services of the LIC remained fully automated through Local Area Network (LAN). The Centre provided its services to the readers through Troodon Library Software and e-Granthalaya Library Software that control the Online Public Access Catalogue (OPAC), circulation of books, etc. The database of 490 MD (Unani) theses and 50 digitized manuscripts of Unani classics remained available on the OPAC for search and consultation. A total of four books were acquired and accessioned, 1,889 books circulated including 33 books that were circulated through Inter-Library Loan Service, and 2,879 issues of daily newspapers and 211 issues of popular magazines were purchased during the year. Besides, 131 issues of journals were received, of which 46 were related to Unani Medicine and 23 were in Hindi language. The LIC carried out editing of 13,316 fields of existing catalogue, physical processing of 72 books and barcoding of 630 books.

The LIC provided spiral binding and photocopying, and reference services to the readers. Comb or thermal binding of 318 items and photocopying of 16,500 pages were carried out. The Library also continued information retrieval service through compiling and disseminating Current Content of Journals (quarterly) in digital form. Another information retrieval service, Daily Medical News Alert remained active and 255 issues were digitally circulated among 206 subscribers on daily basis. The Selective Dissemination of Information (SDI) service also continued at the LIC. Under this service, 3,250 news clippings were collected, of which 2,927 important ones were sent to Deputy Director General whereas over 1,630 were displayed on the library notice board.

The Centre continued institutional membership of British Council Library, American Resource Centre and Developing Library Network (DELNET) during the year.

Besides the researchers of the Council working in the Headquarters, a total of 271 members / non-members from all over India visited the Library. The following international guests also visited the LIC:

- Shri Mohd. Sarfuddin Ahmed, Hamidia Dawakhana, Dhaka, Bangladesh
- Kumari Deborah Schlein, Princeton University, New Jersey, United States of America
- Prof. Dr. Martin Dinees, Deputy Director, Institute of History of Medicine, Stuttgart, Germany
- Dr. Ryu Yong Chol., Director of Science & Technology Department, Ministry of Public Health, North Korea

The project to develop Union Catalogue of Unani Medical Manuscripts allotted to Regional Research Institute of Unani Medicine, Aligarh continued and total number of cards prepared

in the excel form reached 3,213 at the end of the reporting period. Two micro films of manuscripts were also collected.

An important initiative taken by the LIC was the uploading of the data of CCRUM's libraries on NIC cloud. The initiative made the catalogues of the Council's eight libraries attached with its various institutes in the country accessible to all globally. The LIC also initiated a project for digitization of rare books and journals related to Unani system of medicine. Formally inaugurated by Prof. Vd. KS Dhiman, Director General (I/C), CCRUM on 8th March 2017, the project aims to digitize five lakh pages of rare books and journals.

4.2 ORGANIZATION OF CONFERENCE, SEMINAR, ETC.

4.2.1 MEMORIAL LECTURE ON HAKIM MA RAZZACK

The CCRUM organized Hakim MA Razzack Memorial Lecture to mark the birth anniversary of its founding director on 8 April 2016 at Jamia Hamdard, New Delhi.

Hakim MA Razzack was a great personality who devoted his life for all-round development and promotion of Unani Medicine and the system is currently in need of one more MA Razzack for its further development, said Prof. Rais-ur-Rahman, Director General (I/C), CCRUM in his welcome address. He termed the establishment of a separate research council for Unani Medicine as one of his great achievements.

Prof. Talat Ahmad, Vice Chancellor, Jamai Millia Islamia, New Delhi said that from the perspective of Jamia Millia Islamia, Unani Medicine bears historical and cultural significance besides being a medical science and urged that Jamia and the CCRUM should work collectively in the area of research in Unani Medicine.

On this occasion, Dr. Mushtaq Ahmad, Former Director of Central Research Institute of Unani Medicine, Hyderabad delivered an extensive lecture and said that Hakim MA Razzack not only contributed to the cause of Unani Medicine in India but also proved instrumental in the introduction and recognition of the system on foreign soils.

Shri Sohail Razzack, son of Hakim MA Razzack, said that there was a need to modernize Unani Medicine in order to make it widely accepted.

In her presidential address, Dr. Ummul Fazal, Former Director of the CCRUM citing the efforts of Hakim MA Razzack for the promotion of Unani Medicine outside India asked the researchers and practitioners not to limit their efforts to the Indian soil.

At the end, Dr. Khalid M Siddiqui, Deputy Director General, CCRUM proposed vote of thanks.

4.2.2 LAUNCHING CEREMONY OF PROJECT FOR INTEGRATION OF UNANI MEDICINE IN NPCDCS

The Central Council for Research in Unani Medicine under the aegis of the Ministry of AYUSH, Government of India organized a launching ceremony of a pilot project for

integration of Unani Medicine in National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases & Stroke (NPCDCS) at Lakhimpur Kheri, Uttar Pradesh on 1 June 2016.

The project was launched by Shri Shripad Yesso Naik, Hon'ble Union Minister of State (Independent Charge) for AYUSH in the presence of Dr. Shiv Pratap Yadav, Minister of State (Medical and Health), Uttar Pradesh, Shri Ajay Mishra 'Teni', Member of Parliament from Kheri, Shri Utkarsh Verma Madhur, MLA, Lakhimpur, Prof. Jagdish Prasad, Director General of Health Services, Government of India, Prof. Rais-ur-Rahman, Director General (I/C), CCRUM and other officers from Government of India and Government of Uttar Pradesh. A Lifestyle Clinic set up at the venue was also inaugurated by Shri Shripad Naik to mark the opening of Lifestyle Clinics at all the 17 CHCs of Lakhimpur Kheri, Uttar Pradesh.

Launching the project, Shri Naik said that Unani system of medicine is a holistic system that addresses all determinants of health and disease and has potential to play a pivotal role in prevention and management of NCDs and promotion of healthy lifestyle among masses. Speaking on the objective of the project, he said that the project aims to supplement NPCDCS in preservation and promotion of health and prevention and management of lifestyle diseases in the district exploiting potentials of Unani Medicine and its unique and time-tested therapies.

4.2.3 WORKSHOP ON OFFICIAL LANGUAGE

The Regional Research Institute of Unani Medicine, Mumbai organized a one-day workshop on the official language on 4 June 2016 at Mumbai.

The workshop was addressed by Shri CN Kulkarni, Shri Vinod Kumar Sharma, Shri Damodar Gaur, Dr. Irfan Ahmad and Dr. Mohammad Raza among others. The workshop highlighted the activities undertaken by the institute for the promotion of Hindi language and urged the need to put more efforts to increase its use in the official work and day-to-day life. It also stressed that all sections of society should come forward and make their full contribution to the development, promotion and expansion of Hindi language.

4.2.4 LONG-TERM TRAINING PROGRAMME ON RESEARCH METHODOLOGY

The CCRUM organized long-term training programme on research methodology at its central and regional research institutes to sensitize researchers towards methodology for research in Unani Medicine with focus on incorporating basic principles of the system in executing various research studies.

Under the programme, guest lectures by experts on different aspects of research methodology were delivered besides presentations by the Council's researchers. The sessions were kept interactive and the attendance of paramedical staff was also ensured in the relevant sessions. Some of the important topics covered by the experts included basics of research methodology, hypothesis construction, research questions, different research designs, drug development process, preclinical studies, study designs in epidemiologic research, case control studies, randomized controlled trials, methods of randomization, literature review, classical Unani

literature, phases of clinical trial, ethical issues in clinical research, sampling methods, writing a research protocol, understanding scales, informed consent, scientific writing, publication ethics, institutional ethics committee, regulatory issues in clinical trials and modern trends in research in Unani Medicine. The programme also had sessions for hands-on training.

4.2.5 WORKSHOP ON OFFICIAL LANGUAGE

The Regional Research Institute of Unani Medicine, New Delhi organized a workshop on Hindi language at New Delhi on 30 August 2016 with the objective to create an encouraging environment for working in Hindi language and address common difficulties faced by the officials in its use.

The workshop was presided over by Shri Mohammad Farid, Advocate, Delhi High Court while Prof. Durga Prasad was the chief guest who addressed the workshop. It was also addressed by Dr. Salma Khatoon, Deputy Director Incharge, RRIUM, New Delhi and other senior officers of the institute. The speakers emphasized on the maximum use of Hindi language and suggested solutions to the common issues faced by the officials in its use.

4.2.6 NATIONAL UNANI DAY AND CCRUM AWARD FUNCTION

The CCRUM, on the directive of the Ministry of AYUSH, Government of India, organized a function to celebrate the 1st National Unani Day and confer CCRUM Awards at Central Research Institute of Unani Medicine, Hyderabad on 11 February 2017. The function was organized in the wake of the milestone decision taken by the Ministry of AYUSH to declare 11th February, the birthday of Hakim Ajmal Khan – a versatile genius and founder of scientific research in Unani Medicine, as National Unani Day and confer CCRUM Awards on the outstanding contributors in the field of research in Unani Medicine.

In his presidential speech in the function, Shri Shripad Naik, Hon'ble Minister of State (I/C) for AYUSH, Government of India said that the Government of India under the dynamic leadership of Hon'ble Prime Minister Shri Narendra Modi Ji was making concerted efforts to promote and propagate AYUSH systems and created a separate ministry for their development according to their own fundamental philosophies and principles and make optimal utilization of their potential in the national healthcare delivery. He further said that the decision to declare and celebrate National Unani Day was an appropriate step in the direction for promoting Unani Medicine.

Shri Bandaru Dattatreya, Hon'ble Minister of State (Independent Charge), Ministry of Labour and Employment, Government of India, who was the chief guest on the occasion, applauded the decision taken under the leadership of Shri Shripad Naik to observe 11th February as National Unani Day saying that Hakim Ajmal Khan was the one who first brought Ayurveda and Unani systems under one roof and made commendable contribution to the development of Unani Medicine in India.

Speaking on the occasion, Shri Mohammed Mahmood Ali, Hon'ble Deputy Chief Minister of Telangana said that it was a matter of pride for Hyderabad to host the first National Unani Day.

Shri Charlakola Laxma Reddy, Hon'ble Health & Medical Minister, Telangana and Shri Manganti Gopinath, Hon'ble MLA, Hyderabad and various other dignitaries including Shri PN Ranjit Kumar, Joint Secretary, Ministry of AYUSH, Government of India and Prof. Rais-ur-Rahman, Advisor (Unani), Ministry of AYUSH, Government of India were present in the function. Prof. Vd. KS Dhiman, Director General I/C, CCRUM proposed vote of thanks.

Under the newly formulated CCRUM Award Scheme, eight national level awards of various categories were conferred on eminent Unani researchers, academicians and practitioners for their contribution to different research areas of Unani Medicine. In the first category, the Young Scientist Award was conferred on Dr. Syed Mohd Abbas Zaidi, Assistant Professor, HSZH Government Unani Medical College, Bhopal for clinical research and Dr. Mohd. Kashif Hussain, Research Officer (Botany), CRIUM, Hyderabad for drug research. In the second category, the Best Teacher Award was conferred posthumously on Prof. Ishtiyaque Ahmed, A&U Tibbia College, New Delhi for literary research. It was also conferred on Prof. Mohd. Akhtar Siddiqui, Head, Department of Moalajat, Jamia Hamdard, New Delhi for clinical research and Prof. Ghufran Ahmad, Department of Ilmul Advia, Ajmal Khan Tibbiya College, AMU, Aligarh for drug research. In the third category, the Lifetime Achievement Award was conferred posthumously on Hakim MA Razzack who was the founder director of the CCRUM. Whereas, Prof. S Shakir Jamil, Jamia Hamdard, New Delhi received the award for best academician and Dr. Seema Akbar, Assistant Director Incharge, RRIUM, Srinagar for best researcher. The awardees in the first two categories received a shawl, memento, certificate and a cash prize of two lakh rupees while the cash prize was five lakh rupees in the third category.

On this occasion, the MD and PhD programmes in Unani Medicine recently started at CRIUM, Hyderabad in affiliation with Kaloji Nrayana Rao University of Health Sciences (KNRUHS), Telangana and Jamia Millia Islamia, New Delhi were inaugurated by Shri Shripad Naik. Five important publications brought out by the CCRUM were also released.

To mark this occasion, a two-day national seminar on skin diseases and cosmetology in Unani Medicine was organized by the CCRUM and inaugurated concurrently with National Unani Day and CCRUM Award Function.

4.2.7 NATIONAL SEMINAR ON SKIN DISEASES AND COSMETOLOGY IN UNANI MEDICINE

The CCRUM organized a two-day National Seminar on Skin Diseases and Cosmetology in Unani Medicine at Central Research Institute of Unani Medicine, Hyderabad during 12–13 February 2017. The seminar urged the need to exploit the strengths and potentials of Unani system of medicine to control and manage skin diseases.

The seminar had eight technical sessions for oral presentation and two sessions for poster presentation, besides inaugural and valedictory sessions. As much as 37 research papers were presented and seven invited lectures were delivered. The seminar proved an appropriate platform for a total of 250 delegates comprising medical scientists, academicians, researchers and MD (Unani) scholars. Five important publications of the Council were also released on the occasion.

Inaugural Session

The seminar was inaugurated by Shri Bandaru Dattatreya, Hon'ble Union Minister of State (Independent Charge) for Labour and Employment concurrently with National Unani Day and CCRUM Award Function in the presence of Shri Shripad Yesso Naik, Hon'ble Union Minister of State (Independent Charge) for AYUSH, Shri Mohammed Mahmood Ali, Hon'ble Deputy Chief Minister of Telangana, Dr. Charlakola Laxma Reddy, Hon'ble Health & Medical Minister, Telangana and other dignitaries including Shri PN Ranjit Kumar, Joint Secretary, Ministry of AYUSH, Government of India, Prof. Rais-ur-Rahman, Advisor (Unani), Ministry of AYUSH, Government of India and Prof. Vd. KS Dhiman, Director General I/C, CCRUM.

Five new publications of the Council were also released on the occasion. *Unani System of Medicine – The science of Health and Healing* and *Unani Medicine in India – An Overview* were released by Shri Shripad Naik; *Nuqush-i Ajmal* and *Mujarrabat-i Rizai* were released by Shri Bandaru Dattatreya and *Standard Unani Treatment Guidelines for Common Diseases, Vol. II* was released by Shri Mohammed Mahmood Ali.

Technical Sessions

The first of the four technical sessions held on 12 February 2017 was chaired by Prof. S Shakir Jamil, Former Director General, CCRUM and Prof. Syed Imamuddin Ahmed, Member, Scientific Advisory Committee, CCRUM, and the rapporteur was Prof. Qamar Uddin, Research Officer (Unani) and Head, Department of Moalajat (Medicine), CRIUM, Hyderabad. The session began with an invited talk delivered by Dr. Syed Mohd Abbas Zaidi, Assistant Professor, Department of Moalajat, HSZH Government Unani Medical College, Bhopal. He enlightened the audience with his deep knowledge on 'Leech therapy in Unani system of medicine with special reference to its application in skin disorders'. In this session, five delegates presented their papers. The second session held in parallel was chaired by Prof. Yasmin Shamsi, Department of Moalajat (Medicine), Jamia Hamdard, New Delhi, and Dr. Zakiuddin, Assistant Director (Unani), CCRUM Headquarters, New Delhi, and the rapporteur was Dr. Javed Inam Siddiqui, Research Officer (Unani) and Lecturer, Department of Ilmul Adwiya (Pharmacology), CRIUM, Hyderabad. The session also accommodated four paper presentations.

Of the other two sessions of the day, one was chaired by Prof. AB Khan, formerly Dean & Principal, Ajmal Khan Tibbiya College, AMU, Aligarh and Prof. Ghufran Ahmad, Department of Ilmul Adwiya (Pharmacology), Ajmal Khan Tibbiya College, AMU, Aligarh and the rapporteur was Dr. Misbahuddin Azhar, Research Officer (Unani), CCRUM Headquarters. Padma Shri, Dr. MA Waheed, formerly officiating director of CRIUM, Hyderabad delivered an invited talk on 'Psoriasis and Vitiligo management through Unani Medicine'. In this session, four delegates presented their papers. The other session was chaired by Dr. Sharique Ali Khan, Deputy Director, RRIUM, Aligarh and Shri Suhail M Adhami, Consultant (Biostatistics), CCRUM Headquarters and the rapporteur was Dr. Mohammad Zakir, Research Officer (Unani) and Lecturer, Department of Ilmul Adwiya (Pharmacology), CRIUM, Hyderabad. In this session, three delegates presented their papers.

The fifth session was chaired by Dr. DC Katoch, Prof. Vd. KS Dhiman and Dr. MA Waheed and the rapporteur of the session was Dr. Uzma Viqar, Reader, Department of Ilmul Adwiya

(Pharmacology), CRIUM, Hyderabad. The session had two invited talks delivered by Dr. Sharique Ali Khan and Dr. Azhar Jabeen, Assistant Professor, Department of Moalajat, Jamia Hamdard, New Delhi. Dr. Sharique spoke on 'Innovative Approach of Al-Razi to Dermatology' while Dr. Azhar Jabeen delivered a speech on *Irsāl al-'Alaq* (Leech Therapy) in the Treatment of Skin Disorders. In this session, five delegates presented their papers. The sixth session held in parallel was chaired by Dr. Madan Singh Jakhar, Member, Governing Body, CCRUM and Dr. Amjadullah, Research Officer (Pathology), and the rapporteur was Dr. Arzeena Jabeen, Research Officer (Unani) and Lecturer, Department of Moalajat (Medicine), CRIUM, Hyderabad. A total of four research papers were presented in this session.

The next day's proceedings started with two parallel sessions. One of them was chaired by Prof. Anis Ahmed Ansari, formerly Advisor (Unani), Ministry of AYUSH, Government of India, Prof. KMY Amin, AMU, Aligarh and Prof. M Akhtar Siddiqui, Jamia Hamdard, New Delhi, and the rapporteur was Dr. Mohammad Nawab, Research Officer (Unani) and Reader, Department of Moalajat (Medicine), CRIUM, Hyderabad. The session had three invited talks delivered by Prof. Mushtaq Ahmad, formerly Director, CRIUM, Hyderabad, Prof. Neena Khanna, AIIMS, New Delhi and Dr. Hamiduddin, NIUM, Bengaluru. Prof. Mushtaq Ahmad spoke on *Baras* (Vitiligo) as Described in Unani System of Medicine' while Prof. Neena Khanna delivered a speech on 'Scoring System in Dermatology'. Dr. Hamiduddin delivered his talk on 'Evolution of Cosmeceuticals in Unani Medicine: A Historical and Contemporary Perspective'. Five research papers were presented in this session.

The other session was chaired by Dr. S Karimullah, Assistant Director (Unani), CRIUM, Hyderabad and Dr. Naquibul Islam, Research Officer (Unani) and Head, Department of Moalajat (Medicine), RRIUM, Srinagar, and the rapporteur was Dr. Taufiq Ahmad, Reader, Department of Moalajat (Medicine), CRIUM, Hyderabad. Besides, seven papers were presented in this session.

Valedictory Session

The valedictory session was chaired by Dr. B Karunakar Reddy, Vice Chancellor, Kaloji Narayana Rao University of Health Sciences, Telangana. The chief guest of the session was Padma Shri Prof. Syed Khalifathullah, formerly Vice President, Governing Body, CCRUM. The session began with brief summary of the proceedings by Prof. Vd. KS Dhiman, Director General I/C, CCRUM. He summarized the presentations made in the technical sessions in addition to the deliberations of the inaugural session. In his valedictory address, Prof. B Karunakar Reddy said that the strength areas of Unani system of medicine should be identified and some skin diseases should be prioritized for research accordingly. He also stressed on bringing out research papers and publications. Prof. Syed Khalifathullah and Prof. Rais-ur-Rahman also addressed the session. The seminar concluded with vote of thanks proposed by Dr. Munawwar Husain Kazmi, Director Incharge, CRIUM, Hyderabad.

4.2.8 WORKSHOP ON OFFICIAL LANGUAGE

The Council's Regional Research Institute of Unani Medicine, Srinagar organized a day-long workshop on official language on 27 March 2017 at Srinagar with a view to motivate the officials to increase the use of the official language.

The workshop was addressed by Dr. Seema Akbar, Assistant Director Incharge, RRIUM, Srinagar, Dr. Mohd. Meraj Ahmad, Head, Department of Sanskrit and Dr. Zahida Jabeen, Assistant Professor, Department of Hindi, University of Kashmir, Srinagar. They suggested ways to improve the working skills in the official language and encouraged the officials of the institute to put maximum efforts for its promotion.

4.3 PARTICIPATION IN CONFERENCE / SEMINAR / WORKSHOP, ETC.

4.3.1 SEMINAR ON ANIMAL WELFARE AND ALTERNATIVES TO EXPERIMENTATION IN BIOMEDICAL RESEARCH

Some researchers from the Council's Central Research Institute of Unani Medicine, Hyderabad participated in World Laboratory Animal Day (WLAD) cum Seminar on 'Animal Welfare and Alternatives to Experimentation in Biomedical Research' organized by the National Centre for Laboratory Animal Sciences (NCLAS), National Institute of Nutrition, Hyderabad on 24 April 2016. The seminar had deliberation on the possible alternatives to laboratory experimentations on animals and the scope of minimizing the use of animals for research purposes. About 100 delegates and several eminent scientists participated in the seminar.

4.3.2 SYMPOSIUM ON NUTRACEUTICAL, HERBALS & FUNCTIONAL FOODS

The Associated Chambers of Commerce and Industry of India (ASSOCHAM) organized its 2nd National Symposium-cum-Awards on Nutraceutical, Herbals & Functional Foods with the underlying theme of promoting holistic wellness on 5 July 2016 at New Delhi.

The symposium was inaugurated by Shri YS Choudary, Hon'ble Union Minister of State for Science & Technology and Earth Science. On this occasion, managing directors of various industries were awarded by the Minister of Science & Technology for their excellent work.

The symposium had three sessions on 'Nutraceuticals and functional foods: aligning Indian regulatory and quality norms with the global standards', 'Opportunities and challenges in Indian nutraceutical market', and 'Emerging trends in nutraceuticals'. Each session had four invited lectures by imminent speakers followed by various other lectures.

On this occasion, stalls of the CCRUM and other organizations of Ministry of AYUSH, Government of India were also put up for exhibiting their research activities and achievements. Dr. Rampratap Meena, Research Officer (Chemistry) from Drug Standardization Research Institute, Ghaziabad represented the CCRUM in the event.

4.3.3 TRAINING PROGRAMME ON DSPACE

The CCRUM participated in a five-day training programme on design and development of institutional repositories using DSpace software during 1-5 August 2016 at CSIR-National Institute of Science Communication and Information Resources (CSIR-NISCAIR), New Delhi.

The training programme, which was inaugurated by the Director of NISCAIR, had various sessions for theory and hands-on practice of Linux DSpace by the faculties of the NISCAIR during the five-day programme. Shri Syed Shuaib Ahmad, Library & Information Assistant at Library and Information Centre of the CCRUM and over 25 trainees from various academic and research institutions attended the programme.

4.3.4 3RD INTERNATIONAL INDIA MEDICAL TOURISM CONGRESS

The CCRUM participated in the 3rd International India Medical Tourism Congress (IIMTC-2016) held at Hyderabad during 3–4 September 2016. The congress was inaugurated by Shri B Venkatesham, Secretary to Government of Telangana (Youth Advancement, Tourism and Culture Department).

The event had delegates from India and over twenty countries including the USA, the UK and Germany. Besides, representatives of the Ministry of AYUSH, Ministry of Tourism and Ministry of Health, Government of India, chambers of commerce, international associations and academicians as well as a significant number of top-of-the-line Indian healthcare providers and healthcare professionals were present in the two-day congress.

Prof. Rais-ur-Rahman, Director General (I/C), CCRUM and Advisor (Unani), Ministry of AYUSH, Dr. Munawwar Husain Kazmi, Director Incharge and researchers – Dr. Mohd. Kashif Husain, Dr. Javed Inam Siddiqui and Dr. Goli Penchala Pratap – from Central Research Institute of Unani Medicine (CRIUM), Hyderabad represented the AYUSH systems in the event.

The Survey of Medicinal Plants Unit of CRIUM, Hyderabad organized display of posters on important diseases like Vitiligo, Psoriasis, Gingivitis, Arthritis and Sinusitis, plant photographs, single drugs and compound formulations during the event.

4.3.5 BRICS WELLNESS WORKSHOP

The Ministry of AYUSH, Government of India, in collaboration with Research and Information System for Developing Countries (RIS), organized a two-day BRICS Wellness Workshop at Bengaluru during 10–11 September 2016 to promote cooperation in traditional medicine among the BRICS nations. The workshop was inaugurated by Shri Ananth Kumar, Hon'ble Union Minister for Chemicals and Fertilizers in the presence of Shri Siddaramaiah, Hon'ble Chief Minister of Karnataka, Shri Shripad Yesso Naik, Hon'ble Union Minister of State for AYUSH, Shri KR Ramesh Kumar, Hon'ble Minister for Health & Family Welfare, Government of Karnataka and Shri Anil Kumar Ganeriwala, Joint Secretary, Ministry of AYUSH, Government of India.

The workshop had sessions related to traditional systems of medicine, trade and economy, wellness and sustainable development goals (SDGs), wellness indicators for BRICS and wellness and tourism among others. It also included a session on WHO strategy for traditional medicine. Secretary level officers and traditional medicine/wellness experts from the BRICS countries participated in the workshop. Dr. Munawwar H Kazmi, Director Incharge and several officers of CRIUM, Hyderabad and CRU, Bengaluru attended the workshop. A team from National Institute of Unani Medicine (NIUM) led by Dr. MA Siddiqui, Director, NIUM actively participated in the workshop.

4.3.6 WORKSHOP ON E-GRANTHALAYA

The CCRUM's library staff participated in a three-day workshop on *e-Granthalaya*, the integrated library management software of National Informatics Centre (NIC), during 15–17 September 2016 at New Delhi. The workshop was organized by Netaji Subhas Institute of Technology (NSIT), New Delhi in association with the NIC to provide training of the cloud-based version of the software *e-Granthalaya* 4.00.

The workshop was inaugurated by Prof. Yogesh Singh, Director, NSIT in the presence of Dr. S Thakur, Head, Library Services, NSIT; Shri Prabhat Kumar Choudhary, Assistant Librarian, NSIT; Dr. RK Matoria, Technical Director, NIC; and Shri GL Meena, Registrar, NSIT.

The workshop had theoretical and practical sessions on introduction, administrative, acquisition, catalogue, circulation, serials and articles modules of the software. The sessions were conducted by Dr. Matoria and Ms. Ranjni Mishra, Scientist D, NIC.

Shri Syed Shuaib Ahmad and Shri Masood-uz-Zafar Khan, both Library & Information Assistant, and Smt. Lilawati, Senior Library Attendant at Library and Information Centre of the CCRUM, among others, attended the workshop.

4.3.7 LASA CONFERENCE – 2016

The CCRUM participated in the International Conference on Advances in Laboratory Animal Science for Modelling Human Diseases organized by Laboratory Animal Scientists' Association (LASA) India in collaboration with Biocon Bristol-Myers Squibb Research & Development Center (BBRC) at Bengaluru during 14–15 October 2016.

The conference focused on the issues impeding the outcomes of animal research, creating irreproducibility in ongoing research and increasing translatability related to animal research.

The focus of the conference was on the past, present and future role of animal studies in science and healthcare and it made an effort to capture the developments and stimulate a lively discussion on the current trends in lab animal science revolving around animal welfare and science and also the recent animal models used in different areas of research especially in cancer, kidney diseases and neuro-pharmacology. The conference brought together a diversified bunch of participants from pharmaceuticals, academics, researchers and industries engaged in animal research.

Dr. Misbahuddin Azhar, Dr. Mohd. Ghulam Husain, Dr. Javed Inam Siddiqui and Dr. Mohd. Nadeem of the Council participated in the conference.

4.3.8 TRAINING OF MASTER TRAINERS ON CANCER SCREENING

Some researchers from the Council's research institutes in Hyderabad, Lucknow and Aligarh participated in the Training of Master Trainers on Cancer Screening organized by the National Institute of Cancer Prevention and Research (NICPR) at Noida during 24–26 October 2016. The training programme aimed to impart knowledge on prevention and screening of cervical, breast and oral cancers was inaugurated by Prof. Ravi Mehrotra, Director, NICPR. In the

technical sessions, Dr. Anurag Srivastava from All India Institute of Medical Sciences, New Delhi delivered a comprehensive lecture on breast cancer covering breast cancer epidemiology, risk factors and symptoms, clinical breast examination and self-breast examination procedures and abnormal breast lesions. Various other lectures were also delivered on cervical cancer screening by visual methods and management of pre-cancerous and cancerous lesions, role of cytology in cancer screening and pathological confirmation before therapy and related topics. A hands-on training along with evaluation was also conducted.

4.3.9 INTERNATIONAL CONFERENCE ON DIGITAL LIBRARIES

The Council's library and information staff participated in the International Conference on Digital Libraries (ICDL) 2016 held in New Delhi during 13–16 December 2016. The conference organized by the Energy and Resources Institute (TERI) was themed on 'Smart Future: Knowledge Trends that will Change the World'.

The conference was inaugurated by Ms. Donna Scheeder, President, International Federation of Library Associations and Institutions (IFLA), USA. In her inaugural speech, she touched upon some critical issues in digital arena and its impact on the modern society permeating every sector of human life. Dr. Ajay Mathur, Director General of TERI spoke on the importance of e-resources, digital library and their need for a modern society. He also emphasized on seamless accessibility and openness of the digital material.

As much as 42 papers were presented in five technical sessions of the conference. In addition to this, seven special events and three plenary sessions and tutorials on topics related to library management were organized. The conference was attended by 232 delegates from 26 countries.

4.3.10 INTERNATIONAL CONFERENCE ON REVOLUTION OF LABORATORY MEDICINE IN MODERN BIOLOGY

The CCRUM participated in the International Conference on Revolution of Laboratory Medicine in Modern Biology organized by the National Institute of Immunohaematology (ICMR) at Mumbai during 15–17 February 2017. The conference had guest lectures, oration, symposia, panel discussions, interactive sessions and poster presentations broadly pertaining to laboratory diagnosis of common day-to-day problems in Immunohematology as well as recent advances in the field. It covered plenty of topics including transfusion medicine, red cell disorders, hematologic malignancies, cytogenetics and genomic instability syndromes, gene correction/gene therapy, stem cell biology, primary immunodeficiencies, hemostasis and thrombosis, flow cytometry and advanced molecular diagnostic technologies. The conference was attended by the Council's researchers working in the relevant fields.

4.3.11 1ST WORLD UNANI CONGRESS

The CCRUM's researchers participated in the 1st World Unani Congress organized by the World Unani Foundation (WUF), India in collaboration with National Council for Promotion of Urdu Language (NCPUL), Department of Higher Education, Ministry of Human Resource Development, Government of India at Jamia Millia Islamia, New Delhi during 6–7 March 2017.

The function had Prof. Rais-ur-Rahman, Advisor (Unani), Ministry of AYUSH, Government of India as the chief guest. In his address, he said that the research in Unani Medicine being carried out on scientific lines would be useful to develop the system as per the requirements of the international regulatory agencies. The function was presided over by Prof. Talat Ahmad, Vice Chancellor, Jamia Millia Islamia, New Delhi, whereas Dr. DC Katoch, Advisor (Ayurveda), Ministry of AYUSH, Government of India and Shri Hamid Ahmad, CEO/Director, Hamdard Laboratories (India) were guests of honour. The keynote address was delivered by Prof. KMY Amin, Department of Ilmu Advia, Ajmal Khan Tibbiya College, AMU, Aligarh. The valedictory session was addressed by Prof. Vd. KS Dhiman, Director General (I/C), CCRUM, New Delhi.

The congress had deliberations on scientific advancements, novel approaches and future challenges in Unani Medicine and as much as 94 oral papers and 82 poster presentations were delivered. It was attended by about 300 national and 10 international delegates.

4.3.12 INTERNATIONAL CONFERENCE ON KNOWLEDGE GENERATION, DISCOVERY AND NETWORKING (KGDAN-2017)

The library and information staff of the CCRUM participated in the International Conference on Knowledge Generation, Discovery and Networking (KGDAN 2017) organized by the Department of Library and Information Science, AMU, Aligarh in collaboration with Indian Council of Social Science Research, New Delhi during 15–16 February 2017 at Aligarh.

The conference was inaugurated by Prof. PB Mangla, Former Tagore National Fellow, Ministry of Culture, Government of India. A total of 26 out of 62 papers published in the souvenir was presented in the conference which had 102 delegates from India and abroad. A panel discussion on Implementation and Adaption of Knowledge Management in Libraries: Measuring Impact and Future Applicability was also conducted before valedictory session.

4.3.13 NATIONAL CONFERENCE ON CONNECTING MINDS: CREATING FUTURE – THE PARADIGM SHIFT

The CCRUM participated in the 7th National Conference on Connecting Minds: Creating Future – the Paradigm Shift organized by the Central Government Library Association and Indira Gandhi National Forest Academy (IGNFA) during 21–23 February 2017 at Dehradun.

Inaugurating the conference, Dr. KK Paul, Hon'ble Governor of Uttarakhand said that the advances in information and communication technology have brought sea changes in the sphere of library science and stressed that libraries must come forward to inculcate the love of reading from real books, not just e-books among the new generation. He also stressed that libraries need to reorient as information depositories.

As much as 23 papers were presented in the five technical session of the conference which was attended by more than hundred delegates from different states of the country.

4.3.14 CME PROGRAMME ON 'ILĀJ BI'Ī TADBĪR

The Department of 'Ilāj bi'Ī Tadbīr, Faculty of Unani Medicine, Aligarh Muslim University, Aligarh organized a six-day continuing medical education (CME) programme on 'Ilāj bi'Ī Tadbīr

during 6–11 March 2017 at Aligarh. The programme aimed to highlight the importance of *'Ilāj bi'l Tadbīr* in Unani Medicine, its role in the maintenance of health and management of diseases and relevance in the modern world besides training the participants on its various modalities and mechanism.

Besides the inaugural session, the programme had twelve lectures and practical sessions on various modalities of *'Ilāj bi'l Tadbīr*. The trainers included Prof. Mushtaq Ahmad, Prof. Ghazala Mulla, Prof. S Nafees Bano, Prof. Anis Ismail, Prof. Abdul Qawi, Prof. Arun Mukherjee, Prof. Brij Bhushan Singh and Prof. Anis Ahmad Ansari. The programme was attended by 30 selected participants including researchers from the CCRUM.

4.3.15 NATIONAL TRAINING CUM WORKSHOP ON PLANT TAXONOMY: PRINCIPLES AND PRACTICES

The researchers from Regional Research Institute of Unani Medicine, Srinagar participated in the National Training cum Workshop on Plant Taxonomy: Principles and Practices organized by the Botanical Survey of India (BSI), Ministry of Environment, Forest and Climate Change, Government of India at the University of Kashmir, Srinagar during 27–29 March 2017.

The workshop was inaugurated by Dr. Azra Nahid Kamili, Dean, Faculty of Life Sciences, University of Kashmir, Srinagar. The other dignitaries present during the workshop were Dr. Paramjit Singh, Director, Botanical Survey of India, Kolkata and Dr. OP Sharma, Director, Ecology, Environment and Remote Sensing, Jammu & Kashmir. The workshop elaborated on the principles and practices of plant taxonomy and provided relevant training to the participants.

4.4 TRAINING PROGRAMME

The Council, with a view to develop and update their knowledge and skills, provides its medical and non-medical staff the opportunities to attend various training programmes, workshops, etc. During the reporting period, they participated in the following programmes:

- 1st AYUSH Medical Officers Conference T.S. (SEER-2016), Department of AYUSH, Government of Telangana, Tarnaka, 27 August 2016.
- 2nd National Symposium-cum-Awards on Nutraceutical, Herbals & Functional Foods, The Associated Chambers of Commerce and Industry of India (ASSOCHAM), New Delhi, 5 July 2016.
- 4th International Conference on Ayurveda, Unani, Siddha and Traditional Medicine, Institute of Indigenous Medicine, University of Colombo, Sri Lanka, 8-10 December 2016.
- 7th International Conference on Advances in Laboratory Animal Sciences for Modeling Human Diseases, Biocon Bristol-Myers Squibb Research & Development Center (BBRC), Bengaluru, 14-15 October 2016.
- BRICS Wellness Workshop, Ministry of AYUSH, Government of India, Bengaluru, 10–11 September 2016.

- CME on 'Ilāj bi'l Tadbīr, Department of 'Ilāj bi'l Tadbīr, Faculty of Unani Medicine, Aligarh Muslim University, Aligarh, 6–11 March 2017.
- Good Clinical Laboratory Practices (GCLP) Workshop on International Standards ISO 15189:2012, YRG Care, Voluntary Health Services, Taramani, Chennai, 23–25 March 2017.
- Hindi Workshop, National Institute for Micro, Small and Medium Enterprises, Hyderabad, 28 July 2016.
- International Conference on Yoga for Body & Beyond, Ministry of AYUSH, Government of India, New Delhi, 22–23 June 2016.
- International Seminar on Translation of Islamic Thoughts in Persian with Focus on Imam Ja'far Sadiq, Jamia Millia Islamia, New Delhi, 21–22 September 2016.
- National Conference on Moalajat – Relevance of Unani Medicine in Non-communicable Diseases, Faculty of Unani Medicine, Aligarh Muslim University, Aligarh, 21–22 March 2017.
- National Seminar on Healthcare Management, ICFAI Foundation for Higher Education, Hyderabad, 3 June 2016.
- National Seminar on Unani Medicine, All India Unani Tibbi Conference (Bihar Chapter), Patna, 24 April 2016.
- National Symposium on *Usool-i Tashkhees* (Principles of Diagnosis), Faculty of Unani Medicine, Aligarh Muslim University, Aligarh, 5 November 2016.
- National Training cum Workshop on Plant Taxonomy: Principles and Practices, Botanical Survey of India (BSI), Ministry of Environment, Forest and Climate Change, Government of India, Srinagar, 27–29 March 2017.
- National Workshop on *Irsāl-i 'Alaq* (Leech Therapy), HSZH Government Unani Medical College, Bhopal, 28 November 2016.
- National Workshop on E-Learning and Multimodal Learning Analytics, C-DAC, Hyderabad, 25 October 2016.
- National Workshop on Holistic Approach by Regimental Therapy in Unani Medicine, Unani Medical Associate, Hyderabad, 15 May 2016.
- National Workshop on Saidla 2016, Central Unani Development Academy, Hyderabad, 8–9 October 2016.
- Rajbhasha Conference, National Institute of Rural Development, New Delhi, 22 August 2016.
- Seminar on Animal Welfare and Alternatives to Experimentation in Bio-medical Research, National Institute of Nutrition, Hyderabad, 24 April 2016.
- Seminar on Impurity Profiling and Solutions, Waters, Hyderabad, 21 April 2016.
- State Convention of Unani Medicine, All India Unani Tibbi Conference (Telangana Chapter), Hyderabad, 20 August 2016.
- Symposium on Using High Quality Rodent Disease Models in Pharma R&D, Vivo Bio Tech. & Taconic Biosciences, Hyderabad, 22 August 2016.
- Training of Master Trainers on Cancer Screening, National Institute of Cancer Prevention and Research (NICPR), Noida, 24–26 October 2016.

- Training Programme on DSpace, CSIR-NISCAIR, New Delhi, 1–5 August 2016.
- VIII International Symposium on Statistics and Optimization and Seminar on Statistical Inference, Sampling and Optimization Techniques & Related Areas, Aligarh Muslim University, Aligarh, 17–19 December 2016.
- Workshop on Beat Diabetes Scale up Presentation, Strength Care and Enhance Surveillance, Faculty of Unani Medicine, Aligarh Muslim University, Aligarh, 7 April 2016.
- Workshop on *e-Granthalaya* Software for Automation and Networking of Indian Railways Libraries, National Academy of Indian Railways, Secunderabad, 22–24 August 2016
- Workshop on *e-Granthalaya*, Netaji Subhas Institute of Technology, New Delhi, 15–17 September 2016.
- Workshop on Teaching and Research Methodology in Manafi al-Aza, Faculty of Unani Medicine, Aligarh Muslim University, Aligarh, 13–14 November 2016.

4.5 PARTICIPATION IN AROGYA FAIRS / EXPOS

The Ministry of AYUSH, Government of India in collaboration with state governments and other stakeholders organizes and participates in Arogya fairs / expos and similar events to propagate Indian systems of medicine, highlight activities and achievements of its research councils, provide free-of-cost diagnosis and treatment to the ailing visitors, and impart awareness about health, hygiene, and curative aspects of ill-health. The CCRUM and its institutes on the direction of the Ministry of AYUSH participated in national and state level Arogya fairs and similar events during the reporting period.

During all these events, the CCRUM showcased its progress in the area of clinical research, drug standardization, survey and cultivation of medicinal plants, and literary research. It also displayed posters and charts highlighting various concepts of Unani system of medicine. Besides, some important publications of the Council like Unani Pharmacopoeia of India, National Formulary of Unani Medicine, Hippocratic Journal of Unani Medicine, Standard Unani Medical Terminology, and Standard Unani Treatment Guidelines for Common Diseases were put on display. With a view to create awareness about healthy living and intervention of Unani Medicine in curing diseases and promoting health, free-of-cost literature on Unani Medicine and success stories on treatment of some chronic and common diseases were distributed among the visitors. The Council also deployed its physicians to provide free consultation and treatment to the ailing visitors seeking Unani treatment. Lectures on various health issues were also delivered by the Council's researchers. The list of the events is as follows:

S. No.	Name of Event	Place	Duration
1.	Global Exhibition on Services	Greater Noida (UP)	20–23 April 2016
2.	The Yogshala Expo	New Delhi (Delhi)	21–23 June 2016
3.	Government Achievements and Schemes Expo 2016	New Delhi (Delhi)	22–24 July 2016
4.	International India Medical Tourism Congress	Hyderabad (Telangana)	3–4 September 2016

S. No.	Name of Event	Place	Duration
5.	National Arogya Fair	Bengaluru (Karnataka)	9-12 September 2016
6.	Advantage Health Care India 2016	Greater Noida (UP)	3-5 October 2016
7.	Bharat International Tourism Bazaar	New Delhi (Delhi)	3-6 October 2016
8.	BRICS Trade Fair	New Delhi (Delhi)	12-14 October 2016
9.	The CII Chandigarh Trade Fair	Chandigarh (Chandigarh)	21-24 October 2016
10.	MTNL Perfect Health Mela	New Delhi (Delhi)	25-29 October 2016
11.	India International Trade Fair (IITF)	New Delhi (Delhi)	14-27 November 2016
12.	State Arogya Fair	Shillong (Meghalaya)	18-20 November 2016
13.	International Film Festival	Goa (Goa)	20-28 November 2016
14.	State Arogya Fair	Shimla (Himachal Pradesh)	26-28 November 2016
15.	7 th World Ayurveda Congress & Arogya Expo 2016	Kolkata (West Bengal)	1-4 December 2016
16.	AYUSH India Expo - 2016	Ahmedabad (Gujarat)	9-11 December 2016
17.	10 th Kalinga Herbal Fair	Bhubaneswar (Odisha)	12-16 December 2016
18.	State Arogya Fair	Bikaner (Rajasthan)	13-16 December 2016
19.	The East Himalayan Expo	Gangtok (Sikkim)	16-25 December 2016
20.	Health Tech India 2017	New Delhi (Delhi)	3-5 February 2017
21.	Indian Science Congress - Pride of India Expo 2017	Tirupati (Andhra Pradesh)	3-7 January 2017
22.	Pravasi Bharatiya Divas Convention	Bengaluru (Karnataka)	7-9 January 2017
23.	State Arogya Fair	Jorethang (Sikkim)	14-16 January 2017
24.	Global Organic Agriculture Festival	Nasik (Maharashtra)	25-29 January 2017
25.	State Arogya Fair	Trivandrum (Kerala)	7-12 February 2017
26.	State Arogya Fair	Itanagar (Arunachal Pradesh)	20-22 February 2017
27.	Vision Jammu & Kashmir 2017	Jammu (Jammu & Kashmir)	23-25 February 2017
28.	1 st World Unani Congress	New Delhi (Delhi)	6-7 March 2017
29.	2 nd Agri Leadership Summit 2017	Faridabad (Haryana)	18-20 March 2017

4.6 PARTICIPATION IN PROMOTION OF OFFICIAL LANGUAGE

With a view to motivating the employees to create an environment for implementation of the Official Language Policy in day-to-day work, Hindi Pakhwada (fortnight) was celebrated at the CCRUM Headquarters in New Delhi and its different institutes. Besides organization of various competitions, Hindi work done in different sections of the Headquarters was also reviewed section-wise. The Pakhwada at the Headquarters was conducted during 8–22 September 2016.

Inaugurating the Pakhwada on 8 September, Prof. Rais-ur-Rahman, Director General (I/C), CCRUM said that it is the duty of every employee of the Council to use Hindi in day-to-day official work and participate enthusiastically in various competitions of Hindi Pakhwada.

During the Hindi Pakhwada, the Council organized Hindi Dictation, Hindi Translation, Hindi Note Writing, Hindi Debate, Hindi Poetry and Hindi Essay Writing Competitions at its Headquarters and the winners were awarded various prizes. The Hindi Pakhwada was also celebrated in various institutes/centres under the Council which includes Central Research Institutes of Unani Medicine (CRIUMs), Hyderabad and Lucknow; Regional Research Institutes of Unani Medicine (RRIUMs), New Delhi, Aligarh, Bhadrak, Mumbai, Patna, Chennai, Kolkata and Srinagar; Hakim Ajmal Khan Institute of Literary and Historical Research in Unani Medicine, New Delhi; Drug Standardization Research Institute (DSRI), Ghaziabad; Regional Research Centres (RRCs), Allahabad; and Clinical Research Units (CRUs), Burhanpur, Meerut, etc. to promote Hindi in official work.

The prize distribution function at the CCRUM Headquarters was held on 30 September. The function had Dr. Ishwara N Acharya, Director, Central Council for Research in Yoga and Naturopathy as the chief guest. In his address, he emphasized that sincere efforts at each level were needed for greater promotion of Hindi language.

Apart from organizing the Hindi Pakhwada, Dr. Salim Siddiqui participated and represented the Council in the meetings of Town Official Language Implementation Committee and meetings of the Ministry of AYUSH pertaining to the official language. The Rajbhasha Section conducted quarterly meetings of official language implementation committee wherein matters related to the organization of workshops, promotion of letter writing in Hindi, making the website bilingual, review of Hindi works in various sections of the Council, review of quarterly reports of various institutes/centres of the Council, etc. were discussed and specific strategy was formulated. Besides, information, education and communication materials related to the promotion of Unani Medicine were printed in Hindi for distribution in health camps, Swasthya Rakhshan Programme, Arogya fairs and exhibitions.

4.7 APPOINTMENTS

Shri Mohd. Ahmed Khan was appointed Research Officer (Pharmacology) at CRIUM, Hyderabad on 23 January 2017.

4.8 PROMOTIONS

Shri RU Choudhury was promoted as Assistant Director (Administration) at CCRUM Headquarters on 02 May 2016.

Dr. KL Bandopadhyay was promoted as Assistant Director (Pathology) at RRIUM, Kolkata on 30 August 2016.

Dr. Seema Akbar was promoted as Assistant Director (Chemistry) at RRIUM, Srinagar on 30 August 2016.

Tabiba Asiya Khanam was promoted as Deputy Director (Unani) at RRIUM, Chennai on 17 February 2017.

Hakim Maqbool Ahmed was promoted as Deputy Director (Unani) at RRIUM, Mumbai on 22 February 2017.

Hakim Wahiduzzaman was promoted as Deputy Director (Unani) at RRIUM, Patna on 28 February 2017.

Tabiba Shagufta Parveen was promoted as Assistant Director (Unani) at DSRI, Ghaziabad on 20 February 2017.

Tabiba Salma Khatoon was promoted as Deputy Director (Unani) at RRIUM, New Delhi on 17 February 2017.

Hakim SM Qasim was promoted as Deputy Director (Unani) at CRIUM, Lucknow on 17 February 2017.

Hakim Sarfaraz Ahmed was promoted as Deputy Director (Unani) at RRIUM, Srinagar on 29 March 2017.

4.9 RETIREMENTS

Smt. Juliet Saji, Lab Technician at RRIUM, Chennai voluntarily retired 01 April 2016.

Hakim KB Ansari, Deputy Director (Unani) at RRIUM, Patna retired on superannuation on 30 April 2016.

Shri FA Bazaz, Assistant Director (Administration) at CCRUM Headquarters retired on superannuation on 30 April 2016.

Dr. Abdul Kareem, Research Officer (Bio-Chemistry) at RRIUM, Chennai retired on superannuation on 31 May 2016.

Hakim Waseem Ahmad, Deputy Director (Unani) at CRIUM, Lucknow retired on superannuation on 30 June 2016.

Hakim MA Raheem Rafiq, Deputy Director (Unani) at CRIUM, Hyderabad retired on superannuation on 30 June 2016.

Hakim S Kareemullah, Assistant Director (Unani) at RRIUM, Chennai retired on superannuation on 30 June 2016.

Dr. S Mazharul Haq, Research Officer (Pathology) at CRIUM, Hyderabad retired on superannuation on 30 June 2016.

Shri H Akhbar Shareef, Junior Administrative Officer at RRIUM, Chennai retired on superannuation on 30 June 2016.

Smt. Y Sitamaha Laxmi, Staff Nurse at CRIUM, Hyderabad retired on superannuation on 30 June 2016.

Hakim Mohd. Fazil Khan, Deputy Director (Unani) at RRIUM, New Delhi retired on superannuation on 31 July 2016.

Hakim Mohd. Raza, Deputy Director (Unani) at RRIUM, Mumbai retired on superannuation on 31 July 2016.

Shri R Shekar, Radiographer at RRIUM, Chennai retired on superannuation on 31 July 2016.

Shri Jameer Ahmad, Investigator at CRIUM, Lucknow retired on superannuation on 31 July 2016.

Shri K Yadaiah, Lab Attendant at CRIUM, Hyderabad retired on superannuation on 31 July 2016.

Shri Abdul Shakur, Lab Technician at CRIUM, Hyderabad retired on superannuation on 31 July 2016.

Smt. Maimuna Ahmad Thather, UDC at RRIUM, Chennai retired on superannuation on 31 July 2016.

Kumari M Vijay Kumari, Assistant Nursing Superintendent at CRIUM, Hyderabad retired on superannuation on 31 July 2016.

Shri Shafeeq Ahmed Sharif, UDC at CRU, Bengaluru retired on superannuation on 31 July 2016.

Shri Mohd. Ismail, Deputy Director (Unani) at CRIUM, Hyderabad retired on superannuation on 31 August 2016.

Shri Raj Singh Kataria, Assistant at CCRUM Headquarters retired on superannuation on 31 August 2016.

Shri Shoeb Ahmad, Assistant at CRIUM, Lucknow retired on superannuation on 31 August 2016.

Shri Fareed Ahmad, Urdu Assistant at LRIUM, New Delhi retired on superannuation on 31 August 2016.

Hakim Mohd. Rasid Kidwai, Research Officer (Unani) at CRIUM, Lucknow retired on superannuation on 30 September 2016.

Shri Raheem Bux, Lab Technician at RRIUM, Bhadrak retired on superannuation on 30 September 2016.

Smt. Bafatun Bibi, Sister In-charge at RRIUM, Bhadrak retired on superannuation on 30 September 2016.

Shri Mohd. Rafiuddin, UDC at RRIUM, Chennai retired on superannuation on 31 October 2016.

Hakim Qaiser Shaheen, Research Officer (Unani) at CRIUM, Hyderabad retired on superannuation on 30 November 2016.

Smt. A Jagurunnisa Begum, Staff Nurse at RRIUM, Chennai retired on superannuation on 30 November 2016.

Hakim Khalid Mahmood Siddiqui, Deputy Director General at CCRUM Headquarters retired on superannuation on 31 December 2016.

Hakim SM Asim, Research Officer (Unani) at DSRU, New Delhi retired on superannuation on 31 December 2016.

Shri Mohd. Abdul Rashid, Research Officer (Botany) at RRIUM, Aligarh retired on superannuation on 31 December 2016.

Shri Aminuddin, Research Officer (Botany) at CCRUM Headquarters retired on superannuation on 31 January 2017.

Shri Parvez Akhtar, Research Officer (Pharmacology) at DSRU, New Delhi retired on superannuation on 31 January 2017.

Hakim Mirza Wahab Baig, Assistant Director (Unani) at CRIUM, Hyderabad retired on superannuation on 31 January 2017.

Shri Krishan Rai, Chowkidar at RRIUM, Patna retired on superannuation on 28 February 2017.

Hakim Zakiuddin, Assistant Director (Unani) at CCRUM Headquarters retired on superannuation on 31 March 2017.

Hakim Wahiduzaman, Deputy Director (Unani) at RRIUM, Patna retired on superannuation on 31 March 2017.

Shri AA Lateef, UDC at RRIUM, Chennai retired on superannuation on 31 March 2017.

4.10 DEATHS

Shri A Mohd. Rafi, Chowkidar at RRIUM, Chennai died in harness on 19 June 2016.

Shri Suhail Ahmed, Driver at RRIUM, Aligarh died in harness on 14 February 2017.

5. FINANCIAL STATEMENT

5.1 AUDIT REPORT

SEPARATE AUDIT REPORT OF THE COMPTROLLER & AUDITOR GENERAL OF INDIA ON THE ACCOUNTS OF THE CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE FOR THE YEAR ENDED 31 MARCH 2017

We have audited the attached Balance Sheet of the Central Council for Research in Unani Medicine (Council) as on 31 March 2017, the Income & Expenditure Account and Receipt & Payment Account for the year ended on that date under Section 20(1) of the Comptroller and Auditor General's (Duties, Powers & Conditions of Service) Act, 1971. The audit has been entrusted for the period upto 2018-19. These financial statements include the accounts of nine branches of the Council. These financial statements are the responsibility of the Council's management. Our responsibility is to express an opinion on these financial statements based on our audit. Audit examined the accounts of CCRUM (Hqrs.) and one centre of CCRUM at Delhi namely Regional Research Institute for Unani Medicine (RRIUM).

2 The Separate Audit Report contains the comments of the Comptroller and Auditor General of India (CAG) on the accounting treatment only with regard to classification, conformity with the best accounting practices, accounting standards and disclosure norms, etc. Audit observations on financial transactions with regard to compliance with Law, Rules & Regulations (Propriety and Regularity) and efficiency-cum-performance aspects, etc., if any, are reported through Inspection Reports/ CAG'S Audit Reports separately.

3 We have conducted our audit in accordance with auditing standards generally accepted in India. These standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of financial statements. We believe that our audit provides a reasonable basis for our opinion.

4 Based on our audit, we report that:

- (i) We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for the purpose of our audit;
- (ii) The Balance Sheet, Income & Expenditure Account and Receipt & Payment Account dealt with by this report have not been drawn up in the common format approved by the Ministry of Finance, Government of India.
- (iii) In our opinion, proper books of accounts and other relevant records have been maintained by the Council in so far as it appears from our examination of such books.
- (iv) We further report that:
 - A Balance Sheet
 - A.1 Liabilities
 - A.1.1 Current Liabilities

A.1.1.1 The provision for retirement benefits as required in the common format of accounts for the central autonomous bodies was not made on actuarial basis. This observation was also made during the previous year audit.

A.2 Current Assets

A.2.1 Closing balance of medicines in the Regional Research Institute was not disclosed in the accounts of Council. This resulted in understatement of current assets of the Council.

Test check of records of RRIUM, Jamia Nagar, Okhla, New Delhi revealed that RRIUM had stock of medicines as on 31 March, 2017 which was not disclosed in the Receipts and Payments Account.

B General

B.1 As per Schedule-3/A Earmarked/Endowment funds, the closing balance of AIIUM Account was shown as Rs. 25.00 crore instead of Rs. 0.22 crore. This needs to be reconciled.

B.2 Schedule S/5B - Loan and Advances of Current Assets, revealed that, advances amounting to Rs. 3.68 lakh were outstanding for last three years. This needs to be reconciled.

B.3 In the Receipt & Payment Account of Central Research Institute of Unani Medicine, Hyderabad, the time barred cheques amounting to Rs. 2,20,040/- (out of total of Rs. 7,25,043/-) needs to be cancelled and credited back to the bank account since the time has elapsed even for the revalidation. The department has not reverted back the stale cheques which resulted in understatement of prior period income and current liabilities to that extent.

C Grants-in-Aid

(i) Health Account

The council received Grants in Aid of Rs. 111.24 crore (Plan: Rs. 57.24 crore and Non-Plan: Rs. 54.00 crore) during 2016-17. The Council had an unspent balance of Rs.1.29 crore (Plan: Rs. 1.26 crore and Non-Plan: Rs. 0.03 crore) of the previous year. The Council had its own receipt of Rs. 9.55 crore (Plan: Rs. 3.47 crore and Non-Plan: Rs. 6.08 crore). The Council utilized Rs.120.32 crore (Plan: Rs. 60.36 crore and Non-Plan: Rs. 59.96 crore), leaving an unutilized balance of Rs. 1.76 crore (Plan: Rs. 1.61 crore and Non-Plan: Rs. 0.15 crore).

(ii) Specific Project Account

The Council also received grants of Rs. 25.00 crore for specific projects from various agencies in addition to unspent balance of previous year Rs. 2.95 crore. The Council had its own receipt

of Rs. 0.10 crore. The Council utilized Rs. 25.67 crore leaving an unutilized balance of Rs. 2.38 crore during 2016-17.

D. Management Letter

Deficiencies which have not been included in the audit report have been brought to the notice of management of the Council through a management letter issued separately for remedial/corrective action.

- (v) Subject to our observations in the preceding paragraphs, we report that the Balance Sheet, Income & Expenditure Accounts and Receipts & Payments Account dealt by this report are in agreement with the books of accounts.
- (vi) In our opinion and to the best of our information and according to the explanations given to us, the said financial statements read together with the Accounting Policies and Notes on Accounts and subject to the significant matters stated above and other matters mentioned in Annexure to this Audit Report give a true and fair view in conformity with accounting principles generally accepted in India.
- In so far as it relates to the Balance Sheet, of the state of affairs of the Central Council for Research in Unani Medicine as on 31 March 2017 and
 - In so far as it relates to Income and Expenditure Account of the surplus for the year ended on that date.

For and on behalf of the C&AG of India

Place: New Delhi
Date: 12 January 2018

Director General of Audit
(Central Expenditure)

ANNEXURE

1. Adequacy of Internal Audit System

The internal audit of the CCRUM was conducted upto 2012-2015 by the Ministry of Health and Family Welfare.

2. Adequacy of Internal Control System

- a) 35 Paras pertaining to the period 2001 to 2013-14 were outstanding.
- b) Bank reconciliation of Regional Research Institute for Unani Medicine, New Delhi has not been done.

3. System of Physical Verification of Assets

The physical verification of non-consumable articles entered in the stock register for 2016-17 has been carried out on 24.10.2017.

4. System of Physical Verification of Inventory

The physical verification of Books and Publications was conducted upto 22.06.2017. Books worth Rs. 946.35/- were found untraceable during physical verification of library. The physical verification of consumables and stationary was conducted upto 2016-17 and no discrepancy was reported.

5. Regularity in Payment of Dues

No payment over six months in respect of statutory dues was outstanding as on 31.03.2017.

5.2 AUDITED STATEMENT OF ACCOUNTS

CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE

Index of the Annual Accounts for the Year 2016-17

S. No.	Name of the accounts	Page No.	Schedules at Page No.
1.	Receipt & Payment account	134-135	138-165
2.	Income & Expenditure account	136	166-167
3.	Balance Sheet	137	168-171
4.	Notes on Accounts	172	

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE
Receipt & Payment a/c for the year ending 31 March 2017

S. No.	Receipts	Current Year	Previous Year	S. No.	Payments	Current Year	Previous Year
1.	Opening balance:			1.	Establishment expenses	75,33,23,574.00	75,66,77,479.00
	(i) Cash in hand	4,25,855.00	2,09,867.60	2.	Administrative Expenses	13,46,78,936.00	12,21,28,770.31
		-	-	3.	Other Expenses :	-	-
	(ii) Cash-at-bank	11,01,00,670.00	6,57,44,875.50	(i)	Material & Supplies	10,13,85,387.00	9,12,05,982.00
	Total Opening balance	11,05,26,525.00	6,59,54,743.10	(ii)	Advance to Govt. Servants	18,07,000.00	17,12,500.00
2.	G.I.A. received	-	-	(iii)	Outstanding advances	2,41,15,660.00	1,27,64,536.00
	(i) From Government of India	1,34,80,00,000.00	92,93,75,000.00	(iv)	Other charges	5,79,59,010.00	2,26,29,642.00
	(ii) From other sources	-	-	4.	Investments (Out of own funds)	35,38,28,440.00	29,90,50,392.84
3.	Bank interest	1,44,81,727.00	2,00,58,976.94	5.	Fixed assets	1,33,62,279.00	2,98,80,647.79
4.	Interest on refundable advances	557,620.00	6,39,707.00	6.	Work in progress	30,28,80,000.00	1,31,25,000.00
5.	Other receipts	11,51,89,955.00	17,62,99,412.33	7.	Publication (Priced)	3,92,302.00	2,12,697.00
		-	-	8.	Remittance of recoveries	6,87,94,635.00	8,10,46,180.00
6.	By adjustment of advances pertaining to previous years	32,45,762.00	1,38,07,679.15	9.	Amount to be received from concerned a/c, Instts.	1,75,817.00	13,967.00
7.	Recoveries for remittance	7,33,48,956.00	7,99,83,710.00		-do-	43,80,319.00	2,82,294.67

Sd/-
 (Syed Asif Mian)
 Consultant (Accounts)

Sd/-
 (Mohammad Parvez)
 Accountant

Sd/-
 (R.U. Choudhury)
 Assistant Director (Admn.)

Sd/-
 (Prof. Vd. K.S. Dhiman)
 Director General

S. No.	Receipts	Current Year	Previous Year	S. No.	Payments	Current Year	Previous Year
8.	Sale of Publications (Priced)	2,66,818.00	1,96,587.00	10.	LIC amount disbursed	30,948.00	2,00,000.00
9.	Recovery of subscription & advances	5,31,70,974.00	5,87,56,351.00	11.	Other Misc. payments/transfers	17,36,81,267.00	15,90,70,409.00
10.	Investment received	30,20,64,382.00	26,05,04,811.97				-
11.	Amount receivable received	2,57,79,729.00	3,30,11,566.27	12.	Amount remitted by decentralized Institutes to be contra against their receipts in Hqrs N. Delhi	6,66,772.00	87,620.00
12.	Security Deposit receivable received	-	-	13.	Amount payable paid	3,63,659.00	3,69,71,091.00
13.	Security deposit	3,74,669.00	2,15,312.00	14.	NPS amount transferred to NPS Trustee Bank a/c	30,81,330.00	9,98,798.00
14.	In transit in Previous Year received	2,75,236.00	9,70,31,066.00	15.	Closing Balance		
15.	Payable to other a/cs	650.00	1,77,795.00		Cash-in-hand	4,36,868.00	4,25,854.75
16.	Recovery of refundable advances	24,44,327.00	23,34,194.00		Cash-at-bank	5,50,49,899.00	11,01,00,670.40
17.	LIC for disbursement	2,60,000.00	1,50,000.00				
18.	Amount received to be contra against their remittance by the decentralized Institutes	666,772.00	87,620.00				
	Total Rs.	2,05,06,54,102.00	1,73,85,84,531.76		Total Rs.	2,05,06,54,102.00	1,73,85,84,531.76

Sd/-
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Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE
Income & Expenditure a/c for the year ending 31 March 2017

S.No.	Expenditure	Current Year	Previous Year	S.No.	Income	Current Year	Previous Year
1.	Establishment expenditure	75,24,67,800.00	75,26,59,692.00		GIA	1,11,24,00,000.00	92,41,75,000.00
2.	Administrative expenditure	12,77,86,705.00 10,13,85,387.00	12,12,20,152.99 9,12,05,982.00		Other income	1,92,72,120.00	1,98,05,729.33
3.	Other charges	5,79,59,010.00	2,26,29,642.00		Less : Capitalised expenditure	(-)6,14,59,731.00	(-)3,56,97,057.79
4.	Depreciation	1,73,85,000.00	1,66,77,112.79	4.	Excess of expenditure over Income		9,61,08,910.24
5.	Balance being Excess of Income over Expenditure :	1,32,28,487.00	-				-
	Total (Rs.)	1,07,02,12,389.00	1,00,43,92,581.78		Total (Rs.)	1,07,02,12,389.00	1,00,43,92,581.78

Sd/-
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Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE

Balance Sheet as on 31 March 2017

S. No.	Liabilities	Schedule No.	Current Year	Previous Year	S. No.	Assets	Schedule No.	Current Year	Previous Year
1.	Capital fund	(S/1)	1,07,15,14,641.00	1,00,07,01,441.47	1.	Fixed assets	(S/3)	93,93,38,978.00	89,91,39,266.00
2.	Current Liabilities	(S/2)	52,36,98,162.00	51,37,29,657.01	2.	Investments (Others)	(S/5C)	45,10,93,364.00	39,93,29,306.18
3.	Earmarked/ Endowment fund	S/3(A)	2,38,17,625.00	2,94,67,365.73	3.	Current assets:			-
						(i) Loans & advances	(S/5B)	17,31,11,319.00	13,49,03,366.88
						(ii) Bank/Cash balance:	(S/5A)	5,54,86,767.00	11,05,26,525.15
						3,16,69,142.00			
						2,38,17,625.00			
	Total Rs.		1,61,90,30,428.00	1,54,38,98,464.21		Total Rs.		1,61,90,30,428.00	1,54,38,98,464.21

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Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE
Schedule of Receipts for the year ending 31 March 2017

S. No.		Opening balance		GIA		Bank interest	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(1)		(2)		(3)	
1.	Health Scheme a/c						
	(1) NON-PLAN						
	(i) Health Scheme			54,00,00,000.00	48,50,00,000.00	8,513.00	17,20,737.00
	(a) Cash in hand (Imprest)	17,200.00	12,200.00	-	-	-	-
	(b) Cash-at-bank	2,91,833.11	6,08,557.11	-	-	-	-
	Total (Non-Plan) S.No. 1	3,09,033.11	6,20,757.11	54,00,00,000.00	48,50,00,000.00	8,513.00	17,20,737.00
2.	PLAN						
	(i) Health Scheme a/c						
	(a) Cash-in-hand (Imprest)	4,04,667.60	1,97,667.60	55,80,00,000.00	43,91,75,000.00	52,40,361.00	35,45,873.00
	(b) Cash-in-hand (other than Imprest)	3987.15	-	-	-	-	-
	(c) Cash-at-bank	1,21,71,311.30	3,07,73,401.42	-	-	-	-
	Total (H) PLAN	1,25,79,966.05	3,09,71,069.02	55,80,00,000.00	43,91,75,000.00	52,40,361.00	35,45,873.00
	(ii) Herb Garden a/c	36,220.00	34,813.00			1,475.00	1,407.00
	(iii) Pub. of Text Books a/c	51,298.00	49,306.00			2,089.00	1,992.00
	(iv) UPS a/c I	44,035.00	42,361.00			2,975.77	1,674.00

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

S. No.	Opening balance		GIA		Bank interest	
	Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
	(1)		(2)		(3)	
	1,99,002.05	1,91,399.05			7,972.00	7,603.00
(v) DSOP						
(vi) AIUM a/c	21,55,559.00	20,71,856.00	25,00,00,000.00		72,810.00	83,703.00
(vii) Digitalization of Manuscript a/c	115.00	111.00			4.00	4.00
(viii) WHO a/c	2,058.00	1,978.00			83.00	80.00
(ix) International Events conference a/c	6,56,599.00	6,31,103.00			26,735.00	25,496.00
(x) DST a/c	1,14,24,616.00	1,01,64,034.00		52,00,000.00	3,88,969.00	4,38,976.00
(xi) CRISM a/c	1,44,40,923.00	1,39,36,413.00		-	5,15,668.00	5,04,510.00
(xii) South African Unani Chair a/c	4,56,940.68	31,50,394.00		-	21,820.00	1,01,350.00
Total (Plan) S.No. 2 (ii) to (xii)	2,94,67,365.73	3,02,73,768.05	25,00,00,000.00	52,00,000.00	10,40,600.77	11,66,795.00
3. (i) NPS a/c	15,98,032.81	16,73,580.81		-	1,03,069.00	83,252.00
(ii) CPF/GPF a/c	38,70,226.48	15,17,326.88		-	71,67,929.79	1,23,56,640.34
(iii) GIS a/c	9,66,482.84	3,57,760.10		-	98,734.00	9,16,291.60
(iv) Pension fund a/c	6,17,35,418.13	5,40,481.13		-	8,22,519.00	2,69,388.00
Total S.No. 3	6,81,70,160.26	40,89,148.92		-	81,92,251.79	1,36,25,571.94
Grand Total S.No. 1 to 3	11,05,26,525.15	6,59,54,743.10	1,34,80,00,000.00	92,93,75,000.00	1,44,81,726.56	2,00,58,976.94

Sd/-
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Director General

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(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

S. No.		Miscellaneous Receipts		Interest on refundable advances		By adjustment of Advances pertaining to previous years	
		(4)		(5)		(6)	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
1.	Health Scheme a/c						
	(1) NON-PLAN						
		77,70,390.00	93,80,293.00	4,46,559.00	5,38,099.00	10,45,245.00	7,40,551.00
			-		-		-
	Total (Non-Plan) S.No. 1	77,70,390.00	93,80,293.00	4,46,559.00	5,38,099.00	10,45,245.00	7,40,551.00
2.	PLAN		-		-		-
	(i) Health Scheme a/c	56,92,814.94	45,19,119.33	1,11,061.00	1,01,608.00	22,00,517.00	1,30,67,128.15
	Total (H) PLAN (i)	56,92,814.94	45,19,119.33	1,11,061.00	1,01,608.00	22,00,517.00	1,30,67,128.15
	(ii) Herb Garden a/c						
	(iii) Pub. of Text Books a/c						
	(iv) UPS a/c I	20,000.00					
	(v) South African Unani Chair a/c						
	(vi) DSOP						
	(vii) Digitalization of Manuscript a/c						
	(viii) WHO a/c						
	(ix) UPS a/c II						
	(x) International Events conference a/c						

Sd/-
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Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

S. No.	Miscellaneous Receipts		Interest on refundable advances		By adjustment of Advances pertaining to previous years	
	Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
	(4)		(5)		(6)	
	6,750.00	51,00,000.00				
	26,750.00	51,00,000.00				
3.						
	10,17,00,000.00	15,73,00,000.00				
	10,17,00,000.00	15,73,00,000.00				
	11,51,89,954.94	17,62,99,412.33	5,57,620.00	6,39,707.00	32,45,762.00	1,38,07,679.15

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

S.No.		Recoveries of refundable advances		Sale of Council's publications		Recoveries for remittance	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(7)		(8)		(9)	
1.	Health Scheme a/c						
	(1) NON-PLAN						
	Health Scheme	8,11,253.00	18,95,334.00			5,05,36,973.00	5,43,68,748.00
	Total (Non-Plan) S.No. 1	8,11,253.00	18,95,334.00				
2.	PLAN		-			5,05,36,973.00	5,43,68,748.00
	(i) Health Scheme a/c	16,33,074.00	(-)6,000/- +4,44,485/-+375/-	2,66,818.00	1,96,587.00		
	Total (H) PLAN (i)	16,33,074.00	4,38,860.00	2,66,818.00	1,96,587.00	1,83,87,410.00	2,08,39,154.00
	(ii) Herb Garden a/c					1,83,87,410.00	2,08,39,154.00
	(iii) Pub. of Text Books a/c						
	(iv) UPS a/c						
	(v) DSOP						
	(vi) Digitalization of Manuscript a/c						
	(vii) WHO a/c						
	(viii) International Events conference a/c						
	(ix) DST a/c						
	(x) CRISM a/c						
	Total (Plan) S.No. 2 (ii) to (x)						

Sd/-
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Consultant (Accounts)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

S.No.	Recoveries of refundable advances		Sale of Council's publications		Recoveries for remittance	
	Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
	(7)		(8)		(9)	
3.						
	(i) NPS a/c					
	(ii) CPF/GPF a/c					
	(iii) GIS a/c					
	(iv) Pension fund a/c				43,68,319.00	35,52,114.00
					12,000.00	12,000.00
					44,254.00	12,11,694.00
	Total S.No. 3	-	-	-	44,24,573.00	47,75,808.00
	Grand Total S.No. 1 to 3	24,44,327.00	23,34,194.00	2,66,818.00	7,33,48,956.00	7,99,83,710.00

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Assistant Director (Admn.)

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(Mohammad Parvez)
Accountant

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(Syed Asif Mian)
Consultant (Accounts)

S.No.	Recovery of subscription/advances	Recovery of subscription/advances		Receivable amount received		Security deposit lying with the Council	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(10)		(11)		(12)	
1.	Health Scheme a/c						
	(1) NON-PLAN						
	Health Scheme		6,859.00				
	Total (Non-Plan) S.No. 1		6,859.00				
2.	PLAN						
	(i) Health Scheme a/c		7,268.00		2,296.00	3,74,669.00	2,15,312.00 (CCRUM)
	Total (H) PLAN (i)		7,268.00		2,296.00	3,74,669.00	2,15,312.00
	(ii) Herb Garden a/c						
	(iii) Pub. of Text Book a/c						
	(iv) UPS a/c I						
	(v) DSOP a/c						
	(vi) Digitalization of Manuscript a/c						
	(vii) WHO a/c						
	(viii) International Events conference a/c						
	(ix) DST a/c						
	(x) CRISM a/c						
	Total (Plan) S.No. 2				2,296.00		2,15,312.00

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Director General

S.No.	Recovery of subscription/advances		Receivable amount received		Security deposit lying with the Council	
	Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
	(10)		(11)		(12)	
3.	(+)18,73,847.00 (-)17,247.00	28,43,154.00	6,58,003.00			
	5,03,80,814.00	5,49,86,507.00	49,300.00 2,44,08,070.84	2,86,71,143.87		
	9,33,560.00	9,26,690.00		25,98,999.40		
			6,000.00 +6,44,228.00	17,39,127.00		
	5,31,70,974.00	5,87,56,351.00	2,57,65,601.84	3,30,09,270.27		
	5,31,70,974.00	5,87,56,351.00	2,57,79,728.84	3,30,11,566.27	3,74,669.00	2,15,312.00

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Accountant

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Consultant (Accounts)

S.No.	In transit amount received	Security deposit of the Council with others received		Payable amount	
		(13)		(15)	
		Current Year	Previous Year	Current Year	Previous Year
1.	Health Scheme a/c				
	(1) NON-PLAN	15,543.00			
	(i) Health Scheme	9,70,00,000.00			7,268.00
	Total (Non-Plan) S.No. 1	9,70,15,543.00			7,268.00
2.	PLAN				
	(i) Health Scheme a/c	2,00,000.00			86,436.00 + 6,859.00
		75,235.67			30,948.00
	T.D.S				
	Total (H) PLAN (i)	2,75,235.67			1,24,243.00
	(ii) Herb Garden a/c				
	(iii) Pub. of Text Books a/c				
	(iv) UPS a/c I				
	(v) DSOP a/c				
	(vi) Digitalization of Manuscript a/c				
	(vii) WHO a/c				
	(viii) International Events conference a/c				

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Director General

S.No.	In transit amount received		Security deposit of the Council with others received		Payable amount	
	Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
	(13)		(14)		(15)	
	(ix) DST a/c					
	(x) CRISM a/c					
	Total (Plan) S.No. 2					
3.	(i) NPS a/c					39,000.00
	(ii) CPF/GPF a/c					7,284.00
	(iii) GIS a/c				650.00	
	(iv) Pension fund a/c					
	Total S.No. 3				650.00	46,284.00
	Grand Total S.No. 1 to 3	2,75,235.67	9,70,31,066.00	-	650.00	1,77,795.00

Sd/-
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Assistant Director (Admn.)

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(Mohammad Parvez)
Accountant

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(Syed Asif Mian)
Consultant (Accounts)

S.No.		Investment received		LIC amount for disbursement	
		Current Year	Previous Year	Current Year	Previous Year
		(16)		(17)	
1.	Health Scheme a/c				
	(1) NON-PLAN				
	(i) Health Scheme				
	Total (Non-Plan) S.No. 1				
2.	PLAN				
	(i) Health Scheme a/c				
	Total (H) PLAN (i)				
	(ii) Herb Garden a/c				
	(iii) Pub. of Text Book a/c				
	(iv) UPS a/c I				
	(v) DSOP				
	(vi) Digitalization of Manuscript a/c				
	(vii) WHO a/c				
	(viii) International Events conference a/c				
	(ix) DST a/c				
	(x) CRISM a/c				
	Total (Plan) S.No. 2				

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Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

S.No.	Investment received	LIC amount for disbursement			
		(16)		(17)	
		Current Year	Previous Year	Current Year	Previous Year
3.	11,27,000.00				
	29,37,95,368.04	23,18,37,727.23			
		1,61,22,294.74	2,60,000.00	1,50,000.00	
	71,42,014.00	1,25,44,790.00			
	30,20,64,382.04	26,05,04,811.97	2,60,000.00	1,50,000.00	
	30,20,64,382.04	26,05,04,811.97	2,60,000.00	1,50,000.00	

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Accountant

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(Syed Asif Mian)
Consultant (Accounts)

S.No.		Amount received to be contra against remittance by decentralized Institutes as already taken receipts in Previous Year		Total receipts	
		Current Year	Previous Year	Current Year	Previous Year
		(18)		(19)	
1.	Health Scheme a/c				
	(1) NON-PLAN				
	(i) Health Scheme	1,38,553.00	4,950.00		
	Total (Non-Plan) S.No. 1	1,38,553.00	4,950.00	60,10,73,378.11	65,12,92,280.11
2.	PLAN				
	(i) Health Scheme a/c	5,28,219.00	5,000/- +77,000/- +670/-		
	Total (H) PLAN (i)	5,28,219.00	82,670.00	60,52,97,413.66	51,32,94,442.50
	(ii) Herb Garden a/c			37,695.00	36,220.00
	(iii) Pub. of Text Book a/c			53,387.00	51,298.00
	(iv) UPS a/c I			67,010.77	44,035.00
	(v) DSOP			2,06,974.05	1,99,002.05
	(vi) AIUM a/c			25,22,28369.00	21,55,559.00
	(vii) Digitalization of Manuscript a/c			119.00	115.00
	(viii) WHO a/c			2,141.00	2,058.00
	(ix) International Events conference a/c			6,83,334.00	6,56,599.00

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

S.No.	Amount received to be contra against remittance by decentralized Institutes as already taken receipts in Previous Year	Total receipts	
		Current Year	Previous Year
		(19)	
		1,18,20,335.00	2,09,03,010.00
		1,49,56,591.00	1,44,40,923.00
		4,78,760.68	32,51,744.00
		28,05,34,716.50	4,17,40,563.05
3.	(i) NPS a/c	53,42,704.81	46,38,986.81
	(ii) CPF/GPF a/c	37,96,71,709.15	32,93,76,629.32
	(iii) GIS a/c	22,59,426.84	2,10,72,035.84
	(iv) Pension fund a/c	17,64,74,752.13	17,71,69,594.13
	Total S.No. 3	56,37,48,592.93	53,22,57,246.10
	Grand Total S.No. 1 to 3	6,66,772.00	87,620.00

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE

Schedule of Payments for the year ending 31 March 2017

S. No.	Name of the Scheme	Establishment Expenses		Administrative Expenses		Material & Supplies Expenses	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(1)		(2)		(3)	
1.	Non-Plan						
	(i) Health scheme a/c	54,73,32,885.00	55,54,30,535.00	17,73,374.00	19,10,053.00		
	Total (Non-Plan) S.No. 1	54,73,32,885.00	55,54,30,535.00	17,73,374.00	19,10,053.00		
2.	Plan						
	(i) Health scheme a/c	20,51,34,915.00	19,72,29,157.00	13,19,67,288.01	11,93,10,099.99	10,13,85,387.00	9,12,05,982.00
	Health scheme a/c						
	Health scheme a/c						
	Total(H) Plan (i)	20,51,34,915.00	19,72,29,157.00	13,19,67,288.01	11,93,10,099.99	10,13,85,387.00	9,12,05,982.00
	(ii) Herb Garden a/c						
	(iii) Pub. of Text Book a/c						
	(iv) UPS a/c I			4,630.00			
	(v) DSOP a/c						
	(vi) Digitization of Manuscript a/c						
	(vii) WHO a/c						
	(viii) International Events conference a/c						

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

S. No.	Name of the Scheme	Establishment Expenses		Administrative Expenses		Material & Supplies Expenses	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(1)		(2)		(3)	
	(ix) DST a/c	8,55,774.00	14,63,553.00	9,33,644.00	6,68,048.00		
	(x) CRISM a/c						
	(xi) South African Unani Chair a/c		25,54,234.00		2,40,569.32		
	Total (Plan) S.No. (ii) to (xi)	8,55,774.00	40,17,787.00	9,38,274.00	9,08,617.32		
3.	(i) NPS a/c						
	(ii) GPF a/c						
	(iii) GIS a/c						
	(iv) Pension fund a/c						
	Total S. No.3	-	-	-	-	-	-
	Total S.No. 1 to 3	75,33,23,574.00	75,66,77,479.00	13,46,78,936.01	12,21,28,770.31	10,13,85,387.00	9,12,05,982.00

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

S. No.	Name of the Scheme	Assets		Publications (Priced)		Advances to Government Servants	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(4)		(5)		(6)	
1.	Non-Plan						
	(i) Health scheme a/c						
	Total (Non-Plan) S. No. 1						
2.	Plan						
	(i) Health scheme a/c	84,54,247.00	2,25,63,215.79	3,92,302.00	2,12,697.00	18,07,000.00	17,08,000.00
	Health scheme a/c						4,500.00
	Total(H) Plan (i)	84,54,247.00	2,25,63,215.79	3,92,302.00	2,12,697.00	18,07,000.00	17,12,500.00
	(ii) Herb Garden a/c						
	(iii) Pub. of Text Books a/c						
	(iv) UPS a/c I	2,500.00					
	(v) DSOP a/c						
	(vi) Digitization of Manuscript a/c						
	(vii) WHO a/c						
	(viii) International Events conference a/c						
	(ix) DST a/c	49,05,532.00	73,17,432.00				
	(x) CRISM a/c						
	(xi) South African Unani Chair a/c						
	Total (Plan) (ii) to (xi)	49,08,032.00	73,17,432.00				

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

S. No.	Name of the Scheme	Assets		Publications (Priced)		Advances to Government Servants	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(4)		(5)		(6)	
3.	(i) NPS a/c						
	(ii) GPF a/c						
	(iii) GIS a/c						
	(iv) Pension fund a/c						
	Total S.No. 3						
	Total S.No. 1 to 3	1,33,62,279.00	2,98,80,647.79	3,92,302.00	2,12,697.00	18,07,000.00	17,12,500.00

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

S. No.	Name of the Scheme	Outstanding advances		Other charges		Works in progress	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(7)		(8)		(9)	
1.	Non-Plan						
	(i) Health scheme a/c	1,82,222.00	6,29,102.00		976.00		
		1,17,500.00	2,91,327.00		-		
	Total (Non-Plan) S.No. 1	2,99,722.00	9,20,429.00		976.00		
2.	Plan						
	(i) Health scheme a/c	1,89,67,474.00	98,47,883.00	5,58,838.00		4,78,80,000.00	1,31,25,000.00
		48,48,464.15	7,96,224.00		2,25,25,161.00	50,00,000.00	
	Health scheme a/c		12,00,000.00	5,74,00,171.52	1,03,505.00		
	Health scheme a/c			5,79,59,009.52		5,28,80,000.00	
	Total(H) Plan (i)	2,38,15,938.15	1,18,44,107.00		2,26,28,666.00		1,31,25,000.00
	(ii) Herb Garden a/c						
	(iii) Pub. of Text Books a/c						
	(iv) UPS a/c I						
	(v) AIUM a/c					25,00,00,000.00	
	(vi) DSOP a/c						
	(vii) Digitization of Manuscript a/c						
	(viii) WHO a/c						
	(ix) International Events conference a/c						
	(x) DST a/c						

Sd/-
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(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

S. No.	Name of the Scheme	Outstanding advances		Other charges		Works in progress	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
	(xi) CRISM a/c						(9)
	(xii) South African Unani Chair a/c						
	Total S. No. 2 (ii) to (xii)				-	25,00,00,000.00	
3.	(i) NPS a/c						
	(ii) GFP a/c						
	(iii) GIS a/c						
	(iv) Pension fund a/c						
	Total S.No.3						
	Total S.No. 1 to 3	2,41,15,660.15	1,27,64,536.00	5,79,59,009.52	2,26,29,642.00	30,28,80,000.00	1,31,25,000.00

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

S. No.	Name of the Scheme	Excess paid to be received /adjusted		Remittance of recoveries		Un-disbursed amount disbursed	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(10)		(11)		(12)	
1.	Non-Plan						
	(i) Health scheme a/c			4,99,00,700.00	5,59,23,389.00		
	Total (Non-Plan) S.No. 1	-		4,99,00,700.00	5,59,23,389.00	-	
2.	Plan						
	(i) Health scheme a/c			1,88,93,935.00	2,03,46,983.00	30,948.00	
	Health scheme a/c						
	Total(H) Plan (i)			1,88,93,935.00	2,03,46,983.00	30,948.00	
	(ii) Herb Garden a/c						
	(iii) Pub. of Text Books a/c						
	(iv) UPS a/c I						
	(v) DSOP a/c						
	(vi) Digitization of Manuscript a/c						
	(vii) WHO a/c						
	(viii) International Events conference a/c						
	(ix) DST a/c						
	(x) CRISM a/c						
	(xi) CICISM a/c						

Sd/-
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(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

S. No.	Name of the Scheme	Excess paid to be received /adjusted		Remittance of recoveries		Un-disbursed amount disbursed	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(10)		(11)		(12)	
	(xii) South African Unani Chair a/c						
	Total S.No. 2 (ii) to (xii)						
3.	(i) NPS a/c						
	(ii) GPF a/c						
	(iii) GIS a/c						
	(iv) Pension fund a/c	43,68,319 + 12,000	7,967/- + 6,000.00		12,000/- +12,11,694/-		
					35,52,114.00		
	Total S.No. 3	43,80,319.00	13,967.00		47,75,808.00		
	Total S.No. 1 to 3	43,80,319.00	13,967.00	6,87,94,635.00	8,10,46,180.00	30,948.00	

Sd/-
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(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

S. No.	Name of the Scheme	Amount receivable		Investments a/c		Received from LIC disbursed	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(13)		(14)		(15)	
1.	Non-Plan						
	(i) Health scheme a/c	93,998.00	6,859.00				
	Total (Non-Plan) S. No. 1	93,998.00	6,859.00		-		
2.	Plan						
	(i) Health scheme a/c	32,530.00	2,70,235.67				
	Health scheme a/c	47,939.00	5,200.00				
	Health scheme a/c (From DST a/c), RRIUM, Srinagar	1,050.00					
	Total(H) Plan (i)	81,519.00	2,75,435.67		-		
	(ii) Herb Garden a/c						
	(iii) Pub. of Text Book a/c						
	(iv) UPS a/c I						
	(v) DSOP a/c						
	(vi) Digitisation of Manuscript a/c						
	(vii) WHO a/c						
	(viii) International Events conference a/c						
	(ix) DST a/c						
	(x) CRISM a/c						

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Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

S. No.	Name of the Scheme	Amount receivable		Investments a/c		Received from LIC disbursed	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(13)		(14)		(15)	
	(xi) South African Unani Chair a/c				-		
	Total S.No. 2						
3.	(i) NPS a/c		17,93,415.00	20,00,000.00			
	(ii) GPF a/c		31,22,47,279.19	26,64,06,976.84			
	(iii) GIS a/c			1,63,67,466.00		2,00,000.00	2,00,000.00
	(iv) Pension fund a/c	300.00		3,97,87,746.00	1,42,75,950.00		
	Total S.No. 3	300.00		35,38,28,440.19	29,90,50,392.84	2,60,000.00	2,00,000.00
	Grand total S.No. 1 to 3	1,75,817.00	2,82,294.67	35,38,28,440.19	29,90,50,392.84	2,60,000.00	2,00,000.00

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Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

S.No.	Name of the Scheme	Amount payable paid/Adjusted		Other Misc. Payments/Transfer		NPS subscription & contribution transferred to NPS Trustee Bank a/c	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(16)		(17)		(18)	
1.	Non-Plan		2,296.00				
	(i) Health scheme a/c	7,268.00	3,67,83,760.00				
	Total (Non-Plan) S.No. 1	7,268.00	3,67,86,056.00				
2.	Plan						
	(i) Health scheme a/c	2,16,812.00	1,77,963.00				
	Health scheme a/c	6,859.00					
	Health scheme a/c	86,436.00					
	Total(H) Plan (i)	3,10,107.00	1,77,963.00				
	(ii) Herb Garden a/c						
	(iii) Pub. of Text Book a/c						
	(iv) UPS a/c I			15,011.95			
	(v) DSOP a/c						
	(vi) Digitization of Manuscript a/c						
	(vii) WHO a/c						
	(viii) International Events conference a/c						
	(ix) DST a/c				29,361.00		

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

S.No.	Name of the Scheme	Amount payable paid/Adjusted		Other Misc. Payments/Transfer		NPS subscription & contribution transferred to NPS Trustee Bank a/c	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(16)		(17)		(18)	
	(x) CRISM a/c						
	(xi) South African Unani Chair a/c						
	Total S.No. 2(ii) to (xi)			15,011.95	29,361.00		
3.	(i) NPS a/c	39,000.00			21,078/- + 21,078/-	30,81,330.00	9,98,798.00
	(ii) GPF a/c	7,284.00	7,072.00	13,34,400.00	28,06,800.00		
	-do-			3,56,16,300.00	3,09,38,000.00		
	-do-			2,41,48,312.00	2,53,47,554.00		
	-do-						
	(iii) GIS a/c			10,51,709.00	7,00,000/- + 800/-		
				3,01,436.00	27,42,227/- +94,760/-		
					300/-		
	(iv) Pension fund a/c			11,12,69,570.00	9,63,68,450/- + 1.00		
				(-)55,472.00			
	Total S.No. 3	46,284.00	7,072.00	17,36,66,255.00	15,90,41,048.00	30,81,330.00	9,98,798.00
	Grand Total S.No. 3	3,63,659.00	3,69,71,091.00	17,36,81,266.95	15,90,70,409.00	30,81,330.00	9,98,798.00

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

S. No.	Name of the Scheme	Amount remitted by decentralised Institutes now Contra against recovery to Headquarters, New Delhi as already taken receipt in previous year		Closing Balance		Total payments	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(19)		(20)		(21)	
1.	Non-Plan						
	(i) Health scheme a/c	1,35,700.00	4,950.00	15,29,731.11	3,09,033.11		
	Total (Non-Plan) S. No. 1	1,35,700.00	4,950.00	15,29,731.11	3,09,033.11	60,10,73,378.11	65,12,92,280.11
2.	Plan						
	(i) Health scheme a/c	5,31,072.00	670.00	16,53,745.98	1,25,79,966.05		
	Health scheme a/c		77,000.00				
	Health scheme a/c		5,000.00				
	Total(H) Plan (i)	5,31,072.00	82,670.00	16,53,745.98	1,25,79,966.05	60,52,97,413.66	51,32,94,442.50
	(ii) Herb Garden a/c			37695.00	36,220.00	37,695.00	36,220.00
	(iii) Pub. of Text Book a/c			53,387.00	51,298.00	53,387.00	51,298.00
	(iv) UPS a/c I			44,868.82	44,035.00	67010.77	44,035.00
	(v) DSOP a/c			2,06,974.05	1,99,002.05	2,06,974.05	1,99,002.05
	(vi) AIUM a/c			22,28,369.00	21,55,559.00	25,22,28,369.00	21,55,559.00
	(vii) Digitization of Manuscript a/c			119.00	115.00	119.00	115.00
	(viii) WHO a/c			2,141.00	2,058.00	2,141.00	2,058.00
	(ix) International Events conference a/c			6,83,334.00	6,56,599.00	6,83,334.00	6,56,599.00

Sd/-
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Director General

S. No.	Name of the Scheme	Amount remitted by decentralised Institutes now Contra against recovery to Headquarters, New Delhi as already taken receipt in previous year		Closing Balance		Total payments	
		Current Year	Previous Year	Current Year	Previous Year	Current Year	Previous Year
		(19)		(20)		(21)	
	(x) DST a/c			51,25,385.00	1,14,24,616.00	1,18,20,335.00	209,03,010.00
	(xi) CRISM a/c			1,49,56,591.00	1,44,40,923.00	1,49,56,591.00	1,44,40,923.00
	(xii) South African Unani Chair a/c			4,78,760.68	4,56,940.68	4,78,760.68	32,51,744.00
	Total S. No. 2 (ii to xii)		-	2,38,17,624.55	2,94,67,365.73	28,05,34,716.50	4,17,40,563.05
3.	(i) NPS a/c			428,959.81	15,98,032.81	53,42,704.81	46,38,986.81
	(ii) GPF a/c			63,18,133.96	38,70,226.48	37,96,71,709.15	32,93,76,629.32
	(iii) GIS a/c			6,46,281.84	9,66,482.84	22,59,426.84	2,10,72,035.84
	(iv) Pension fund a/c			2,10,92,289.13	6,17,35,418.13	17,64,74,752.13	17,71,69,594.13
	Total S. No. 3		87,620.00	2,84,85,664.74	6,81,70,160.26	56,37,48,592.93	53,22,57,246.10
	Grand Total S. No. 1 to 3		6,66,772.00	5,54,86,766.38	11,05,26,525.15	2,05,06,54,101.20	1,73,85,84,531.76

	Current year	Previous year
Cash (imprest)	4,36,867.60	4,25,854.75
Bank	27,46,609.49	1,24,63,144.41
Total	31,83,477.09	1,28,88,999.16

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE

Schedule of Income for the year ending 31 March 2017

S. No.	Grant-in-aid	Miscellaneous Receipts	Capital Expenditure
1.	Health a/c (Plan) 1,44,00,000.00 55,80,00,000.00	1.00+ 52,40,361/-+56,92,814.94 + 1,11,061/- 1,10,44,237.94	84,54,247/- + 3,92,302/- (-)2,66,818/- 5,28,80,000/- 6,14,59,731.00
2.	Health a/c (N.P.) 54,00,00,000.00	1420/-+8513/-+77,70,390/- + 4,46,559/- + 1,000.00	
	Total (Non Plan) 54,00,00,000.00	82,27,882.00	
	Grand Total 1,11,24,00,000.00	1,92,72,119.94	6,14,59,731.00

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE
Schedule of Expenditure for the year ending 31 March 2017

S. No.	(A) PLAN	Depreciation	Establishment expenses	Administrative expenses	Material & Supplies	Other charges	Total Expenditure	Excess of Income over Expenditure :	Excess of Expenditure over Income
1.	Health a/c	44,23,652.00	20,51,34,915.00	13,19,67,288.01	10,13,85,387.00	5,79,59,009.52			
		57,89,179/-							
		(-1,69,722/-							
		51,58,840/-							
		(-67,380/-							
		26,99,118/-							
		(-8,83,128/-							
		3,91,356/- (-)							
		12,937/-							
				(-)59,53,957.00					
	Total (Plan)	1,73,28,978.00	20,51,34,915.00	12,60,13,331.01	10,13,85,387.00	5,79,59,009.52	50,78,21,620.53	1,41,62,886.41	
2.	Health a/c (Non Plan)	33,924/- + 20090/- 72/- + 12/-	54,73,32,885.00	17,73,374.00					
	Total (Non Plan)	54,098.00	54,73,32,885.00	17,73,374.00			54,91,60,357.00		9,32,475.00
3.	FW. a/c	1,112/- + 812/-							
	Total FW.	1,924/-					1,924.00		1,924.00
	Grand Total	1,73,85,000.00	75,24,67,800.00	12,77,86,705.01	10,13,85,387.00	5,79,59,009.52	1,05,69,83,901.53	1,41,62,886.41	9,34,399.00
	Excess of Expenditure over Income							1,32,28,487.41	

Sd/-
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Sd/-
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Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE

Schedule of assets of Balance Sheet as on 31 March 2017

S. No.	Name of Schemes	Fixed assets (S/3)	Excess of Expenditure over Income (S/4)	Current assets (S/5A)	Current assets (S/5B)	Investments (S/5C)	Total assets
1.	Health a/c	93,93,16,254.00	15,90,32,430.77	31,83,477.09	13,55,53,088.80		1,23,70,85,250.66
2.	FW. a/c	22,724.00	1,85,841.06		2,047.94		2,10,613.00
3.	NPS a/c			4,28,959.81	2,89,094.00	1,69,93,414.99	1,77,11,468.80
4.	CPF/GPF a/c			63,18,133.96	1,51,942.98	36,48,10,801.34	
	-do-				62,10,233.00		
	-do-				2,41,01,715.80		40,15,92,827.08
	-do-						
	GIS a/c			6,46,281,.84	180/- +2132718/-	1,63,67,466.00	1,91,46,845.84
	-do-				200.00		
	-do-						
5.	Pension fund a/c			2,10,92,289.13	46,69,798 + 300.00	5,29,21,682.00	7,86,84,069.13
	-do-						
	-do-						
	Total	93,93,38,978.00	15,92,18,271.83	3,16,69,141.83	17,31,11,318.52	45,10,93,364.33	1,75,44,31,074.51

Sd/-
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Consultant (Accounts)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE

Schedule of Liabilities of Balance Sheet as on 31 March 2017

S. No.	Name of Schemes	Capital fund (S/1)	Excess of Income over Expenditure (S/4)	Current Liabilities (S/2)	Total liabilities
1.	Health a/c	1,23,05,39,389.71		65,45,860.95	1,23,70,85,250.66
2.	FW. a/c	1,93,523.00		17,090.00	2,10,613.00
3.	NPS a/c			76,54,871.00	
	-do-			2,89,094/- + 97,67,503.80	1,77,11,468.80
4.	CPF/GPF a/c			26,43,01,271.49	
	-do-			10825/- + 62,10,233/-	40,15,92,827.08
	-do-			13,10,70,497.59	
	-do-				
5.	GIS a/c			1,90,95,169.84 + 1026.00	1,91,46,845.84
	-do-			50,000/- + 650/-	
	-do-				
6.	Pension fund a/c			7,86,39,815.13 + 44,254.00	7,86,84,069.13
	Total	1,23,07,32,912.71			
	Excess of Income over Expenditure :			52,36,98,161.80	1,75,44,31,074.51
	Less: Excess of Expenditure over Income :	(-)15,92,18,271.83			(-)15,92,18,271.83
	Total	1,07,15,14,640.88		52,36,98,161.80	1,59,52,12,802.68

Sd/-
(Syed Asif Mian)
Consultant (Accounts)

Sd/-
(Mohammad Parvez)
Accountant

Sd/-
(R.U. Choudhury)
Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE
Consolidated Schedule of Fixed Assets as on 31 March 2017

S. No	Name of the assets	Gross Block			Less: Sale of Council's publications (priced)			Depreciation			Net Block			
		Opening balance as on 01.04.16	Addition	Deductions	Total	Opening balance as on 01.04.16	Sale during the year	Total	Opening balance as on 01.04.16	On addition	On Deductions	Total	As on 31.03.2017	As on 31.03.2016
1.	Machinery & Equipment	11,12,93,143.11	50,88,260.00	(-)16,97,224.00	11,46,84,179.11				5,75,13,467.11	58,24,215.00	(-)1,69,722.00	6,31,67,960.11	5,15,16,219.00	5,37,79,676.00
2.	Furniture & Fixture	9,18,55,916.82	12,38,621.00	(-)6,73,800.00	9,24,20,737.82				4,09,42,198.82	51,79,742.00	(-)67,380.00	4,60,54,560.82	4,63,66,177.00	5,09,13,718.00
3.	Computers	2,42,36,978.00	19,81,661.00	(-)14,71,883.00	2,47,46,756.00				2,13,01,597.00	26,99,190.00	(-)8,83,128.00	2,31,17,659.00	16,29,097.00	29,35,381.00
4.	Land	27,85,336.00			27,85,336.00								27,85,336.00	27,85,336.00
5.	Works in progress	69,66,17,336.00	5,28,80,000.00		74,94,97,336.00								74,94,97,336.00	69,66,17,336.00
6.	Books & Journals	3,28,26,919.00	1,99,841.00		3,30,26,760.00								3,30,26,760.00	3,28,26,919.00
7.	Vehicles	80,13,955.69		(-)862,48.00	79,27,707.69				54,04,829.69	3,91,368.00	(-)12,937.00	57,83,260.69	21,44,447.00	26,09,126.00
8.	Building	13,43,46,873.00			13,43,46,873.00				9,01,10,349.00	44,23,652.00		9,45,34,001.00	3,98,12,872.00	4,42,36,524.00
9.	Council's Publications (Priced)	1,45,92,769.50	3,92,302.00		1,49,85,071.50	21,57,519.50	2,66,818.00	24,24,337.50					1,25,60,734.00	1,24,35,250.00
	Total	1,11,65,69,227.12	6,17,80,685.00	(-)39,29,155.00	1,17,44,20,757.12	21,57,519.50	2,66,818.00	24,24,337.50	21,52,72,441.62	1,85,18,167.00	(-)11,33,167.00	23,26,57,441.62	93,93,38,978.00	89,91,39,266.00

Sd/-
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Consultant (Accounts)

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Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE

Schedule forming part of Balance Sheet as on 31 March 2017

(Schedule -3/A) Earmarked/Endowment funds

	Herb Garden a/c	Publication of Text Books	UPS a/c 1	DSOP a/c	Digitization of Manuscript a/c	AIUM a/c	WHO a/c	International events conference a/c	DST a/c	CRISM a/c	South African Unani Chair a/c	Total	
												Current year (12)	Previous year (13)
(a) Opening balance	36,220.00	51,298.00	44,035.00	1,99,002.05	115.00	21,55,559.00	2058.00	6,56,599.00	1,14,24,616.00	1,44,40,923.00	4,56,940.68	2,94,67,365.73	3,02,73,768.05
Total (a)	36,220.00	51,298.00	44,035.00	1,99,002.05	115.00	21,55,559.00	2058.00	6,56,599.00	1,14,24,616.00	1,44,40,923.00	4,56,940.68		
(b) Additions:													
• Grant-in-aid						25,00,00,000.00							52,00,000.00
Other additions a/c of:													
• Bank interest	1,475.00	2,089.00	2,975.77	7,972.00	4.00	72,810.00	83.00	26,735.00	3,88,969.00	5,15,668.00	21820.00	10,40,600.77	11,66,795.00
• From Health a/c													
• By adjustments of advances pertaining to previous years													
• Receivable received													
• Misc receipts			20,000.00						6,750.00			26,750.00	
Total (b)	1,475.00	2,089.00	22,975.77	7,972.00	4.00	25,00,72810.00	83.00	26,735.00	3,95,719.00	5,15,668.00	21,820.00	25,10,67,300.77	1,14,66,795.00
Total (a+b)	37,695.00	53,387.00	67,010.77	2,06,974.05	119.00	25,22,28,369.00	2,141.00	6,83,334.00	1,18,20,335.00	1,49,56,591.00	4,78,760.68	28,05,34,716.50	4,17,40,563.05
(c) Utilization/expenditure													
i) Capital expenditure													
• Fixed assets			2,500.00						49,05,532.00			49,08,032.00	73,17,432.00
• Others						25,00,00,000.00						25,00,00,000.00	
ii) Revenue expenditure													
• Salaries/wages allowances									8,55,774.00			8,55,774.00	40,17,787.00
• Other administrative expenditure			4,630.00						9,33,644.00			9,38,274.00	9,08,617.32
• Material & supplies													
• Amount payable paid													
• Unspent balance refunded												15,011.95	29,361.00
• Temporary transfer to Health a/c to be received													
Total (c)			22,141.95			25,00,00,000.00			66,94,950.00			25,67,17,091.95	1,22,73,197.32
Net balance (a+b)-(c)	37,695.00	53,387.00	44,868.82	2,06,974.05	119.00	25,00,00,000.00	2,141.00	6,83,334.00	51,25,385.00	1,49,56,591.00	4,78,760.68	2,38,17,624.55	2,94,67,365.73

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Assistant Director (Admn.)

Sd/-
(Prof. Vd. K.S. Dhiman)
Director General

CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE

5.3 NOTES ON ACCOUNTS

1. Annual accounts of the Council for the year 2016-17 has been prepared on the new format as prescribed by CGA and approved by the CAG of India since 2002-03.
2. The Central Council for Research in Unani Medicine is fully financed through grant-in-aid. Therefore, income tax is not applicable on the organization.
3. The said accounts prepared on accrual basis.
4. Schedule attached where necessary.
5. Depreciation has been charged on assets on diminishing balance method.
6. The construction work being done by the CPWD & NPCC.
7. There is no valuation of Inventories since it is not a profit earning organization but a Research Organization under Ministry of AYUSH, Government of India.
8. A schedule of Investment prepared every year & given to audit which is duly reconciled with actual documents figure mentioning there the rate of interest duration amount & name of Institutions etc.
9. Retirement benefits are treated as per GOI Rules.
10. Depreciation has been charged under expenditure
11. Earmarked/Endowment fund has been shown separately in the Balance Sheet with necessary Schedule.
12. The annual accounts of the Council for the year 2016-17 has been approved by the competent authority i.e. Standing Finance Committee on 31-08-2017.

Sd/-
Assistant Director (Admn.)
CCRUM, New Delhi

APPENDIX-I

INSTITUTIONAL NETWORK OF CCRUM

1. **Central Council for Research in Unani Medicine**
61-65, Institutional Area
Opposite D Block
Janakpuri
New Delhi – 110 058
Phone: +91-11-28521981
Fax: +91-11-28522965
E-mail: unanimedicine@gmail.com
2. **Central Research Institute of Unani Medicine**
Opp. ESI Hospital
AG Colony Road
Erragadda
Hyderabad – 500 038
Telangana
Phone: +91-40-23811551
Fax: +91-40-23811495
E-mail: criumhyderabad@gmail.com
3. **Central Research Institute of Unani Medicine**
Basaha, Kursi Road
Lucknow – 226 026
Uttar Pradesh
Phone: +91-522-2361720
Fax: +91-522-2723088
E-mail: crium_lko@yahoo.co.in
4. **Hakim Ajmal Khan Institute for Literary & Historical Research in Unani Medicine**
Dr. MA Ansari Health Centre
Jamia Millia Islamia, Okhla
New Delhi – 110 025
E-mail: rriumnew1986@gmail.com
5. **Regional Research Institute of Unani Medicine**
1, West Meda Church Street
Royapuram, Chennai – 600 013
Tamil Nadu
Phone: +91-44-25955519
Fax: +91-44-25955532
E-mail: rriumchennai@gmail.com
6. **Regional Research Institute of Unani Medicine**
Chandbali Bypass Road
Near Rural Police Station
Bhadrak – 756 100
Odisha
Phone: +91-6784-240289
Fax: +91-6784-240289
E-mail: rriumbdk_unani@yahoo.co.in
7. **Regional Research Institute of Unani Medicine**
Guzri, Patna City, Patna – 800 008
Bihar
Phone: +91-612-2631106
Fax: +91-612-2631106
E-mail: rriumpatna@gmail.com
8. **Regional Research Institute of Unani Medicine**
Post Box No. 70
AK Tibbiya College Hospital
(New Block), Aligarh Muslim
University, Aligarh – 202 001
Uttar Pradesh
Phone: +91-571-2704781, +91-571-2701399
E-mail: rrium_aligarh@rediffmail.com

9. **Regional Research Institute of Unani Medicine**
JJ Hospital Compound
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Mumbai – 400 008
Maharashtra
Phone: +91-22-23718706
Fax: +91-22-23718706
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10. **Regional Research Institute of Unani Medicine**
University of Kashmir Campus
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Phone: +91-194-2421604
Fax: +91-194-2421357
E-mail: rriium.srinagar@gmail.com
11. **Regional Research Institute of Unani Medicine**
250A/29, GT Road (North)
Near Jaiswal Hospital, Liluah
Howrah – 711 204
West Bengal
Phone: +91-33-26550108
E-mail: kolrriium@gmail.com
12. **Regional Research Institute of Unani Medicine**
D-11/1, Abul Fazal Enclave, Jamia Nagar
New Delhi – 110 025
Phone: +91-11-26922759
Fax: +91-11-26922759
E-mail: rriiumdelhi@gmail.com
13. **Drug Standardization Research Institute**
PLIM Building, Opp. M Block
Sector–23, Kamla Nehru Nagar
Ghaziabad – 201 002
Uttar Pradesh
Phone: +91-120-2783029
Fax: +91-120-2787016
E-mail: dsriccrum@gmail.com
14. **Regional Research Centre**
B-501/4, GTB Nagar
Opp. Dulhan Palace, Kareli
Allahabad – 211 016
Uttar Pradesh
Phone: +91-532-2551223
E-mail: rrcallahabad@gmail.com
15. **Regional Research Centre**
SM Dev Civil Hospital
Silchar – 788 001 (Cachar) Assam
Extension Centre
Ullaskar Dutta, Masjid Road
Karimganj – 788 710 (Assam)
Phone: +91-3843-267522
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16. **Drug Standardization Research Unit**
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17. **Clinical Research Unit**
Kurupatil Nina Memorial
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Edathala (N)
Alweye – 683 564
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Phone: +91-484-2836006
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18. **Clinical Research Unit**
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19. **Clinical Research Unit**
Dr. Abdul Haq Unani Medical
College
40/23 Park Road, Kurnool – 518 001
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E-mail: cru.kurnool@gmail.com
20. **Clinical Research Unit**
Cantonment General Hospital
Soti Ganj, Begumpul
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Phone: +91-9012843253
E-mail: doctormtk@gmail.com
21. **Clinical Research Unit**
Gandhi Medical College
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Phone: +91-755-2540590
E-mail: cruu_incharge@yahoo.com
22. **Clinical Research Unit**
SH Unani Tibbiya College
Ganpati Naka
Burhanpur – 450 331
Madhya Pradesh
Phone: +91-7325-252250
E-mail: cruburhanpur@rediffmail.
com / mahajankk@rediffmail.com
23. **Chemical Research Unit**
Department of Research in Unani
Medicine
Near Office of Dean, Faculty of Science
Aligarh Muslim University
Aligarh – 202 001
Uttar Pradesh
24. **Unani Medical Centre**
(Extension Centre of RRIUM, New
Delhi)
Dr. Ram Manohar Lohia Hospital
New Delhi – 110 001
Phone: +91-11-23404594
25. **Unani Speciality Centre**
(Extension Centre of RRIUM, New
Delhi)
Deen Dayal Upadhyay Hospital
Ghantaghar, Harinagar
New Delhi – 110 064
26. **Clinical Research Pilot Project**
Ground Floor
Regional Research Institute of
Homoeopathy
New Checkon Road (Opp. Tribal
Colony)
Imphal East – 795 001
Manipur

NOTES

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CENTRAL COUNCIL FOR RESEARCH IN UNANI MEDICINE

Ministry of Ayurveda, Yoga & Naturopathy, Unani,
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