



CENTRAL COUNCIL FOR
RESEARCH IN INDIAN
MEDICINE AND HOMOEOPATHY

4

Annual Report
1977-78

MINISTRY OF HEALTH AND FAMILY WELFARE
(GOVERNMENT OF INDIA)
NEW DELHI

(Printed and Published under the aegis of Central Council for
Research in Ayurveda and Siddha.)

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INDIAN MEDICINE & HOMOEOPATHY**

*Annual Report
1977-78*

The contents of the annual report relating to Ayurveda,
Unani, Siddha, Homoeopathy and Yoga are based on
the material furnished by the concerned successor
bodies of Central Council for Research in
Indian Medicine and Homoeopathy.

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1.1 Central Research Institute Cheruthuruthy.

The Central Research Institute, Cheruthuruthy has taken up research studies in the chronic diseases like *pakshaghata*, *khanja*, *pangu*, *saisaveya vata* at inpatient level and trials with coded drugs Ayush-56 and 57 at outpatient level. The Mobile Clinical Research wing which is engaged, among others, in survey and surveillance programme, also collected health statistics. The Unit has also taken up short term projects like effect of *pushkarmoola* in *tamaka swasa*, *vidangadi loha* and *punarnava mandoora* in *krimija pandu*, in addition to supplying of Ayush-ACII for studies related to fertility regulations.

The studies have revealed that *masha*, *atmagupta*, *eranda* and *bala* are effective remedies in cases of *pakshaghata* where there is wasting of muscles. The general response in *pakshaghata* is variable of the 44 cases, moderate to complete relief was noticed only in 20 cases. Of the 15 cases of *amavata* ten cases showed encouraging response. In cases of *pangu* and *khanja* five showed promising results out of the 15 cases taken up. Of the 17 cases of *saisaveya vata*, mild to marked relief was registered in 15 cases.

The reports relating to coded drug Ayush-57 in vitiligo has been encouraging.

The survey and surveillance programme is in progress at Thalassery village 5th follow-up of 2370 cases of previous villages and initial follow-up of 482 cases of Thalassery village were completed. The health statistical data, so far collected, is being compiled.

Short term studies are in progress and the Unit has also been participating in providing of incidental medical aid. The team also conducted special medical aid programme at Chulliyar dam area where here were floods.

The studies have been carried out, utilising the radiographic, biochemical and pathological laboratory facilities, available in the Institute.

Pharmacology section has taken up study of drug, *kandivenna*, commonly used locally. The drug seems to lower serum cholesterol level and glucose level at experimental stage. Steps for study of auto-urine therapy at experimental level have been taken up.

The Pharmacy has prepared medicines required for the Institute and also supplied medicines needed for various research projects taken up at other Institutes/Centres/Units.

The study regarding the possibility of breeding the Civet cat in captivity, envisaged earlier, has also continued this year.

1.2 Central Research Institute, Patiala

Central Research Institute, Patiala is engaged in Clinical Research, Survey and Surveillance programme, Family Welfare programme and preparation of medicines required for this Institute as well as other projects. Under Clinical research, *Tamaka swasa*, *Pakshaghata*, *amavata Krimiroga*, *Madhumeha*, *Swetapradara* were taken up. 139 cases of *Tamakaswasa* were studied with two different groups of medicine, i.e. (1) *Nardeeya lakshmvilas-rasa*, and *Godanti* bhasma in doses of 1.5 g. (in tablets of 500 mgm) per day and with (2) *shwasa kesari* (*Kantakari churna* with *Godanti Bhasma*) in doses of 1.5 gm (each tablet 500 mgm.). The trial period ranged between 2-12 weeks. The number of cases treated under group 1 is 42 and under group 2 was 97. The results of the study were as below :—

Table : I Results of the study of cases of *Tamakasawsa*

Group of medicine	100% of relief	75% "	50% "	25% "	0% "	LAMA un-changed	Absconded & referred	Dead	Total
<i>Nardeeya group</i>	12	8	9	5	3	2	3	Nil	42
<i>Swasa Kesari group</i>	24	27	16	9	4	13	3	1	97
Total	36	35	25	14	7	15	6	1	139

32 cases of *Pakshaghata* were treated on the following lines :—

Yogaraiguggulu with *Rasnasaptakkwatha* as *anupana* was prescribed with *Mahanarayan taila* for *Bahirsneha*. *Dashmoolakwatha* was used for *Bashpa swedakarma* and *Eranda taila* was used for *Virechana karma* periodically. Of the 32 cases, one case showed total relief and the response range of 25% to 75% was observed in 23 cases.

Studies on *Amavata* were carried out using *Yogarajaguggulu* with *Rasna saptak-kwatha* and using *valukasweda*. 63 cases were studied and 8 cases had shown complete abatement of symptoms and the response varied in the range of 25% to 75% in 40 patients.

Krimiropa was treated using *Nimba Kisalaya choorna* with *Marich*. A total of 48 cases were treated. Of these, 23 had treatment at Indoor level. 33 cases showed complete freedom from *Krimiropa* and the response in 4 cases varied between 25% to 75%.

Madhumeha being chronic metabolic condition, the patients preferred treatment without getting admitted. Ten cases were treated with *Madhwarigutika* and *Babbularishta*. 5 cases showed relief of symptoms to the extent of 50% and the rest showed relief to a minor degree.

65 cases of *Shwetas pradara* were treated with *Pradarari churna* (*Nagakesar*, *Hastidanta choorna* and sugar). *Triphala kashaya* was used for vaginaladouche. *Jatyaditaila* was locally applied when needed. 37 cases responded to the treatment well. In 13 cases the results had been observed upto 75% limit.

The Mobile Clinical Research wing took up to survey and surveillance programme and collection of health statistics in the villages of Hasanpur and Bilaspur.

The Family Welfare Project is engaged in the trial of coded drug Ayush-AC I. The number of drop-out due to domestic or other reasons was quite huge, only one case completed eleven cycles; two individuals are continuing the drug. In the month of February, 1978, the Institute switched over to Ayush AC-4 which was taken up on wide scale trial. Six subjects administered this drug.

It was proposed to cover at least 36 cycles before conclusions could be drawn.

Modern techniques like X-Ray, biochemical and Pathological laboratory investigations were made use of whenever needed.

The pharmacy section prepared the medicines required for the Institute and helped to prepare and supply medicines needed for study/trial at different research Centres; besides working on the medical kit.

2.1 Regional Research Institute, Bhubaneswar

The Institute has a Clinical Wing, Mobile Wing and a Medicobotanical survey section.

The Clinical wing has undertaken the study of (1) Amavata (2) Pakshaghat (3) Pangu (4) Parinamashula and trials of coded drugs: (i) Ayush-AC II-an oral contraceptive agent (ii) Ayush-56 and (iii) Ayush-57 Briefly the activities during the period of reporting are as under :—

- (1) *Amavata* : Out of 28 cases registered for study, 16 cases showed total relief : and five cases showed partial relief. Three cases did not show any response; four cases did not continue the treatment. The line of treatment adopted covers administration of *Yogarajaguggulu*, *Vatagajankhushrasa*, *Maharasnadi Kwatha* and application of *Valuka sweda* and/or *Dashanghna lepa*. This treatment for *amapachana* was continued for a period of 10-15 days and later the above treatment was instituted. *Virechana Karma* was also given for further period of 10 to 15 days.
- (2) *Pakshaghata* : Out of 9 cases registered for study, 2 showed complete relief and 6 had partial relief; one case did not continue the treatment. The line of treatment adopted included *Snehana*, *Swedana*, *Virechana* and oral administration of *Yogaraja guggulu*, *Vatagajankhush Rasa*, and *Maharasnadi Kwath*.
- (3) *Pangu* : In the 35 cases taken up for study, internal administration of *Yogaraja-guggulu* and *Maharasnadi Kwath*, *Snehana Swedana*, *Virechana* was administered. 31 cases did not continue the treatment; partial relief was observed in three cases and one did not show any response.

(4) *Parinamashula*-Shatavari Swarasa along with the milk-diet was provided to 20 cases registered for study. Twelve patients responded well for the treatment and in six patients there was only a response to moderate degree. Two dropped out.

The study of coded drugs Ayush AC II, Ayush-56 and 57 were also initiated. Mobile wing had provided incidental medical aid to the rural folks in the areas visited for collecting Health Statistics; the team also had taken up studies of the effect of Nityanand Rasa in Shleepada.

Medico-botanical survey wing explored the Medico-botanical potential of Nayagarh Forest division and Baruni Forest area. The herbaria had been enriched by the addition of 565 plant sheets, 84 authentic samples of Mineral, animal and plant-kingdom were maintained in the museum, besides cultivation of 39 plants were also undertaken.

2.2 Regional Research Institute, Calcutta

The Regional Research Institute, Calcutta has taken up the study of effect of *Madhwari gutika* (A & B) in *Madhumeha*, *guggulu* in *amavata*, besides coded drugs Ayush-56 and 57 in epilepsy and vitiligo respectively. The results generally have been encouraging with both these coded drugs. The Mobile Clinical Research division completed 5th follow up study in 1615 individuals and collected requisite information for health statistics. A short term programme on *sandhivatha* was taken up. The work was carried out at Mandalganti. The common diseases met with in the area included *Vicharchika*, *Atisara*, *Amlapitta*, *Jwara*, *Kasa*, *mukharoga*, *grahani*, *Pratishaya*, *Panduroga*, *Pradara* etc. A total of 12,649 patients were treated in out patient division. The biochemical and Pathological laboratories assisted in carrying out various investigations. The team participated in the programme of rendering medical aid in areas affected by encephalitis, Kalazar, particularly Dhanbad, Bankura, Muzafferpur, Baishali, and Samastipur etc.

The Pharmacy prepared over sixty medicinal preparations required for the Institute. It has supplied coded drugs Ayush-55, 56 & 57 and

anti malarial tablets to various Institutes/Units/Centres under the Council.

The Survey of Medicinal Plants Wing visited Bankura forest division. 134 plant specimens had been collected for the preparation of herbarium sheets to enrich the existing herbarium. The team also collected 19 folklore claims. Drugs were procured during the visits for the preparation of medicines for the Institute and also for supplying to the other research projects functioning under the Council. Local tours to Sodepur, Mohispota, Dumdum, Rajarhat, Naryanpur, Atghora, Mandalghanti and Belgharia were also undertaken for crude drug collection. This division identified that seeds of *Thespsia populanea* seemed to be adulterated with seeds of *Argeria speciosa*.

The Family Welfare division is engaged in study of effect of *Pippalyadi yoga* in fertility control. Regular use of this in every month was reported to provide desired effect. Coded drug AYUSH-AC I had been taken up to assess the antifertility effect. It also had shown temporary sterility. One of the claims. *Hansprabha* was taken up in December, 1977. Of the seven ladies, to whom the drug was given, six are continuing the drug and the study has to be continued further to offer any views on the effectiveness of the drug.

Govt. of West Bengal, looking at the rapid studies made in different fields, have taken a documentary film on the activities of the Institute.

2.3 Regional Research Institute Jaipur

Regional Research Institute, Jaipur has taken up clinical research, survey and surveillance programme, medicobotanical survey and family welfare research programmes. The clinical research wing had continued studies related to *Grahanidoshha* and *amavata*. 139 patients were studied at indoor level and of these 81 were considered to fall within the criteria laid down after screening. The list of 81 included six cases of *amavata*. The biochemical and pathological investigations were carried out to the extent possible. Cases of *grahanidoshha* were treated with pip-pali, and cases of *amavata* were administered *ashvagandha* with *shunthi*. Attempts were made to carry on the studies in the field of aetiopathogenesis so that there could be a proper appreciation of these clinical entities.

The fact finding mobile clinical research wing has visited villages around Jaipur, Lechoice of village of random basis is being worked out. Earlier work was carried out in the villages around Mongoliawas where *guggulu* cultivation was taken up. The data gathered is being compiled for bringing out a health statistics monograph with information on dietetic habits, disease incidence, socio-economic implications in the causation of diseases

At Mongoliawas, the institute has continued *guggulu* cultivation and it will take time to have the yield of *guggulu* required for the work at different units.

An oral contraceptive recipe Ayush AC-IV has been taken up for wider trials in the family welfare programme. Earlier another contraceptive recipe, pippalyadiyoga was screened in collaboration with Bombay Hospital. The studies are in progress.

The medicobotanical survey team of the Institute has taken up the programme of survey, drug collection, herbarium maintenance, museum maintenance and cultivation programmes. Survey of Bharatpur, Bayana and Sirmathur forest area was conducted. 1700 specimens with 456 field numbers were collected. 102 claims (with medicobotanical data) practised by adivasis was also collected. The study on fauna along with flora was also carried out. The team had been able to spot an area, hitherto not located, for the uncommon but well known Siberian crane. Raw drugs and seeds were also collected. About 52 claims from Southern ranges of Aravali were collected. Tribal areas of Banswara, Udaipur, Chittorgarh forest areas were also visited earlier. Drugs for Pharmacognostic study were collected through these and other local tours. The Institute has at present 875 identified herbarium sheets. There are altogether 1452 herbarium sheets belonging to 325 speci and has 110 exhibits of ethnobotanical importance. A raw drugs museum with authentic samples is maintained. An experimental cultivation garden with *Acorus calamus*, *glycyrrhiza glabra*, *plantago ovata*, *Terminalia bellirica* *Phyllanthus emblica*, *Sphaeranthus indicus* and *Vetiveria Zizanoides* is being maintained. Pharmacognosy of *Boswellia serrata*, *Fagonia Critica* and chemical studies on *Commiphora wightii* are in progress.

2.4 Regional Research Institute, Trivandrum.

Regional Research Institute, Trivandrum is engaged in the applied drug research programmes which include drug standardisation/extract-

ion/preparation and supply of fractions for isolation preparation and supply of fractions for clinical and pharmacological studies and chemical investigations of plants. The Institute has taken up evolving of standards in preparation of *aristas*, physiochemical characters of *asavas* and *aristas* are also taken up. Study of constituents of *Saptasaram kwatha*, *Dadimadi kwatha* and *Bilvadikwatha* from physio-chemical angle is taken up. Studies relating to the preservatives, both natural and chemical, have been taken up.

Clinical studies with Nimbidin oil on *Dadru* (psoriasis) were carried out both at O.P. level and I.P. level. *Aragwada kwatha*, *ghritha*, *kerom* (oil) were also taken up for study on dermatological conditions. The response has been encouraging. Another drug under study for skin conditions was *poowarasukwatha* and *poowarasu kerom* (oil).

The Family Welfare Research programme was carried out at clinical level with *Vidangadi yoga* (*vidanga*, *japa* and *Hingu*). The drug is given in dose of three pills (each one gram) thrice daily during the first five days of menstruation alongwith *kanjika*.

The medicobotanical survey wing conducted the Medico botanical exploration of Kettoor area of Trivandrum forest division. The team collected 16 drugs in varying quantities for use in research projects. 60 taxa have been collected for herbarium. Pharmacognostic studies on six plants have been carried out. A mushroom considered to be of medicinal importance, referred to by local Vaidya, has been identified as *Coprinus lagopus*. Steps have also been taken up to provide identity for drugs that appear in *Sahasrayoga*.

2.5 Captain Srinivas Murti Research Institute, Madras.

The Institute is engaged in a variety of Drug Research Programmes relating to Ayurveda and Siddha. They cover chemical investigations of the plants, analytical chemistry, pharmacognostic study, tumour biology, screening of anti-malarial agents and drugs used in family welfare programme. Detailed chemical investigation, alongwith isolation of active principles, alongwith structure, elucidation of *priyangu*, *Jathipathri*, *Vyagrairanda* and *Kadirpachai* have been carried out. From *Priyangu* (*Aglaia roxburghiana*) a number of triterpenoids and an alkaloid have been isolated. Two new compounds have been isolated

from *Jatipatri*. *Jatropholones* have been isolated from *Jatropha gossypifolia* and they are tested against p 388 lymphocytic leukaemia. From *kadirapachai* (*Pogostemon heyneanus*) three flavonoids have been isolated. Analytical chemistry of *Mouktika bhasma*, *Dantavarti*, *Godhanti bhasma*, *Karpooora rasa*, *Muktapanchamrita rasa*, *lohasava*, *Kasthuryadigutika* and *Goroohanadivati* have been carried out to evolve (preliminary) standards. Pharmacognostic study of *Trachyspermum ammi*, *Cuminum cyminum*, *Mucuna*, *pruriens*, *Ocimum sanctum* and *Sesamum indicum*. Methyl cholanthrene, fibrosarcoma induced in wister rats was studied with following phytochemicals isolated from medicinal plants.

(1) Liriodenine (2) B-Solamarine (3) Lapacho (4) Plumbagin (5) RGX (6) Echitamin chloride. Liriodenine, Lapachol, Plumbagin and Echitamine chloride was found effective against induced sarcoma. *Alstonia scholaris*, *Caesalpinia bonducela* and *Swertia chirata* have been tested against rodent malaria test system (*P. berghei* in rats) and found to be effective. Physalins have been isolated from *Physalis minima* and it has shown oxytocic property. Pharmacological studies on code drugs, EMB, RDG and DG were carried out.

At clinical level, STG has been tried in a case of Osteogenic sarcoma of right tibia, combination of STG and RGX has helped in relief of pain in these cases. This has helped in reduction of the size of the tumour. Biochemical investigation like seromucoid estimation, Rosette formation Test, DNEB, Skin sensitivity test, Biopsy etc. were carried out. *Kanjam Korai* (*Ocimum americanum*), *Pulivasai* and *Melia composita* were taken up for chemical studies. Nevadensin and pectolarigenin 7, methyl ether were isolated. Emodin and chrysophanol have been isolated from *Pulivasai*, from *Mellia composita*, Salanjenin was isolated. Pharmacognostic studies on *malaivembu* and *vedupadakki*, drugs used in Siddha system were carried out.

The Institute has submitted four applications for securing patents and also participated in the symposium in chemistry held at Indian Institute of Technology, Madras and presented five papers.

2.6 Indian Institute of History of Medicine Hyderabad

Biographical studies on Sukira-Sudhira and Gayadase, the commentators and also of the famous Unani Hakim and Philosopher, Arastu

(Aristotle) were prepared. Medico-social allusions from the Srishti Khanda of Padmapurana, from Yashas tilakachampu of Somadeva and also from Skandapurana were gathered and articles prepared. Summaries of seven chapters of al-Hawi were also completed. The books in different libraries were surveyed with a view to collect material for the compilation of Unani medicine in India, during and after Moghul period. A paper on the development of Unani medicine during Nizam's dynasty was presented in local seminar. Studies were continued for compilation of information on developmental concepts of History of Unani Medicine. Papers titled "Homoeopathic treatment of cholera"; "Hahnemann's knowledge of Bacteriology" and the "Medical system of Honigberger" were prepared. The Library and Museum were maintained and developed further. The Institute presented papers in seminars and also collaborated in the arrangement of medico-historical exhibitions at different places. Lectures were also delivered on the origin and the development of Dravyaguna and introduction to the study of history of Ayurveda and historical evidences which have relevant to Ayurveda.

The Institute periodically published a Bulletin. Material for its next two issues was also scrutinised, edited and sent for publication.

2.7 Amalgamated Unit, Tarikhet

This project comprises of survey wing, standardisation wing, cultivation wing, experimental in case of certain plants and extensive care of saffron. A musk deer breeding project is also functioning under the unit.

Survey of Medicinal Plants Wing—During the period under review, Jhvlaghat, Taleshwar, Majirkanda, Kanari, Semi, Gaurihat, Bethari, Bishkholi, Boli, Mayalek, Badyalv, Jakh, Gaina, Kunali khet, and Garikhet of Pancheswar forest areas were surveyed. Repeated visits were carried out in the areas around Trijuginarain, Soneprayag, Gaurikund, Rambara and Kedarnath. During the year, 1251 plant specimens were collected from these areas. About 1240 plants were added to the herbarium, bringing the total number of herbarium sheets to 15621. 107.12 kg. of dried drug material were collected. Different drugs were supplied to various units of the Council. Eight new samples of drugs were added

to the museum. About forty folklore claims have also been collected. Pharmacognosy of the following drugs were completed.

1. *Punica granatum* (Root)
2. *Berberis aristata* (Root)
3. *Vsparagus curillus* (Root)

Standardisation Research Wing—The standardisation studies related to method of manufacture and finished products—*Kumaryasava-A* (Lot-III); *Kumaryasava-B* (Lot-II), *Chyavana Prasha* (Lot-III) and *Abhrak Bhasma* (from 9th to 18th puta) have been carried out. The physico-chemical observations relating to the following formulations have also been completed:-

1. *Abhayarista*—(lot I & III)
2. *Dashmularistha*—(lot I-III)
3. *Draksharistha*—(Lot III)
4. *Agastyarasayana*—(lot II & III)
5. *Vasavaleha*—(lot II & III)

Preparation of Makardhwaja has been started.

Analytical study of 9 single drugs that enter into the compound formulation has been made. Fluorescence study of 30 single drugs has also been made. Effect of container on the contents has been studied in case of six formulations.

Breeding of Musk Deer—During the period under review stockades had been constructed in Mahruri. Two years old female animal was transported from the temporary enclosures at sama to the stockades in the night. Study on the animal behaviour, reaction to rain, humidity, adaptability, intake of water, leap, grazing habits, head raising, feeds and fodder and response to artificial milk feed have been done. Observations on adaptability to Glaxo milk have been made. Information relating to heat in the female animal have also been noted.

Cultivation of Saffron :

Cultivation of saffron has been taken up at Ranikhet, Chamma, Dharamighar and Tarikhet. There are about 3,01,000 corms study relat-

ing to growth and development are noted regularly. 3,454 flowers had been collected during the year. The rate of flowering declined during cloudy weather. The adopted technique of propagation of *crocus* through eye cuttings, is expected to bring down the cost of planting stock.

3.1 Regional Research Centre Bangalore

This Centre has a Standardisation wing, a survey wing and a surveillance wing.

During the period under review the survey of Medicinal Plants wing had explored the medico-botanical potential of Kadamakkal, Pattikat, Sampaje, Anekad, Athur, Kushalnagar, Mathikodi and Thithimathi forest areas of Coorg forest Division. During the exploratory tours 135 plant specimens were collected, 183 identified herbarium sheets were added to the herbaria, 163 index cards were prepared, 2 drugs and 29 herbarium sheets were supplied to various Units of the Council. 13 plants are being maintained in the Garden at the Centre.

Preparation and study of 7 compound formulations, 5 for standardisation and 2 for studying the effect of the container on the contents had been undertaken by the standardisation wing of the Centre.

Literary compilation of 10 drugs had been completed. In the chemistry section literary compilation of 7 drugs, organic analysis of 6 drugs had been completed. Analysis of 10 single drugs were also completed. Periodical study of 7 compound formulations to study the effect of container on the contents and analysis of 3 compound formulations had also been completed. Pharmacognostic study of 6 drugs had been completed.

The Mobile wing had surveyed Chikka Kallasandra, Konamkunta, Vaddarapalya and Navanappaselly palya to collect the Health statistics and to prepare the health Atlas of the country, besides screening of contraceptive agent among the rural folk was also initiated. The team had completed the study of 237 and 1088 follow-up cases in villages Konamkunta and Chikka Kallasandra respectively. The initial studies had been conducted of 74 and 56 cases in villages Vaddarapalya and Nayanappaselly palya respectively. Incidental medical benefit was extended to 50 patients.

3.2 Regional Research Centre, Jhansi

The Regional Research Centre, Jhansi has a division for drug supply and another for carrying out Mobile clinical research programme. The Centre is maintaining a herb garden. The Unit had carried out preliminary screening of Lalitpur Forest Sub-Division and collected 500 specimens of plants. 107 raw drugs were supplied to various Units under the Council.

The cultivation of medicinal plants had also been taken up. 80 plants were presently under cultivation. A total of 8,500 herbarium sheets were in the Centre.

The Mobile clinical research wing, which visited Ata, provided incidental medical aid to 1009 patients and also collected seven folklore claims.

3.3 Regional Research Centre, Jogindernagar

The Centre comprises of a Medico-botanical survey wing and Mobile clinical wing. During the period under review Medico-botanical exploration of Bharmour forest area in Chamba district had been conducted. About 114 plant specimens, 50 raw drugs had been collected by the survey wing. 18 raw drugs had been supplied to various research units of the Council. About 400 herbarium sheets had been prepared.

Mobile Clinical Research Wing

Collection of health statistics of Aju village was taken up. The initial and follow-up studies were in progress. During this period of reporting, five follow-up studies had been completed. 360 patients of various diseases were provided treatment. The study of effect of *mustaka* in *atisara* was taken up and the trial was in progress. -

3.4 Regional Research Centre, Nagpur

The Centre has a Medico-botanical survey wing and a Mobile Clinical wing. During the period under review Medico-botanical exploration of Allapalli and Melghat forest areas had been undertaken by

Medico-botanical survey wing and about 23 plant specimens had been collected to enrich the existing herbaria. Index cards had also been prepared. The Centre had also supplied the raw drugs to the various Units of the Council. About 16 new plant specimens had been added to the Museum. About 150 plants were being maintained in the garden of the Centre.

Mobile Clinical Wing had collected the health statistics from Panchagaon village. Initial study in the new village Kapsi had been started. *Sandhivata* and *Raktapradara* had been taken up as special problems for study. *Vathar churna* (prepared from *chakramardabejj*) and *Raktarodhak churna* (prepared from *Lobanpuspa* and *swet jirak*), are taken up in this programme. About 1156 patients of different diseases were given incidental medical relief. 16 Folklore claims had also been collected.

3.5 Regional Research Centre, Vijayawada

This centre consists of a Mobile wing and a survey wing. **Survey wing:** During the period under review, Medico-botanical exploration of Nellore forest area was done. In this area, *Pterocarpus santalinus* and *Tylophora indica* are found in abundance. This tour helped in solving the identity of controversial drug sample (Root) sold in the local market by the name of "*Barre Sugandhi*". This taxon is botanically identified as *Decalepis hamiltonii* Wt et. Arn. belonging to family *Aselepiadaceae*. During the year 86 field numbers, and 51 folklore claims had been collected. 6 raw drugs were supplied to various research units.

Mobile Wing: Work relating to collection of Health statistics of Savaragudam village had been completed. During the year, 47 visits to the above village were conducted and 2348 follow-up study proformae were filled. Health statistics study had been started in Gosala village and 13 visits had been made. Initial study covered 283 individuals belonging to 60 families.

3.6 Jawabarlal Nehru Ayurvedic Medicinal Plants Garden and Herbarium Kothrud, Poona.

The garden is conducting experimental cultivation of medicinal plants to assess the germination potentiality growth percentage, and

yield under known ecological background. Steps are also in progress to study the influence of habitat on particular plants. About 760 plants are maintained in experimental beds, fields and pots to study the aspects cited. Museum and Herbarium sections have about 2500 genuine materials belonging to plant, animal and mineral kingdom. The drug available in the garden is also supplied to various other projects for further studies. In time to come, this garden may help to guide the medicinal plant cultivators with the Technical know how to maximise the yield with minimum investment.

Jawaharlal Nehru Ayurvedic medicinal plants Garden and Herbarium Kothrud, Poona has 19 acre land with three major soil groups i. e. areas of sand and murrum, black cotton soils and Rock-barren area, underlying Deccan traps. The following medicinal plants were raised and harvested:

- i. *Samudra palaka* (*Argyreia speciosa*, Sweet).
- ii. *Shatamuli/Satawar* (*Asparagus racemosus* Willd).
- iii. *Ghritha Kumari* (*Aloe barbadensis* Mill).
- iv. *Ghandhatrina* (*Cymbopogon citratus* DC. Stapf)
- v. *Rohisha* (*Cymbopogon martini* Linn).
- vi. *Sanatha Dodonaea viscosa* Linn).
- vii. *Isabgol* (*Plantago indica* Linn).
- viii. *Isabgol* (*Plantago ovata* Forsk).
- ix. *Antamul* (*Tylophora asthmatica* W & A).
- x. *Bakuchi* (*Psoralea corylifolia* Linn).

150 medicinal plants were raised in plots. The following fruiting trees are also maintained in the garden.

1. *Anjira*: *Ficus carica* Linn (Saplings).
2. *Sapot*: *Acharas sapota* Linn.
3. *Amla*: *Embllica officinalis* Gaertn.
4. *Kapittha*: *Feronia limonia* (Linn.)
5. *Mansala*: *Psidium guajava* Linn (Saplings).

6. *Amb* : *Mangifera indica* Linn.
7. *Jambu* : *Syzygium, cumini* (Linn) *Skeels* (*Saplings*).
8. *Tintrini* : *Tamarindus indica* Linn (*Saplings*).
9. *Badara* : *Zizyphus jujuba* Lam.

Cultivation of the following is taken up on extensive scale :-

1. *Samudra palaka* (*Argyreia speciosa*).
2. *Gunja* (*Abrus precatorius* Linn) *Leguminosae*) both varieties (white and red.)
3. *Ghrita kumari* (*Aloe barbadensis* Mill *Lilliaceae*),
4. *Gandhatrina* (*Cymbopogon citratus* DC.) *Stapf* (*Graminaea*)
5. *Paterchur coleus aromaticus* Benth (*Labiatae*).
6. *Rosha* (*Cymbopogon martini* Stapf.). (*Gramineae*).
7. *Akarkara* (*Spilanthes acmella* Murr) (*Compositae*).
8. *Sarpagandha* (*Rauwolfia serpentina* Benth ex Kurz)
(*Apocynaceae*).
9. *Antamul* (*Tylophora asthmatica* W & A) (*Asclepidaceae*
species).
10. *Khashkhas* (*Vetivera zizanioides* (Linn) (*Graminaea*).
11. *Sadaphuli* (*Vinca rosea* (Linn). (*Apocynaceae*)

The Institute is maintaining a herbarium with 2043 specimens and museum with authentic crude drugs.

3.7 Dr. Lakshmiapati unit for Research in Indian Medicines, Madras

This project has studied the effect of *ashwagandha* as *rasayana* and on prevention of the process of ageing in human volunteers. A double blind clinical trial on normal healthy adults was carried out by including 141 subjects out of 331 volunteers. 101 of these had a full one year course of treatment. The daily dose was 3 grams. Parameters, for ageing study were selected from Alex comfort test battery. The following are the major observations :

(1) There is statistically significant increase ($P < 0.1$) in hair melanin.

(ii) The mean decrease in serum cholesterol is also statistically significant ($< P: 0.1$).

(iii) The mean increase in the seated stature of the treated group as compared to the control group is statistically significant ($P < 0.05$) and (iv) the mean increase in the single index (height/weight) is significant. *Ashwaganda* appears to have effect on reducing calcium depletion and as such it is possible it will be of benefit to the aged in acceleration of healing process in bone fractures.

The Unit has continued double blind clinical studies on the effect of *guggulu* and Fraction ('A') of Petroleum ether extract of *gum-guggulu* on weight and serum lipids of obese subjects. 50 patients were included in the trial on the basis of Brocas index and 37 completed the treatment period. Biochemical investigations like serum cholesterol, total lipids, phospholipids and alkaline phosphatase were done. 12 week follow-up was done at an interval of four weeks. There seemed to be a reduction in both systolic and diastolic B. P. in the treated groups perhaps due to reduction in peripheral vascular resistance.

Thus observations are summed as below:-

S. No. Parameter	Mean difference guggulu	\pm fraction A	Standard error Placebo
1. Systolic B.P.	-5.71 ± 5.49 $P < 0.001$	-4.29 ± 3.09 $P < 0.001$	2.75 ± 4.56
2. Diastolic B.P.	-4.29 ± 3.33 $P < 0.05$	-7.14 ± 2.93 $P < 0.01$	3.75 ± 1.98
3. Pulse rate	-2.71 ± 2.51 N.S	-5.00 ± 1.89 $P < 0.1.$	-0.50 ± 2.01

These studies have confirmed the earlier findings in relation to serum triglycerides, serum total cholesterol and lipids. The Unit has conducted studies on prakriti of criminals and found dominance of Vata in parkriti of the individuals. A coded drug Ayush-57 has been taken up for study in vitiligo and out of 134 cases, screened, 63 completed the 12 week

treatment with beneficial results. A paper based on studies which was published in the Journal 'Ayu' of Gujarat Ayurved University, Jamnagar was awarded a gold medal instituted by the Hari Om Ashram Trust. The Unit is continuing programmes of multicentre studies related to Ayush AC I, Ayush AC IV, Ayush 56 and *guggulu* study in cases of myocardial infraction besides studies related to antistress, anti-scabic programmes. The Unit has been assisting in the manufacture and supply of tablets of Ayush AC I, Ayush AC IV and antimalarial tablets.

3 8 Clinical Research Project, National Institute of Mental Health and Neuro Sciences, Bangalore

This clinical project is unique in its nature, wherein the effect of Ayurvedic line of treatment in *Manasroga* are being studied. The following are the abstracts of work:-

Shirodhara in Anxiety Neurosis (udvega):-

10 cases of either sex in the age group of 20-35 suffering from uncomplicated anxiety neurosis had been included in the trial *Ksheeradhara* was given for 14 days continuously. 7 patients had taken complete course of treatment. The response had been satisfactory.

Role of Ayush VI in the patients of Kaphomada (Depression):

A compound drug AYUSH VI (*Vacha, Jatamansi and Pippali*) was brought out by the Unit for trial on patients suffering from depression. Steps were in progress to study this problem.

Double blind controlled study on role of Brahmyadi yoga in chronic unmada (schizophrenia):-

Brahmyadiyoga was found to be effective in chronic cases of *unmada*. Preparation of the drug is in process for starting the large scale trial since the pilot studies have revealed encouraging results.

The project had also treated 32 inpatients and 248 out patients of various mental disorders. The studies had revealed that the classical line of treatment indicated in the texts was useful in the treatment of *Manas Roga*.

3.9 Documentation Centre, New Delhi

In the field of Research, Documenting and ledgerisation of the Scientific and other ancillary information play a pivotal role. The Documentation Centre has a library which contains about 5,000 volumes related to medical systems and allied disciplines; it is subscribing to about 200 national and international journals covering various areas of research with which the Council is concerned. The Photography division has micro-filmed, rare and valuable books/manuscripts. Photographs of the materials of scientific value are taken and added to the Centre. The Documentation division documented the information relating to ISM and other Contemporary medical sciences. Information related to 350 medicinal plants, entering into medicinal formulations which are included in the First volume of Ayurvedic formulary of Government of India has been documented. The Centre has participated in exhibitions. The Centre has now a Printing Machine and a Xerox copier. This will help in making available Scientific information/references to Scientific workers whenever needed. The steps were taken to improve the library and journal wealth. The Documentation Centre has links with other bodies like INSDOC, Indian Council of Medical Research, Indian Council of Agriculture Research, Council of Scientific and Industrial Research etc and steps have been taken to gather upto date information on the drugs that are in the formulations. The ledgering of the herbarium sheets is initiated. Plans to start a museum with drugs in common use are in progress.

4.1 Standardisation Research Project, Jamnagar

This project has worked out the standardisation of 10 raw drugs, and two compounds preparation viz. *Vaisvanara churna* and *Sitopaladi churna*. The raw drugs worked out are *Mahanimba*, *Yavani*, *Ajmoda*, *Nagara*, *Haritaki*, *Sitopala*, *Vansalochana*, *Pippali*, *Ela*, *Tvk*. Seven formulations have been studied for self life period and effect of packing materials on the contents. Six formulations of different pharmacies have also been analysed to compare the analytical data.

4.2 Drug Standardisation Research Project, Junagadh

During the reporting period, much emphasis had been laid down for the standardisation of single drugs. Details on Fluorescence analysis of 13 single drugs have been done. Chemical study of two drugs viz. *Lodhra* (Root, Stem, Bark, Leaf) and *Saptaparni* (Root) have been completed. Self life of two formulations have been studied. Chemical study of two formulations have also been completed.

4.3 Standardisation Research Project, Varanasi

Standardisation studies on five market samples have been completed. Standardisation of ten compound formulations have also been done as *Latakasturi*, *Vidanga*, Betal leaf and Neem leaf have been studied to find out whether they can be used as on preservatives. Phytochemical study of *varuna* has also been undertaken.

4.4 Standardisation Research Project, Vijayawada

This project was engaged in standarding Bhasma & Sindurus, beside study of preservatives an Ayurvedic line. Study of relating to identification of *Gandhaka Bhasma* is in progress. Work relating to following preservatives such as *Trijatakarka*, *Tankana*, *Sati*, *Kanjika*, *Dadhi-manda*, *Ksharodaka* is in progress.

5.1-5.5 Pharmacognosy Research Project-Calcutta, Chandigarh, Jammu, Lucknow and Poona

As in the preceeding years, Pharmacognostical studies were carried on the following drugs along with their adulterant species, alleged species, as well as market samples.

1. *Acorus calamus* (Rhizome)
2. *Capparis spinosa* (stem and leaf)
3. *Brassica nigra* (Seeds)
4. *Cassia angustifolia* (leaf)

5. *Clitoria ternatea* (Root, stem leaf)
6. *Boswellia serrata* (Oleo-resin)
7. *Abelmoschus moschatus* (seed)
8. *Aristolochia indica* (root)
9. *Ailantus excelsa* (Root, Root bark, stem bark)
10. *Alangium salvifolium* (root)
11. *Gymnema sylvestri* (Leaves)
12. *Jasminum sambac* (leaves & root)
13. *Lawsonia inermis* (leaves)
14. *Piper peepaloides* (Leaf)
15. *Albizzia lebbek* (seed)
16. *Albizzia procera* (seed)
17. *Anogeissus latifolia* (stem bark)
18. *Buchanania lanzan* (bark & seed)
19. *Basella rubra* (leaf)

6.1-6.5 Chemical Research Project-Calcutta, Delhi, Hyderabad, Lucknow and Varanasi

Chemical investigation of the following plants was carried out to isolate active constituents; the structural elucidation for understanding the probable scope of the areas of usefulness was also carried out.

1. *Ficus hispida* (Berries)
2. *Abelmoschus moschatus* (Whole plant)
3. *Solanun nigrun* (Root)
4. *Pistacia integrremna* (gall)
5. *Adhatoda vasika* (leaves)
6. *Cassia siamea* (Pods)
7. *Symplocos spicata* (Stem bark, leaves)
8. *Grewia asiatica* (Leaves)

9. *Coreñium tenestratum* (Root)
10. *Physalis peruviana* (Root)
11. *Nymphaealba* (flowers)
12. *Cyperus rotundus* (Rhizomes)
13. *Alternanthera sessilis* (whole plant)
14. *Dioscorea bulbifera* (Rhizome)
15. *Apium leptophyllum* (seed)
16. *Desmostachya bipinnata* (Root)
17. *Gardenia jasminoides* (Gum)
18. *Alstonia scholaris* (Bark)
19. *Dioscorea prazeri* (Rhizome)
20. *Dioscorea deltiodes* (Rhizome)
21. *Bombax malabaricum* (Root bark)
22. *Achyranthes uspera* (Fruit)
23. *Randia dumetorum* (Fruit)
24. *Swertia chirata* (arial parts)
25. *Diospyros peregrina* (Fruits)
26. *Vitex negundo* (seed)
27. *Mikania scandens* (Aerial root)
28. *Nymphia stellata* (flower)
29. *Glycyrrhiza glabra* (root)

Besides above, the plant extracts were also supplied to various other Research Projects of the Council in large scale.

7-1- 7.9 Pharmacological Research Projects, Including Toxicity studies-Bhopal-Bombay (3 projects) Calcutta Jodhpur-Lucknow-Meerut-Trivandrum

Pharmacological profile along with toxicity studies were carried out during the period under review on drugs used commonly in Ayurveda. The results briefly are:-

1. *Tephrosia purpurea* :-

Benzene extract of sodium hydroxide soluble fraction was found to possess the analgesic activity when administered orally and intra-peritoneally. Na_2CO_3 soluble fraction showed maximum inhibition in oedema volume.

2. *Nelumbo nucifera* :-

Pet-ether, acetone, benzene and alcohol extracts have been screened for toxicity studies. Amongst the extracts screened only benzene extract administered orally in a dose of 1gm/kg showed a significant increase in pentobarbitone induced sleeping time. Pet-ether extract in a dose of 500 mg/kg showed 2 fold increase in the pain threshold when administered orally.

3. Toxicity studies of Ayush—11, 12, 14, 61 were taken up on mice through oral route. Studies on other species are in progress.

4. *Ficus hispida* :-

None of the extracts showed any significant anti-inflammatory activity in carrageenin induced hind-paw oedema. No significant effect on Blood pressure and respiration in anaesthetized cat was noticed. Pet-ether extract showed anti-histaminic activity lasting for about 30 minutes on atropinized pig ileum.

5. *Ficus hispida* :-

Chloroform extract showed 36% inhibition of carrageenin induced hind-paw oedema in rats. Chloroform and methanol extracts caused fall in Blood pressure in anaesthetized cat.

6. *Scirpus kysoor* :-

Methanol extract caused fall in Blood pressure followed by slight rise in Blood pressure; other extracts were inactive.

7. *Saccharum spontaneum* :-

All the extracts were active in carrageenin induced hind-paw oedema. Chloroform extract caused fall in blood pressure without affecting the respiration. Other extracts were inactive.

8. *Celastrus paniculata* :-

Pet-ether, benzene, acetone and ether extracts showed antihistaminic effect in 0.01, 0.03 and 0.1 mg/ml concentration when tested on isolated guinea pig ileum but such effect was seen with equivalent amount of the solvent (ethyl alcohol) too. The pet-ether, acetone and ether extract in 0.03, 0.1 and 0.3 mg/ml showed anti-acetylcholine effect on frog rectus muscle.

9. The alcoholic extract of *Benincasa hispida* in 10 and 30 mg/kg i. v. caused fall of mean arterial blood pressure. The respiratory rate increased with fall of blood pressure but the depth of respiration remained unaltered.

10. Alcoholic extract of *Nymphaea alba* produced a dose-dependant negative inotropic and cronotropic effect on perfused frog's heart. It also showed antihistaminic effect on isolated guinea pig ileum in concentrations of 0.1, 0.3, 1.0 and 3.0 mg/ml.

11. Alcoholic extract of *D-lipinata* produced a negative cronotropic and inotropic effect on perfused frog's heart when tested in doses of 3, 10 and 30 mg. It did not modify acetyl-cholina (0.25mcg/ml) induced contractions in 0.5, 1.5, 30 mg/ml. However in a concentration of 6.0 mg/ml the extract itself produced contractions.

12. *Ocimum sanctum* :-

It was found to possess marked adaptogenic properties meaning thereby that it could increase the resistance of human body to a variety of stresses. Treatment of mice with extract increased their swimming capacity tremendously. These animals could swim atleast for twice the duration of the normal controls. The central stress induced ulcer in rats were also prevented. These studies point the scope of *Ocimum sanctum* in prevention of a variety of human ailments.

13. *Buddleja asiatica* :-

This drug has an antifertility effect in rabbits. It prevented ovulation. Besides, it has a hypotensive effect in dogs and this effect it possesses because of an alpha-receptor blocking property.

14. *Sapindus trifoliatis* :

Alcoholic extract from the fruits showed potent hypotensive effect, which is prolonged and durable. It has a direct vasodilator effect as seen on blood vessels of hind-limb in dogs.

15. *Inula racemosa* :

A detailed study of alcoholic extract of its anti-asthmatic activity was carried out. The drug is a potential antiasthmatic agent, and is very important from point of view of anti-pollen effects, which are known to produce human asthma.

16. *Randia dumatorum* :

Pharmacological investigation on *Randia dumatorum* showed that the chromatographically separated fraction VI of the saponin, isolated from fruit-berrier, caused significant pressure response in 10-50 mg/kg doses in anaesthetised dog. It was also found to cause increase in force of contraction in the isolated rabbit heart. From these observations, the saponin may find important therapeutic use in hypodynamic condition of heart as well as in cardiovascular shock, including anaphylaxis.

17. *Lawsonia inermis* :

Pharmacological investigation on alcoholic extract of *lawsonia inermis* leaves showed that the extract possesses marked anti-inflammatory effect in doses 10 mg/kg. The extract has also been observed to possess analgesic activity which was comparable to aspirin.

18. *Sida rhombifolia* :

Pharmacological investigation on *Sida rhombifolia* and several other chromatographic friscion isolated from the whole extract was found to posses anti-inflammatory activity. The chromatographic fraction 1 showed significant ardiac stimulant properties in the doses 10-100 mg. The anti-phlogistic, anti-inflammatory properties of this drug can be better utilised in the treatment of arthritis and other inflammatory conditions.

19. *Quercus infectoria* :-

The alcoholic extracts in doses ranging from 0.1 to 0.8 mg stimulated the isolated heart preparation. The extract also decreased the amplitude of contraction of isolated intestine and retarded the propulsion movements, thus substantiating its use in the treatment of diarrhoea.

20. *Albizia lebbek* :-

This drug was found to protect the guinea pigs against histamine aerosol as well as antigen challenge in sensitised guinea pigs. The results suggest that continuous drug treatment is essential for the inhibition of anti body formation.

21. *Cannabis indica* :-

Studies indicated that, although copper has no significant neuropharmacological action, it interacts with cannabis activity, specially in tolerant rats, in effects on hypothermia. The site of action of copper is possibly the hypothalamus, where it inhibits the processes of tolerance development to cannabis on the nor adrenergic neurons.

22. *Stephania harnandifolia* :-

Total alkaloidal mixture of this drug showed adrenergic neurone blocking activity by preliminary testing. It was observed that the alkaloid epistephanine is responsible for this activity.

23. Pharmacological studies on *Hemidesmus indicus* (as 2 hydroxy-4 methoxy benzaldehyde) revealed significant antifungal activity at experimental and clinical levels and showed encouraging results.

24. As antiulcer drugs *Nimbidine* and *Taramanduram* were studied in experimental models. 6 of these nimbidine tablets has been taken up for a random clinical trial in duodenal ulcer.

25. Plumbagin was found to possess local irritant effects in 0.1% and above concentrations in olive oil when given to rabbits intradermally.

26. Antimibolic study on *Plumbago-zeylanica* was investigated using tissue culture techniques. Preliminary studies on auto-urine therapy were carried out.

27. *Acorus calamus* :-

The extract was found to suppress the primary as well as secondary phase of inflammation significantly. It was also found potent as analgesic at a dose of 5mg/kg.

28. *Vitex negundo* :-

The ethyl acetate extract at a dose of 50 mg/kg orally produced definite anti-inflammatory effect against carrageenine, 5-HT and Bradykinin; whereas Dextran and prostaglandin induced oedema remained unaffected with the extract. The extract was found to suppress the primary as well as secondary phase of inflammation significantly.

29. *Ricinus communis* :-

Pet-ether extract at a dose of 150 mg/kg (oral) produced definite anti inflammatory effect. The extract also produced inhibition of the formaldehyde and adjuvant arthritis in albino rates.

30. *Caesalpinia crista* :-

Pet-ether extract at a dose of 150 mg/kg oral produced some anti inflammatory effect against acute type of inflammation produced by carrageenine and 5-HT.

8.1-8.8 Applied Drug Research Teams-Ahmedabad, Bombay, Gwallior, Lucknow, New Delhi, Pondicherry, Poona and Varanasi

Drug-oriented clinical studies have been carried out to assess the reas of utility and also to identify new areas where they can be put to use with advantage. The resume of the activities under this programme highlights a few leads observed.

i) *Kakodumbara* - 18 cases of *shwitra* were administered this drug and the response has been encouraging.

Guggulu & its fractions in *Medoroga*

59 cases of *Medoroga* were administered *guggulu* in pure form or its fractions to observe its hypolipidemic effect, and the drug has

indicated its significant action on reducing the serum cholesterol, serum lipid, lipo protein and triglycerides.

Kantakari in *Swasa kasa*-28 cases studied have shown response ranging from fair to good with this drug.

Haridra in *Amavata*- A pilot study on *Haridra* and its pure isolated fraction. *Curcunim* in *Amavata* revealed that this drug has curative potentiality.

Yashtimadhu in *Parinamashula* (Peptic ulcer)

Six cases suffering from *Parinamashula* have been administered *yashtimadhu*; the studies have shown that the drug has been helpful in amelioration of the condition.

Vidanga, Kampillaka, Krimimudgarasa and Palasha Bija Kajli in
worms

41 cases of helminthic entestations were administered *Krimihara-dravyas* like *vidanga, kampillaka, krimimudgarasa* and *Palasha Bija Kajli*.

These drugs have shown vermifuge effect to varying degree. The studies are in progress.

Arogyavardhini in Hepatitis and liver cirrhosis

Symptomatic relief was observed in 19 cases of hepatitis with this drug. *Trivanga bhasma* in *Madhumeha*- Experimental studies were initiated.

Pashanabheda as diuretic agent in *shotha*- Mild diuretic effect was observed in the 17 cases studied.

Bimbi in *Madhumeha*- 41 cases of *Madhumeha* were administered *Bimbi swarasa* and it has been observed that the drug has hypoglycaemic action.

Karavellaka in *Madhumeha*- The pilot study carried out with the drug did show the anti-diabetic effect; further studies are required for confirmation of this observation.

9.1 Survey of Medicinal Plants Project, Gauhati

During the period under review, Namehik, Maio, Deban, Jairampur, Nampong of Triap, Distt. of Arunachal Pradesh, Lekhapani, Nazirating,

Doomuooma, Daimari, Sonari and Jagun areas of upper Asasm, Pynursla, Sobakong, Nongiri and Shillong of Meghalaya forest areas were surveyed. About 50 herbarium sheets were identified. About 16 raw drugs and 12 herbarium sheets were supplied to various units of the Council. 42 plants are being maintained in the garden. 143 plants specimen and 34 folklore claims have been collected. This project is helping to meet the demands of genuine *Embelia ribes* for further studies.

9.2 Survey of Medicinal Plants Project, Gwalior

During the period, survey of Amarkantak (South Shahdol Forest Division) had been carried out to explore the medico botanical potential. About 1010 plant specimens had been collected. Out of these 222 had been identified. 25 drugs and 40 folklore claims were also collected. About 1638 plant specimens of previous year had been identified and added to the existing herbaria. 25 specimens had also been added in the Museum. About 14 plants are being maintained in the garden.

9.3 Survey of Medicinal Plants Project, Jammu

During the reporting period Sudhamadai, Lati, Mansar, Suriansar areas of Udhampur Forest Division were surveyed. About 330 plant species were collected, 40 folklore claims were also collected. 500 plant specimens were maintained and identified. 30 samples of different plant materials were added to the Museum. About 150 plants were under experimental cultivation. 18 raw drugs and 225 herbarium sheets were supplied to various units of the Council.

9.4 Survey of Medicinal Plants Project, Patna

During the period under review, Kotraha, Madanpur, Triveni range of Champaran (West), Govardhana, Udaipur forest of Champaran (Central) Bhalua, Rajauli forest area of Gaya forest division, Bangabad, Khokara, Gawan forest ranges of Giridi forest division had been surveyed. During the year 320 plant specimens and 47 folklore claims had been collected. 197 herbarium sheets had been identified. Two raw drugs had been supplied to other Units of the Council. About 69 plant specimens are in the Museum.

9.5 Survey of Medicinal Plants Project, Rajpipla

During the period under review, Vyara, Balpur-Karanjbel, Songadh-Raniamba, Ukai, Serula, Kokara localities of Vyara Forest Division and

Kalibel and Saputara of Dangs Forest Division were explored to assess the medico-botanical potential. About 34 plant specimens had been collected. 947 herbarium sheets were prepared and 9 samples had been added to the Museum. About 100 kgs of raw drugs and 590 herbarium sheets were supplied to various units of the Council. 28 folklore claims had been collected and 470 sheets had been ledgerised.

10.1-10.21 Clinical Research Projects

Ahmedabad (2 Projects)-Baroda-Bombay (2 Projects)
Gauhati-Hardwar (2 Projects) Hyderabad-Jammu-Kottakal-
Lucknow-Madras-New Delhi-Poona-Varanasi (6-Projects)

As in the previous years, Clinical evaluation of selected therapeutic approach/measures in selected clinical conditions were carried out.

1. Assessment of the effect of *Shodhana* in *Kshudra Kushtha*,

129 subjects of various types of *Kshudra Kushtha* like *Vicharchika*, *Vipadika*, *Dadru*, *Pama*, etc. were studied. It is observed that :

One course of *Snehana* therapy had provided relief to a considerable extent and the second course of *Shodhana* therapy further helped in relief of symptoms. With the combination of *Snehana* and *Shodhana* chikitsa there was relief of symptoms to the extent of 75%.

2. Assessment of the efficacy of *Panchakarma* therapy in *Khanja* & *Pangu*

28 cases of *Khanja* and *Pangu* (Poliomyelitis) were given *Basti* therapy; of these 9 patients showed relief with 1 course of treatment; relief was observed in seven with 2nd course and in 12 with 3rd course. The results of study revealed that *Basti* therapy occupied an important role in the treatment of *Khanja* and *Pangu*.

3. Assessment of the role of *Laxmivilas Rasa* and *Vyaghritaila Nasya* in *Pratishyaya*

67 cases of *Pratishyaya* were studied under this programme. Of these, 28 fell under category of *Vatika Pratishyaya* and 39 under *Dusta Pratishyaya*; of the 67 cases, 21 were acute ones and 46 were chronic cases. The treatment with *Laxmivilas Rasa* and *Vyaghri Taila Nasya* provided beneficial results in cases of *Pratishyaya*.

4. Assessment of the effect of *Panchakarma* therapy in *Vatarogas*

It had been observed that though *Vamana Karma* was not included in the line of treatment of *Pakshaghata*, the administration of *Vamana* was found to be helpful in the treatment of this condition. (*Virechana Karma*, when done in the cases of *Pakshaghata*, there was *Laghavata* in the body and *Jatharagani deepthi*.)

The administration of *Basti Karma* in cases of *Pakshaghata* showed encouraging results. 10 cases were studied for all the above three kinds of treatments.

5. Assessment of the effect of Jambu fruit pulp on *Madhumeha* and Normal persons

Studies were carried out to evaluate effect of Jambu beeja in normal and diabetic individuals. The study in four patients of *Madhumeha* showed lowering of blood sugar. Further studies and follow up were in progress.

6. Role of *Jasada Bhasma* and *Yava* in *Madhumeha*

Steps had been taken to draw an approach plan to assess the efficacy of *Yava* and *Jasada Bhasma* in *Medhumeha*.

7. Role of *Latakarnja* leaves in *Krimi-roga*

The vermifuge action of *Latakarnja* leaves was not found satisfactory in 36 cases, when administered in the form of *Swaras*. But there had been symptomatic relief in cases administered for long period. A survey to find out incidence of *Krimi-roga* in 5 villages around Gauhati was conducted; it was found that the round worm infestation was much more frequent than the other types. This observation was based on examination of 281 stool samples.

8. Study on Aetiopathogenesis and treatment of *Timira*

A study carried out on 39 cases of *Timira* revealed that the vitiated *Vata-kapha*, due to various causative factors, obstructed the normal course of *Alochaka pitta*, and thus caused *timira*. *Mahatriphala ghrta* with *saptamrita loha* was found effective in varying degrees in all the 39 cases. Further studies and follow up was in progress.

9. Effect of indigenous drugs in Galaganda

In this, vitiated *Vata* and *Kapha* accumulate in *Gala* and *Manya* thereby causing *galaganda*. The incidence of *galaganda* is more among females at the age of puberty. 604 cases were observed in this programme. The administration of *kanchanara guggulu* in these cases showed encouraging leads in comparison to standard drug-Lugolsiodine. *Shilajita* did not show any beneficial effect.

10. Role of Amashaya Shodhana in Parinamashoola

A pilot study conducted has shown that the *Amashaya Shodhana* is effective in *Parinamashoola* in varying degrees. Further studies need to be carried out.

11. Anti-diabetic effect of Bijasara in Madhumeha

In 177 subjects of *Madhumeha* who were administered *Bijasara* the results were encouraging in 19.23% cases. There were cases of recent onset. In chronic cases, the response was fair in 7.69% cases.

12. Assessment of the anti-diabetic potentiality of Nirmali

8 diabetics cases were registered for trial with *Nirmali*; the response was not encouraging.

13. Role of Guduchi and Chitraka in Madhumeha

10 cases were registered for assessing the effect of *Guduchi* and *Chitraka*. The drug was administered in a capsule. The study was in progress.

14. Assessment of the effect of indigenous drugs in Parinamashoola

224 cases of *Parinamashoola* were administered *Yastichurna* or *yastichurna* with *Panchakarma* therapy or *Tiladi gutika* or *Tiladi gutika* with *Panchakarma*, and these had shown 56 to 58.33% curative value. The follow-up studies and further trials were in progress.

15. Role of Virechana in Pakshavadha

40 subjects of *Pakshavadha* were treated with *Virechana karma*. *Shatphala ghritam* was administered internally. The results are encouraging and the study is continuing.

16. Management of *Amlapitta*, *Annadravashoola* and *Parinamashoola* according to classics

21 cases of *Annadravashoola* and *Parinamashoola* were studied. The number of cases being inadequate to draw conclusions relating to the effect of the therapeutic approach, further studies are considered necessary.

33 subjects of *Amlapitta* were given *Amalaki churna*/*Dashanga Kwath*. The study reveals that *Amalaki churna* appears to possess higher degree of curative potential as compared to *Dashanga kwatha*.

17. Study of disease proneness in particular *Prakriti*

21 healthy individuals were analysed to assess their *prakriti*; *Vata prakriti* was found in 14.22%, *Pitta* in 14.2% and *Kapha* in 80.95%. An interesting factor among the 210 blood donors indicated that most of them belonged to *Kapha prakriti* (148). The remaining were *Vata* (52) and *Pitta* (10).

Kapha prakriti persons were more prone for eye diseases; the lower level of blood clotting time (35 minutes) was observed in *Kapha prakriti* subjects.

18. Studies on *Amalaki Rasayana* in the treatment of Peptic ulcer

12 cases of Peptic ulcer were administered *Amalaki rasayana*. The drug was effective in relieving the acute symptoms.

19. Clinical evaluation on the *Medhya* effect of *Ashwagandha*

The study conducted indicates that the drug appears to possess an anti-anxiety and adoptogenic potentiality; thus it is in conformity with the *Medhya* and *Rasayana* effect described for the drug in classical works.

20. Experimental studies on the *Medhya* effects of *Brahmi*

Experimental studies conducted showed that the drug possessed highly significant action as *Medhya* agent.

21. Assessment of the effect as anti-anxiety

30 cases that were treated with *Ashwagandharista* showed attenuation of the anxiety and improvement in mental faculties.

22. Long-term clinical trial on *Guggulu*

20 patients presenting the symptoms of ischaemic heart diseases, alongwith over weight were enrolled for study. Purified *guggulu* in the dose range of 6-10 gms. according to tolerance was administered. In 88% of the cases, cholesterol had been reduced 24 to 30%. Clinical improvement had been recorded in the signs and symptoms of coronary heart diseases to the extent of 54%.

23. Assessment of the effect of Ayurvedic medicine in wound healing property

145 subjects of anal fissure were treated with *Jatighrita* (Ext. use) *abhayarista* and *Shatasakara churna*. The complete healing of the wound was seen in a period ranging 14-15 days.

24. Effect of *Nasyakarma* in Chronic sinusitis

The study conducted on 161 cases, showed that the *nasyakarma* was effective in affording relief of the symptoms.

25. Role of *Ksharasutra* in Ano-rectal disorders

4920 subjects were registered under this programme. This included 401 piles, 2948 with fistula-in-ano, 1462 subjects with miscellaneous conditions were studied. *Ksharasutra* was found to be highly effective in ano-rectal disorders.

26. Assessment of the effect of *Varuna*, *kulatha* & *Gokshura* in *Mutrashmari*

684 subjects were studied under this programme. Cases of *Mutra krichehra* were found to respond well to *Varuna*, *kulatha* and *Gokshura*.

27. Study of effect of *Kutaki compound/Arogyavardhni* in *Yakritrogas*

The programme to study the role of *kutaki compound/Arogyavardhni* and *Yakritrogas* was taken up. The studies have shown promising results warranting taking up of detailed studies on larger number of cases.

11.1-11.4 Survey and Surveillance Projects

Jamnagar-Kurukshetra-Varanasi-Vidisha

To plan any medicare programme, information on the health statistics and preparation of disease atlas play a pivotal role. The Council has taken up the collection of Health statistics through a net work of Mobile Clinical Research Projects spread all over the country at randomly selected villages. These teams have provided incidental medical aid. The information collected, in time to come will be of help in the preparation of health/disease atlas of the country which is needed in health planning.

During the period under review, initial and follow-up studies of Bhatti village, Badagaon, Ahammadpur village, Lashkarpur village, Polah village, Matathavana village, Bajidpur village and Banoli village had been undertaken. Health education like sanitation etc. were also provided. The team also were engaged in the Family Welfare programme.

12.1 Literary Research Project, Thanjavur

The project copied and edited 4th to 12th Patala of *Netra Pariksha* of Pujyapata, checked 6 tarangas of *Chikitsamrita Sagar* and checked *Satashloki* of *Avadhana saraswati*.

An article on *Pratinidhi dravya* had been compiled.

13-1-13.2 Tibetan Medicine Research Project Leh-Dharamshala

The Amchi Research Centre, Leh has collected 76 rare books and manuscripts as a preliminary step to plan studies in Tibetan Medical system. Another step taken up was to identify the distribution of herbo-mineral medical wealth so that clinical research can be carried out utilising the locally available drugs. The Unit has collected 95 drug samples. The sites/belts where *shilajita* is available were located the following are worth recording :

Tamisgam-Hemissokapachan-Sindiyang-Dumkhar-Marmoo and Sateedo.

Sapi and Sanskar range of Karakoram range seems to have more *shilajita* deposits.

The *shilajeeth* obtained appeared to be fine. This is a popular ingredient in Amchi medical practice particularly in conditions like biliary disease, peptic ulcer, arthritis and is also used as aphrodisiac. A few monasteries at Hemia merchalang, Likir, Lamayouree and Rizong were visited for information on medical manuscripts. The preparation of papers on history of Amchi medicine, method of treatment in Amchi medicine for respiratory diseases and *shilajith* are in progress.

14.1-14.7 Clinical Research Project (Family Welfare) Bombay-Calcutta-Jaipur-Lucknow Patiala-Trivandrum-Varanasi

1. Vidangadiyoga

Since inception 1083 cases were registered; out of them 583 discontinued and 500 cases were under follow-up at different cycle level.

2. Ayush-AC-1

Total of 90 cases were registered, & the cases discontinued at different cycle levels.

3. Ayush-AC-4

This has been taken up for clinical trial in the later part of the year; 2 cases were registered and both the cases are under follow-up.

4. 'K' Capsule

Total of 92 cases have been given the drug; out of which 16 cases discontinued; others are under follow-up and the drug appears to have a contraceptive effect.

5. Ayush-AC-1

66 cases were registered for study; out of that 37 cases discontinued and others are continuing.

**15.1-15.4 Chemico-Pharmacological Research Projects (Family Welfare)
Bhubaneswar-Jamnagar-Trivandrum-Varanasi**

1. Aqueous extract of *Karavirmula* in the doses 125, 250, 500 mgs./gm. body weight showed 92.4%, 93.8% and 93.2% anti-implantation effect respectively.
2. Pet-ether and benzene extract of *Kalonji* at the dose of 500 mg/100 gm. body weight showed 91.3% and 72.6% anti-implantation effect respectively.
3. Benzene extract of *Karpasamula* at the dose of 500 mg/100gm. body weight showed 89.7% anti-implantation effect.
4. Benzene extract of *carrot* seed at the dose of 125, 250 and 500 mg/100 gm. body weight showed 94.6%, 95.8% and 96.0% anti-implantation effect respectively.
5. Ayush-AC-4 at the dose of 125, 250 and 500 mg/100gm. body weight showed 87.2%, 89.7% and 89.2% anti-implantation effect respectively.
6. Ayush-AC-5 at the dose of 125 mg/100gm. body weight showed 87.6% anti-implantation effect. All these drugs have no effect on the oestrogenous cycle of female rats and in the mating behaviour.
7. Study on *carrot* seeds and Ayush-AC-3 were completed. The *carrot* seeds showed significant anti-fertility effect at a dose level of 100 mg from D₁-D₇. The anti-fertility activity was upto 80% level. It does not show any anti-ovulatory effect.
8. Ayush AC-3 shows less anti-fertility effect when administered for 10 days (D₁-D₁₀) but shows more effect when fed for 7 days only.
9. The other drugs Ayush-AC-4 & 5 are under observation. Steps are also under process to prepare about 500 'J' capsules for clinical trial at Varanasi.
10. Ayush-47 and Ayush-10 were observed to be 100% effective for anti-ovulatory and anti-implantation purpose at 200% mg/kg. body weight dose.
11. Ayush-7 in the same dose found effective for anti-ovulation purpose in rabbits.
12. Ayush-AC-4 at the dose 10 mg/kg. and 200 mg/kg. showed anti-ovulatory effect.

13. In the chronic toxicity studies with Ayush-AC-2 the results showed that there was no blood liver and kidney of rats in the chronic toxicity studies. There was a numerical decrease in glycogen levels in Ayush-AC-2 treated group which was not statistically significant.

14. Ayush-AC-3 in the dose of 100 mg/kg. produced only 33.3% anti-implantation effect in rats. In treated group the fetal loss was 60% as against 13% in the control group which was statistically significant. The drug was non toxic also.

15. *Laksha* in the dose of 50 mg/kg. produced 33.3% anti-implantation effect.

The total loss was 66.6% in treated group which was statistically significant. Ayush-AC-4 in the dose 1 mg/kg. produced 50% anti-fertility activity. Further studies are in progress.

16.1 Journal of Research in Indian Medicine, Yoga and Homoeopathy Varanasi.

Journal of Research in Indian Medicine is the official journal, published quarterly from Varanasi; it includes papers relating to research activities of various Research Projects. The results of research are communicated to the scientific world through this medium. About 60 papers were published besides a number of short communications.

SIDDHA SECTION

Projects in operation

- 1. Central Research Institute (Siddha), Madras.**
- 2. Clinical Research Unit, Madras.**
- 3. Drug Standardisation Unit (Siddha), Madras.**
- 4. Survey of Medicinal Plants Unit, Palayamkotti.**
- 5. Literary Research Unit, Palayamkotti.**

1. Central Research Institute

1.1 The Central Research Institute (Siddha), Madras is engaged in the clinical research. The modern techniques and other laboratory facilities are made use of in the research programme. The Institute has a radiography section besides laboratories engaged in biochemical, pathological and pharmacological investigations. There is a pharmacy also for preparing medicines required by the Institute and other units engaged in this field of research.

1.2 The Institute is running an out-patient department and cases for research are screened and selected from out-patient section. The problems on which the work is going on are :

- 1. Valigunmam (Peptic ulcer)**
- 2. Putrunoi (Cancer)**

3. *Manjal Kamalai* (Infective Hepatitis) and

4. *Grahani* (Malabsorption syndrome)

1.3 *Valigunmam* (Peptic ulcer) :

During the period under review, 125 cases were admitted for carrying out research. Out of these 8 cases were discharged after preliminary screening as they do not satisfy the criteria laid down. 59 cases were discharged as cured and 24 cases were discharged at request when they noticed slight relief. *Thambra chenduram* prepared in the following processes were tried :

P1—With the juice of *Karunthulasi* leaves (*Ocimum sanctum*).

P2—With the juice of *Manjal Karisalai* leaves (*Wedalia calendulacea*).

P3—With the juice of *Kadugu* (*Brassica juncea*) Whole plant.

P4 – With the juice of *Mullangi* (*Raphanus sativus*.)

Thambra chenduram prepared in the juice of *Karunthulasi* leaves was found to show comparatively better results i.e. to the extent of 80%. Some of the cases that had recurrence also responded well to this drug. No side effects or toxic reactions were observed. *Thambra chenduram* prepared by the *Karunthulasi* process added with *Chowkara chunnam* (P6) was also found effective in cases of *Valigunmam*. No side effects or toxic symptoms were observed.

1.4 *Putrunoi* (Cancer) :

During the period under review 53 cases were admitted for trial. Since the drugs like *Chandarasa Barpam*, *Sampoorana Chunnam*, *Navarathina Kalpam* did not show encouraging results, a special recipe was selected from the Siddha medical literature for pilot trial. The drug RGX with *Senkottai* (*Semecarpus anacardium*) as main ingredient is tried in *Putrunoi* (Cancer) affecting various regions e.g. *Nahil* (Breast), *Kannam* (Cheek), *Yoni* (Cervix), *Lingam* (Penis), *Thondai* (Throat), *Elumbu* (Bone), *Rathotha* (Hyloid), *Nak* (Tongue) and *Asanawai* (rectum). The dose of 750 mg. twice a day relieved pain; there was also reduction in the size of ulcer or tumour. Local application over affected area of the extract of *Senkottai* with castor oil base showed encouraging results. No

toxic or side effects were noticed during or after the treatment. *Solamarine*, isolated from *Solanum trilobatum* was found effective in sarcoma and was noticed to be least toxic. No formation of secondaries were noticed and 20% of regression was observed in the size of tumour with 90 days of treatment. A third drug is also now being administered in the treatment of this clinical condition. It has been observed that the disease is not only controlled, but aggravation is considerably reduced. Study with all the three coded drugs is in progress (i.e.) RGX or SKX, STG, KW and KR.

1.5 *Manjal Kamalai* (Infective hepatitis) :

During the reporting period, 30 cases were taken up for study. The effect of *Sangu barpam* with *Keezhanelli kudineer* was taken up. *Katrashai charu* and *Keezhanelli kalkam* and *Manjal-karisalai kalkam* has been studied. The clinical assessment was made in accordance with the principles of Siddha system of medicine and modern medicine. Biochemical investigation according to needs were carried out as periodical intervals.

1.6 *Grahani* (Malabsorption syndrome)

The place of *Annabedhi chenduram* in the treatment of *Grahani* has been taken up as a research programme. A pilot study was carried out on five cases.

The number of patients that attended the out patient is 42,185. The details of the cases treated are as below :

S.No.	Clinical Condition	O.P.D.	I.P.D.
1.	Valigunmam	1202	125
2.	Putrunoi	151	53
3.	Manjal Kamalai	92	30
4.	Grahani	6	5
5.	Misc. conditions	40734	—
Total		42185	213

Table B : Sex-wise distribution of the cases treated at I.P. level

Sl.No.	Description	Male	Female	Children
1.	Valigunnam	100	25	—
2.	Putrunoi	23	29	1
3.	Manjal Kamalai	19	9	2
4.	Grahani	4	1	—
Total		146	64	3

1.7 Pharmacy wing :

The pharmacy wing prepared medicines worth of Rs. 10.700 falling under categories of *barpams*, *chendurams*, *chooranams*, *chunnam*, *mathirai*, *karuppa*, *manappaga*, *Kazhambu* etc. besides the special pharmaceutical preparations like *Kamalainei*, *shanmugamezhugu*, R.G.X., S.K.X., KW and KR. The Institute is using 85 medicines at out-patient level and 32 medicines on the cases chosen for research studies. The pharmacy has also supplied medicines required for other units of the Council. Apart from these, medicines needed in the standardisation programme were also prepared.

1.8 Biochemistry wing :

Biochemical investigations required for clinical and pharmacological divisions are being carried out. The investigation mostly carried out were estimation of sugar, urea and serum cholesterol and other investigations on blood.

α amylase has been isolated from *Butea frondosa* (*Palash*). Crystallisation of amylase is being attempted.

Biochemical studies involved in the pharmacological screening of antifertility agents has been taken up.

1.9 Pharmacology wing :

The drugs like AYUSH AC I, AC II, *Kramuka* (*Pooghaphal*), *Ashoka-twak*, *Laksha* and AYUSH AC-IV have been screened for their antifertility potentiality.

A pilot study of the drugs showed the antifertility effects to the extent shown below :

Drugs	Dose level mg/kg	Effects observed
AYUSH AC-I	50	50%
	100	83.33%
AYUSH AC-II	50	50%
	100	16.67%
Laksha	50	41.66%
	100	100%
Kramuka (Pooghaphal)	50	50%
Ashoka twak	100	50%
AYUSH AC-IV	100	In progress
	50	50%

Out of them all, *Laksha* at 100 mg/kg showed almost 100% activity in detailed studies. It was observed to be uterotropic (oestrogenic) at the same dose level. The biochemistry investigations on immature rat uterus showed results which were almost consistent with that of oestrogenic effects. The drug did not show any abortifacient activity or any teratogenicity.

Acute toxicity—Upto 200 mg/kg orally was found non-toxic.

Sub-acute toxicity—Doses up to 1 gm/kg orally for 30 days—study in progress.

Histopathological of vital organs and haematological studies were carried out. The drug was found effective at 100 mg/kg and is comparable to Analgin. But its effect in comparison to morphia is low.

1.10 Pathology wing :

Routine investigations are carried out and biopsy cytological studies required for the problems undertaken for clinical study to assess the effect of Siddha medicine/ therapies.

2. Clinical Research Project :

The Clinical Research Project functioning at A.A. Hospital, Madras has taken up the two clinical problems i.e. *Sandhivathasoolai* (Rheumatoid arthritis) and *Kalanja Padai* (Psoriasis).

2.1 Under *Sandhivathasoolai* 60 cases were studied to assess the effect of *Ambar mezhugu*. The data is under compilation for the preparation of a monograph. *Vanga chunnam* and *Ayaveera chenduram* found to be useful in this condition was taken up for study.

2.2 Evaluation of effect of *Rasagandhi mezhugu* in cases of *Kalanjapadai* was carried out. The study was completed and the preparation of monograph on the subject is in process. *Parangipattai Pathangam* was taken up to assess its effect in this condition.

3. Standardisation Research Project :

3.1 The Drug Standardisation Research Project functioning at Capt. Srinivasamurthy Research Institute, Madras is engaged in the standardisation of the single drugs used in Siddha system of medicine. The unit completed standardisation work on 34 drugs; of these eleven drugs were of mineral origin e. g. *Rasam* (Mercury), *Thalagam* (Trisulphite of yellow arsenic), *Lingam* (Cinnabar), *Vellaipashanam* (White arsenic), *Veeram* (Hydrargyrum perchloride), *Gandhagam* (purified sulphur), *Manasilai* (Bisulphuret of arsenic), *Nandukkal* (Fossil stone), *Gowri pashanam*.

The following plant drugs are chemically under review :

3.2 *Pulivasi* (Market sample) :

Studies indicate that the drug is member of Fam. Polygonaceae. The chemical studies revealed presence of two anthraquinone derivatives beta-sitosterol and a triterpene.

3.3 *Kanjankorai* (*Ocimum americanum*) :

From this sitosterol, betutinic acid, ursolic acid, 7-methyl pectolinarigenin and nevadensin have been isolated. The structure elucidation of the last two compounds was also made.

3.4 Detailed pharmacognostic examination of *Peymirattai Anisomeles malabarica* R. Br.) is worked out.

3.5 Chemical analysis of a Siddha preparation *Navaratna Kalpam* was also carried out. It was found to contain iron, manganese, titanium, aluminium, magnesium, silica and traces of chloride. Hydrated silica was present in large quantities.

3.6 Apart from this, a number of Siddha preparations supplied by the pharmacy of Central Research Institute were also analysed. The unit published two papers.

4. Survey of Medicinal Plants Project :

4.1 The Survey of Medicinal Plants Project located at Govt. College of Indian Medicine, Tirunelveli conducted 97 survey tours during the past 6 years in 120 forest areas in the districts of Kanyakumari, Tirunelveli, Madurai, Salem, Coimbatore, Ramnad, Madras and Chengalpet and also the adjoining areas falling within Kerala State, with a view to assess the qualitative and quantitative position of the natural resources. The Project has the information on about 1450 plants having medicinal and economical importance. An herbarium of 3000 sheets containing 770 species is being maintained. Index cards for all the mounted herbarium sheets are prepared. Efforts are made to confirm the identity of collected plant material with the assistance of Botanical Survey of India and Department of Botany of nearby Universities. A museum of about 315 authentic specimens is maintained. Detailed reports on 250 drugs used in Siddha system of medicine were prepared. About 190 drugs were collected and supplied to other Research Projects functioning under the Council. *Urginia indica*, *Vetiveria zizanioides*, *Cissus quadrangularis*, *Cassia angustifolia*, *Vinca rosea*, *Gloriosa superba*, *Sida spinosa*, *Withania somnifera*, *Solanum xanthocarpum* etc. are few drugs so supplied. The Project located two new taxa—(i) *Sauro-matum guttatum* Fam. Araceae and (ii) *Mikimia scandens* Fam. Compositae.

The Unit has taken up to study of market samples of drugs used in Siddha system of medicine. One hundred folk medicinal claims were reported by the Project.

5. Literary Research Units :

5.1 The literary research work related to Siddha system of medicine is being carried out at T.M S.S M. Library, Thanjavur and Government College of Indian Medicine, Tirunelveli. These Projects have edited a total of fourteen medical works related to Siddha system of medicine.

A. Books printed :

1. A Hand Book of Common Remedies in Siddha system of medicine (English)
2. Theriyarkappiyam (Tamil)
3. Theriyar Tharu (Tamil)

B. Books in the process of printing :

1. A Hand Book of Common Remedies in Siddha system of medicine (Tamil)
2. Agasthiyarvallathi—600, Parts I, II, III (Tamil)
3. Theriyar Sekkarappa—Parts I, II (Tamil)

C. Press copies approved for printing :

1. Theran Yama ga venba (Tamil)
2. Siddhar Kayakalpam (Tamil)
3. Theriyar Decoction—100 (Tamil)
4. Theriyar Sekkarappa—Parts I and II (Hindi)
5. Siddhar Kayakalpam (Hindi)
6. Theriyar Neerkuri—neikuni (Hindi)

D. Press copies awaiting approval :

1. Descriptive Catalogue—208 (Tamil)
2. Bogar Nigandu—1200 (Tamil)

2 The Literary Projects visited 104 villages and towns and collected 33 cudjan leaf manuscripts related to Siddha system of medicine. Calligraphic work on 14 manuscripts was completed and deciphering of seven is in progress. Editing of five manuscripts has been taken up recently. Steps are in progress to prepare English annotations for four manuscripts.

5.3 The copying work of the following manuscripts from the cudjan leaf manuscripts into modern Tamil script has been completed :

1. Agasthiyar Swamy Arulicheitha Rathina Churukkam—360.
2. Agasthiyar Thirumandana Soothiram

3. Agasthiyar Muppatharu
4. Balasasthiram
5. Konganar Athiseya Soothiram
6. Pathinoravathu Nigandu
7. Shanmuga Thevar Swamiyar—1000
8. Tetchinamoorthi Palathirattu Vagadam
9. Tathuva Kannadi
10. Vaithiya Attavanai
11. Piramamuni Arulicheitha Vaithiyam—360
12. Arathara Therisana Vagai Manam
13. Gurunadi Sasthiram
14. Tetchinamoorthi

5.4 The deciphering and annotation work on the following manuscripts are in progress :

1. Boganathar Kayakarpam—360
2. Pothikaisalapathi Sakala Kalaikiyanam—1200
3. Karpam
4. Mappu
5. Sarakku Vaippugal
6. Kattugal
7. Kazhangu

5.5 The work on the following manuscripts were completed and editing work is in progress :

1. Agasthiyar agarathi
2. Maruthuvagai ariya agarathi
3. Sangamuni vaithiyakanunool
4. Agasthiyar Eka mooligai neetrinam—205
5. Boga muniar karukkadai nigandu—500

5.6 The annotating of the following manuscripts into English is in progress :

1. Piramamuni arulichaitha vaithiyam—360
2. Garunadi sasthiram
3. Tetchinamoorthi—150
4. Agasthiyar Eka mooligai neertrinam—205

6. Projects in Operation :

1. Central Research Institute, Madras.
2. Clinical Research Project, A.A. Hospital, Madras.
3. Standardisation Research Project, Capt. Srinivasamurthy Research Institute, Madras.
4. Survey of Medicinal Plants Project, Govt. College of Indian Medicine, Tirunelveli.
5. Literary Research Projects, F.M.S.S.M. Library, Thanjavur, and Govt. College of Indian Medicine, Tirunelveli.

7. List of papers Published/under Publication Read Out in the Seminars by the Officials of the Council.

Ayurveda Publications

Sl. No.	Author	Title of the Paper
1.	Ahuja, M.M.S. Malhotra, S.C. Tandon, H.D.	Experimental studies on Mongolian (Meriomes unguiculatus) with fraction 'A' of <i>Commiphora mukul</i> . (In Jour. Ex. Bio. Feb, 1977)
2.	Antarkar, D.S. Nanda, C.V.	Assessment of Vrsyatwa of Masa (<i>Phaseolus mungo</i>) by estimation of Plasma testosterone.
3.	Antarkar, D.S. Nanda, C.V.	Assessment of acute effect of Brsta Dhanya (Roasted food article) on blood sugar levels of normal male volunteers (Preliminary study)
4.	Apparao M.V.R Srinivasan (Mrs) Kanchana Rao, T.K.	The effect of <i>Centella asiatica</i> on general mental ability of mentally retarded children. (In Journal Psychiatry 1977 19 (4), 54, 59)
5.	Audichya, K.C. Billore, K.V. Joseph, T G.	Medicinal plants lore from the tribal areas of the Aravali ranges.
6.	Banerjee, S. Nag, B.N. Patra, B.B. Sikdar, S.	Studies on anti-inflammatory effect of <i>Ricinus communis</i> in albino rats. (Decennial Conference, Indian Pharmacological Society, Calcutta, Dec. 1977.)
7.	Barnawal, A. Kumar, P. Trivedi, V P.	A preliminary study of <i>Streblusasper</i> Lour (Shakhotak) as an antilymphoedematerus agent.

8. Barnawal, A.K.
Trivedi, V.P. A Critical appraisal of the role of agni in the occurrence of diseases with special reference to an udararoga.

9. Bhaumic, P.K.
Patra, B.B.
Sikdar, S. Studies on the Acetylcholine like action of *Annona squamosa* alkaloid (Proc-65th Ind. Sc. Cong part III-1978 Jan.)

10. Bhide, M.B.
Naik, P.Y.
Joshi, R.S. Recent advances in the pharmacology of anti-asthmatic drugs of plant origin. (proceedings of the U.G.C. seminar on recent advances in the chemistry of indigenous drugs held at Waltair—pp. 94-107-1977)

11. Bhide, M.B.
Naik, P.Y.
Joshi, R.S. Studies on the neuromuscular blocking activity of seeds of *Solanum khasianum* Clarke.
(Bull-Haff-Institute)

12. Bhide, M.B.
Naik, P.Y.
Joshi, R.S. Studies on the antiasthmatic activity of *Measua ferrea*.
(Bull-Haff-Institute-5, 27-1977)

13. Bhide, M.B.
Naik, P.Y.
Joshi, R.S.
Krupadanum, G.L.
Srimannarayanan, G. Neuromuscular blocking activity of some natural and synthetic oxygen heterocycles.

14. Bhide, M.B.
Naik, P.Y.
Joshi, R.S.
Patil, V.M. Effect of Saponin on skelated and smooth muscle preparations.

15. Billore, K.V. Botany in Ayurveda (U.G.C. sponsored seminar, University of Rajasthan, Jaipur).

16. Billore, K.V.
Audichya, K.C. Some oral contraceptive, Family Planning tribal way.

17. Billore, K.V.
Joseph, T.G. A note on abnormal flowers in *Ipomoea pescaprae*.
(Goebios 1977)
18. Biswas, G.K.
Saharia, G.S. A new alkaloidal glycoside frame *Alstonia scholaris*.
(I.J. forestry-1, 67-1978)
19. Bose, R.
Tripathi, V.J.
Bhattacharya, S.K. Dopamina receptor antagonist and agonist activity of its derivative antherospermine.
20. Bratali, Sanyal,
Patra, B.B.
Mukherjee, B.P.
Ganguly, S.N. Some observations on the pharmacodynamics of a toxin from spherodes oblongus liver on Amphibian heart and on Mammalian blood pressure, respiration and intestine.
(Decennial conference. Indian pharmacological society—Calcutta, 1977, Dec.)
21. Chaturvedi, G.K. A survey of preferred medicine for the treatment of respiratory diseases.
(Seminar on respiratory diseases G.A.V. Jamnagar, 1977)
22. Chaturvedi, G.K. A study of the diseases affecting pranvaha shrotasa in comparison with other strotasas.
(Seminar on respiratory diseases, G.A.V. Jamnagar, 1977)
23. Chaturvedi, G.K. Skin affection in Madhumeha,
(Seminar on clinical Pharmaceutical and Drug Research, Ahmedabad, 1977)
24. Chaturvedi, G.K. A study of prattisyaya using laxmivilas rasa for oral administration and vyaghri tail for local administration i.e. Nasya.
(Seminar on respiratory diseases, G.A.V. Jamnagar, 1977)

25. Chaudhari, S.B.
Roy, N.M.
Sikdar, S.
Mukherjee, P.K.
Das, P.C.
Chatterjee (Mrs), A. Further Chemical and Pharmacological studies of some 4-N-substituted ethyl ester.
(Ind. J. Expt. Biol. 1977)
26. Chopra, K.K.
Sharma, B.N. Ayurvedic treatment of Anorectal disorders.
(Seminar on total Health care, B.H.U Varanasi, 1978)
27. Das, M.N.
Dey, D. Pharmacognosy of the leaf, bark and fruit samples of *Oroxylum indicum* vent.
(Proc-65th Ind. Sci. Cong. Part III No. 264-pp, 119, 1978)
28. Das, M.N.
Dipali, Dey Pharmacognosy of leaf and stem of *Capparis sepiaria*.
29. Dasu, P.K.
Sannd, B.N. The role of Kantakari on tamaka swasa (Bronchial asthma) with a comparative analysis on the basis of panchkarma therapy.
30. Dennis, T.J.
Joseph, T. G.
Mishra, K.P.
Billore, K.V. Pharmacognostic study of root of vira-taru-*Dichrostachys cinerea*.
31. Dennis, T.J. Note on occurance of hitherto unrecorded Mn in *Momordica charantia* Linn.
32. Dennis, T.J.
Billore, K.V.
Mishra, K.P. Pharmacognostic study of gumoleo resin of *Boswellia serrata* Roxb.

33. Dennis T.J. Bhaishajya nirman-vevachan
(Sachitra Ayurved, 1977)
34. Deshpandey, S.L. Kustha roga samanya samprapti, Jyotish-
vaur-vedatmaka ekacharcha,
(B H.U. Seminar, 1977)
35. Deshpandey, S.L. Arogya Mishrana tatha gandhakadi lepaka
kshudra kusta me karya karitva
(G.A.V.M. Seminar, Ahmedabad, 1977)
36. Deshpandey (Mrs), I.S. Studies on the incidence of pulmonary
Mehendala, V.V. tuberculosis in diabetes mellitus and the
causes to develop the tuberculosis indi-
abetis.
(G.A. University, Seminar, Jamnagar)
37. Deshpandey (Mrs), I.S. Pashanbhedaka, Shastrokta, gunakar-
Mehendala, V.V. moka prayogi Adhyana.
Barot, K.C. (G.A.V. M. Seminar, Ahmedabad).
38. Deshpandey (Mrs), I.S. Clinical studies-diuretic properties of
Mehendala, V.V. *Bergenia ligulata*.
Sharma, K.S.S. (B.H.U. Seminar, Varanasi).
39. Deshpandey (Mrs), I.S. A study of the incidence of pulmonary
Mehendala, V.V. tuberculosis etiological factors.
40. Dipali, Dey Comparative pharmacognostic studies on
Das, M.N. leaf, bark and fruit samples of two
species of *Barringtonia*.
(J.R.I.M.Y. & H, Varanasi)
41. Dipali, Dey Chromosome evolution in compositae.
(The nucleus vol. 20, 88-93, 1977)
42. Dipali, Dey Pharmacognost of the leaf, bark and
Das, M.N. fruit samples of *Oroxylum indicum* vent.
(Proc. 65th Ind. Sci. Cong. Part IV, No.
264, pp 119, 1978)
43. Dixit, B.S. A review of contraceptive agent as practis-
Trivedi, V.P. ed in ancient modern India.
Shukla, K.

44. Goyal, H.R. Effect of Yograj Guggulu and Rasna saptak Quath on Amavata—A Clinical and Pharmacological study. (Sachitra Ay., 1977)
45. Goyal, H.R. Effect of Swasakesari tablets on Tamak-swasa (Bronchial asthma)—A clinical trial on 173 cases. (Nagarjun, 1977)
46. Goyal, H.R. A clinical study on krimiroga. (Ayurveda Mahasammelan Patrika, 1978)
47. Goyal, H.R. Anthelmintic effect on an ayurvedic compound in cases of Ankush krimi. (Nagarjun, 1977)
48. Goyal, H.R. A study on etiological factors on 500 cases of Tamak swas. (G.A.V. Jamnagar)
49. Goyal H.R. A clinical study of 383 cases of Tamak swas. (G.A. University, Jamnagar).
50. Goyal, H.R. Anthelmintic effect of an Ayurvedic compound on krimiroga. (Sachitra Ayurveda, 1977)
51. Gupta, O.P.
Gupta, P.S.
Srivastava, Y.
Sharma, K.S.
Deshpande, (Mrs.) I.S.
Mehendala, V.V.
Somani, A.G.
- A study of hypoglycemic effect of *Syzygium communis* (Jambu) in diabetes Mellitus.
52. Gupta, R.C.
Paul, S R.
- White flowered form of *Tephrosia purpurea* (Linn) pers (ucguminosae)
(National Academy of science letter (2), 47-78 (1978)
53. Gupta, R.C.
- Pharmacognostic studies on *Dravanti-Jatropha. curcas* Linn.
(Ind. J. Pharm-39 (6), 176 (1977, Dec.)

54. Gupta, R.C. Pharmacognostic studies on *Sarcostemma brevistigma* W & A—A substitute of Jivanti.
(Ind. Journal of pharmacy, Dec. 1977)
55. Gupta, R.C. Comparative pharmacognostic studies on Sirish seeds.
(Ind. Journal of pharmacy, Dec. 1977)
56. Gupta, S. Anti-inflammatory and anti-hyaluronidase activity of *Lawsonia intermis*.
(Ind. J. Pharmacol-1978)
57. Gupta, S.S. Adrenergic effects of the saponin of *Randia dumetorum*.
(Ind. J. pharmacol-10-1978)
58. Hemadri, K.
Sharma, C.R.R.
Rao, R.R. Procurement of raw drugs—ways and means.
59. Holla, B.V.
Mishra, D.D. Efficacy of Nityananda rasa on sleepada in coastal district Puri.
60. Joseph, T. G.
Dennis, T.J.
Billore, K.V.
Mishra, K.P. Pharmacognostic study of *Fagonia cretica* Linn.
61. Kapoor, S.L.
Sharma, P.C. etal. A botanical trip to Moralkanda (H.P).
(J. Bomb. Nat. His. Soc. Vol. 73 (2) p. 329-347, 1976).
62. Kotiyal, J.P.
Bisht, D.B.
Singh, D.S. Double blind cross over trial of guggugulu fraction 'A' in hypercholestarolemia.
63. Kuppurajan, K.
Rajgopalan, S.S.
Rao, Koteswara,
Sitaraman, R. The effect of Guggulu (*Commiphora mukul*) on serum lipids on obese, hypercholesterolemia and hyperlipidemic cases.
(Jour. of Asso. of Physicians of India)

64. Kuppurajan, K. A double blind study of the effect of
Srinivasan, (Mrs), K. Mandookparni on the general mental
Janaki (Mrs.), K. ability of normal children.
65. Kuppurajan, K. Rasayana effect of Aswagandha, on hair
Rajgopalan, K. Declanin.
Janaki, (Mrs), K.
Venkaturaghavan, S.
Revathi, R.
66. Lal, B. Antifertility property of the alcoholic ex-
Udupa, K.N. tract of carrat seed.
Singh, R. H.
67. Mahaiskar, V.B. Trial of Dhatri Nisha kwath in Madhu-
Chaturvedi, G K. meha.
Barot, Y.S. (G.A. University, Jamnagar, Nov. 1977)
68. Mhaishkar, V.B. Trial of Dhatri Nisha kwath in Madhu-
Chaturvedi, G.K. meha.
Barot, Y.S. (sp. pub. of G.A. University, Jamnagar),
69. Malhotra, S.C. Effect of *Commiphora mukul* (Guggulu)
on blood librinolytic activity in patients
of diabetes mellitus.
(IInd Indo-German Symp. at CDRS,
Lucknow, Feb. 1977)
70. Malhotra, S.C. Experimental studies on Mongolian gar-
bils (*Morianes unguiculatus*) with frac-
tion 'A' of *Commiphora mukul*
(Guggulu)
(IInd Indo-German Symp. at CDRI
Lucknow, Feb. 1977)
71. Malhotra, S.C. Long term clinical studies on the hypo-
lipidaemic effect of *Commiphora mukul*
(Guggulu) and Clofibrate.
(IInd Indo-German Symp. at CDRI,
Lucknow, Feb. 1977)

72. Malhotra, S.C.
Ahuja, M.M.S.
Sunderam, K.R. Long term clinical studies on the hypolipidaemic effect of *Commiphora mukul* and Clofibrate.
(I J.M.R. March, 1977)
73. Mary, Z.
Shetty, J.K.P.
Yoganarsimha, S.N. Pharmacognostical studies on *Valeriana arnottiana* Wt. and comparison with *V. Jatamansi* Jones (Indian valeriana)
74. Marry, Z.
Yoganar Simhan, S.N.
Shetty, J.K.P.
Nayar, R.C. Pharmacognostical studies on the root of *Apma siliquosa*
(Ind. Acad. Sc. Bangalore, 1977)
75. Mehrotra, S.
Mitra, R. Pharmacognostical study of peet Chandan *Cosainium benestratum* (Gaertn) Coleber.
(29th All India Pharmaceutical Congress Proc. Ind. Journal Pharm. December, 1977)
76. Mishra, A.K.
Tripathi, S.N. Development of specialities in Ayurveda.
(Sc. Seminar, BHU Varanasi, Feb, 1978)
77. Mishra, K.P.
Dennis, T.J. Rajasthan ki Vanaspatik Aushodiyon ka Rasayanic vivechan-I
78. Mishra, K.P.
Dennis, T.J. Rajasthan ki Vanaspatiyon ka rasayanik vivechan-II.
79. Mishra, O.P.
Uniyal, M.R. Udichya & A suggestion.
(JRIMH & Y, Varanasi)
80. Mitra, R.
Mehrotra, S. Pharmacognostical study on the heart wood of patanga, *Caesalpinia sappan* (Abst.)
(29th All India Pharmaceutical Congress Proc. Ind. Jour Pharma. Dec. 1977)
81. Mitra, R.
Mehrotra, S.
Mehrotra, B.N.
Kapoor, L.D. Pharmacognostical studies on *Asclepias eurassavica* Linn.
(Bull-Bot-Surv-Vol. 16, No. 14, 82-88, Oct. 1977)

93. Nanal, B.P.
Ranade, (Mrs.), S.S. Preliminary clinical trials of *Kakodumber* (*Ficus Hispida*) in cases of Switra.
94. Nanal, B.P.
Ranade, (Mrs.), S.S. Clinical trial of *Vidarikhanda* as *Shukrasanjana*.
95. Nanal, B.P.
Ranade, (Mrs.), S.S. Preliminary clinical trials of *Rakta punarnava* (*Boerhavia diffusa*) in cases of soth.
96. Nanal, B.P.
Ranade, (Mrs.), S.S. Clinical trials of *Shigru*, (*Moringa pterigosperma*) on all sorts of Udar krimi.
97. Nande, C.V.
Antarkar, D.S.
Jakhomola, A.T. Study of urinary 17 ketosteroid to assess *Vrsyatwa* (Androgenic activity) of Masa (*Phaseolous mungo*) ingestion in mala volunteers.
98. Nayar, R.C. A review on the Ayurvedic drug *Sariva*.
99. Nayar, R.C.
Shetty, J.K.P.
Yoganarsimhan, S.N.
Mary, Z.
Venkatrao, B.S. Pharmacognostical studies on the heart wood of *Pterocarpus marcupium* Rox (Asana).
100. Nayar, R.C. Pharmacognostical studies on the root of *Decalepis hamiltonii* Wt & Arn. and comparison with *Hemidesmus indus*. (29th Ind. Pharmaceutical Congress, Wal-tair).
101. Nayar, R.C.
Sharma, A.R. *Eichhornia a crassipes* (Mart). Solms—the water—hyacinth.
102. Nayar, R.C.
Shetty, J.K.P.
Mary, Z.
Yoganarsimhan, S.N. Pharmacognostical studies on the root of *Decalepis hamiltonii* Wt & Arn. and comparison with *Hemidesmus indicus* (R. Br.) (Ind. Academy Sc. Bangalore, 1977)
103. Nayar, R. C.
Mary, Z.
Yoganarsimhan, S.N. Pharmacognostical studies on the bark of *Acacia nilotica sp. Indica*. (JRIMY & H, Varanasi).

104. Pant, Vibha Some physical and chemical determination of *Mandur bhasma*.
(JRIMHY & H, 1977).
105. Pant, Vibha Some physical and chemical analysis of *Tamra bhasma*.
(JRIMHY & H, 1977).
106. Pataskar, R.D. Pharmacognostic study of bark of *F. hispida*.
(Journal of Poona University, Sci. Tech. Section, 1978).
107. Pataskar, R.D. Interesting medicinal plants from Sahyadri ranges, Nasik Dist.
(JRIMH & Y, Varanasi).
108. Patra, B.B.
Dasgupta, S.R.
Sikdar, S. Further studies of Ayush-49 on isolated smooth muscles (Proc-65th Ind. Sc. Cong. Part III, Jan., 1978).
109. Patra, B.B.
Mukherjee B.P.
Mukherjee, A.
Sikdar, S.
Dasgupta, S.R. Further studies of a chloroform extract of *Acorus calamus* on behaviour of rats under the experimental conditions.
(Decennial Conference, Indian Pharmacological Society, Calcutta, 1977)
110. Patra, B.B.
Bose, A.N.
Sikdar, S.
Dasgupta, S.R. Further studies on the growth and development of rat *filaria*, *Litomosoides carinii*.
(Decennial Conference, Indian Pharmacological Society, Calcutta, 1977)
111. Prasad, R.A. Ama Dosh, Evam uski, Chikitsa,
(Ayurveda Vikas, 1977).
112. Praveen Sharma,
Manju Sharma,
Rangaswami, S. Orientalone, a new 1,4-naphthaquinone from *Rumex orientalis*.
(I. J. Chemistry—Vol. 15B, 6, 544, 1977).

113. Premakumari, P. Antifertility activity of *Plumbagin*.
Rathinam, K. (Ind Jour. Med. Res. 65(6) 829-838, June,
Santhakumari, G. 1977).
114. Puri, H.S. Medicinal plants of India (in Punjabi)
(Punjab State University, Text Book
Board, Chandigarh).
115. Puri, H.S. Treatment for breaking the dormancy of
seed in *fenugreek*.
(Jour. Res. Ind. Med. Yoga and
Homoeo. 12, 109-17).
116. Puri, H.S. The C-19 diterpinoid alkaloids from
Aconitum falconeri.
(Phytochem-16(5), 623-24.)
117. Puri, H.S. Structure of falacontine and mithaconatine,
two novel diterpinoid alkaloids from
Aconitum falconeri.
(J. Chem. Soc. Chem. Comm. 12-13).
118. Radhakrishna Pillai Preliminary investigations of the antifungal
Hamsaveni, R. activity of *Cassia alata* linn.
Uma, R. (JRIMH & Y, Varanasi, Vol. XI, No. 2,
June, 1976, p. 70).
119. Radhakrishna Anti-gastric ulcer activity of *Nimbidin*.
Pillai, N. (Ind. Jour. Med. Res., July, 1978).
Suganthan, D.
Seshadri, C.
Santhakumari, G.
120. Rao, T.S. General survey of *Sleepada* in villages
Rao, P.V. around Razole (A. P.)
Kumari, Kusum, K.
121. Rao, T. S. A clinical study of *Vitiligo* with Ayush-57
Kuppurajan, K. (Ayu., Jamnagar).
Rajgopalan, V.
Janaki (Mrs.), K.

132. Santhakumari, G. Anti-fertility activity of Indigenous drugs.
133. Santhakumari, G. Effect of *Thyroid hormone* on reproduction in the female.
(Decennial Conference of Indian Pharmacological Society of Calcutta, December, 1977)
134. Santhakumari, G. Anti-coagulant activity of *Plumbagin*.
Rathinam, K. (Ind. Jour. Exp. Biol. — March, 1978).
Seshadri, C.
135. Seshadri, C. Biochemical changes in the female genital tract and liver in mated rats treated with *Embelin*.
(Decennial Conference of Indian Pharmacological Society of Calcutta—December, 1977).
136. Seshadri, V. A new *Crystalline lactone* from *Bombax malabaricum*.
Bhatta, A.K. (Ind. Jour. of Chemistry, 14, 617, 1976.)
Rangaswami, S.
137. Seshadri, V. *Praserigenin A-3-0-B-D, Glucopyranoside* and *Praserigenin A-3-0-L rhamnopyranoside*, two new glycosides from *Dioscorea proseri* and *Diosgenin—3-0-B-D Glucopyranosyl (1-3)-0-B-D Glucopyranosyl (1-4)-0-B-D Glucopyranoside*, A new saponin from *D-deltaoidea*.
Rangaswami, S. (Ind. Jour. of Chemistry, 10, 14, 735, 1976).
Rajaraman, K.
138. Seshagiri Rao, T. Effect of Vasti in *Pakshavadham* (Hemiplegia).
Hamsaveni, R. (JRIMY & H—Varanasi, Vol. XI, No.2
Shanmughadason, K K. June, 1976, p. 38)
139. Seshagiri Rao, T. Normal values of *Gamana Kalam* (walking time) and *Grahana sakti* (Grip power) in the people of Madras.
Hamsaveni, R. (JRIMY & H, Varanasi, Vol. X, No. 3, Sept., 1975, p. 118).
Shanmughadason, K.K.

140. Shah, N.C. Sadabahar—Raktakainsar ki vanaspatik aushadhi.
(Sachitra Ayurveda—pp. 682-684, March, 1978).
141. Shah, M.R. Punsamvan par Vichar.
(Niramayan, Nov., 1977).
142. Shah, M.R. Tamak Swas rog per ek anubhut yog ka prayogtmak adhyan.
(G.A.U., Seminar, Jamnagar).
143. Shah, M.R. Tamaka Swas—Samprapti ghatak-Anusar chikitsa.
(Sudhanidhi, Feb.-March, 1978).
144. Shah (Mrs.), M.M. Pranvahasrotas Sambandhit Vyayamyon ki chikitsa me Ahar Yojana ka Mahatva.
(Sudhanidhi, Feb.-March, 1978).
145. Shah, N.C. The mystery of Unani Tibb Medicine.
(Sachitra Ayurveda—pp. 828-831, May, 1977).
146. Shah, N.C. Ridhi—Bridhi Vinyachaya evam Vichar.
(Ayurveda Mahasammelan Patrika pp. 245-247, June, 1977).
147. Shah, N.C. Soma ka sahityik vivechana.
Badola, D.P. (Sachitra Ayurveda—pp. 207-214, September, 1977).
148. Shah, N.C. Pharmacognostical studies on *Angelica glauca* Edgew.
Mitra, R. (Bull. Bot. Surv. India—Vol. 16, No. 1-4, 40-47, October, 1977).
149. Shah, M.R. The factors may helpful in the treatment
Shah (Mrs.) M.M. of the diseases related to digestive system.
(Niramaya, Feb.-March, 1978).

150. Sharma, M.L. Roga apanitti galatiyan ke karma.
(Swasthya Sandesh).
151. Sharma, M.L. Aao pani peena seekhen.
(Avagahan, Gandhi Vidya Mandir, Shar-
darshar).
152. Sharma, M.L. Sweta pradar ka Samekshatmak adhyan—
A theoretical review.
153. Sharma, M.L. Roga kya hota hai.
(Chikitsak, Fatehabad, 1978).
154. Sharma, M.L. Shishi ka Amrit—Man ka doodh.
155. Sharma, M.L. Parivar Samadhan me hari ka yogadan.
156. Sharma, M.L. Manchahee Santan kaise payen.
157. Sharma M.L. Parivar Niyojan ek yugdharma.
158. Sharma, M.L. Sankhavati ka prayogatmak adhyan.
Dwivedi, G.
159. Sharma, M.L. Panjab and Ayurveda.
Sannd, B.N. (Panjab Govt. Seminar, Patiala).
160. Sharma, M.L. Ama eavam roga utpatti.
Sannd, B.N. (Panjab Govt. Seminar, Patiala).
161. Sharma, M.L. Clinical study on *Twagdosha*.
Sharma, Keerti (G.A.V.M. Seminar, Ahmedabad)
162. Sharma, C.R.R. Eye care in Ayurveda.
(Vaidyakala 1977)
163. Sharma, D.N. Ichhit Santan aapki haath.
Shah (Mrs.) M.M. (Niramaya, Sept., 1977)
164. Sharma, L. A survey study of the patients of three
Sharma, B.N. villages of Saurashtra with a special
Shukla, C P. reference to the *Pranavaha srotas*
ailments.
(Gujarat Ayurved University, Jamnagar,
November, 1977)

165. Sharma, B.N.
Sharma, L.
Shukla, C.P. A study of the folklore drugs action on the diseases of *Pranavaha srotas*. (Gujarat Ayurved University, Jamnagar, November, 1977).
166. Sharma, V.N.
Vyas, D.S.
Godhwani, H.L. Analgesic, anti-inflammatory and other pharmacological properties of ethanolic extract of *Bergenia ligulata*—A preliminary report. (J.R.I.M.Y. & H., Varanasi)
167. Sharma, K.S.
Deshpande (Mrs.) I.S.
Mahendale, V.V.
Somani, A.G.
Gupta, O.P.
Gupta, P.S.
Battigala, P.G. A study of *Bergenia ligulata* (*Pashana-bheda*) as a diuretic agent in various disorders.
168. Shetty, J.K.P. Pharmacognostical studies on the heartwood of *Pterocarpus marsupium* Roxb. Asana. (29th Ind. Pharmaceutical Congress, Waltair, 1977)
169. Shetty, J.K.P.
Abraham, Koshy
Yoganarasimhan, S.N. Phytochemical studies on the root of *Pygmacopremna herbacea* and its comparison with *Clerodendrum serratum*.
170. Shetty, J.K.P.
Venkataram, B.S.
Vakula, T.R.
Mary, Z. Preliminary studies on the effect of time, packing matter and light on certain Ayurvedic preparations.
171. Shetty, J.K.P.
Raj, P.V.
Abraham, Koshy
Venkataram, B.S. Standardisation of *Narikela lavana* and its comparative study with market sample.
172. Shukla, K.
Trivedi, V.P.
Sharma, V.K. A study of the effect of an indigenous compound drug on reproduction physiology. (All India Seminar on Shareer, Lucknow)

173. Shukla, P.
Tripathi S.N.
Mishra, A.K.
Udupa, K.N. Adrenal function studies in the cases of *Bronchial asthma*. (All India Seminar on Shareer, Lucknow March, 1978)
174. Singh, R.H. Studies on the biochemical changes in brain under the influence of four Medhya Rasayana drugs described by *Charaka*. (U.G.C. Seminar on the role of Indian Medicine in total health care, Varanasi, 1978)
175. Singh, R.H. Studies on the anti-anxiety effect of Medhya Rasayana drug *Brahmi*. (U.G.C. Seminar on the role of Indian Medicine in total health care, Varanasi, 1978)
176. Singh, R.H. Biochemical basis of psychosomatic constitution (*Dehaprakriti*). (All India Seminar on Shareera—1978)
177. Singh, R.H. Psychobiological studies on some Hathayogic practices. (All India Seminar on Shareera, 1978).
178. Singh, R.H.
Malaviya, P.C. Studies on the anti-anxiety effect of the Rasayana drug—*Ashvagandha*. (J.R.I.M.Y. & H., Varanasi, 13:1, 1978)
179. Singh, R.H.
Mehta, A.K. Studies on the psychotropic effect of the Medhya Rasayana drug *Shankhapushpi* (Part I). (J.R.I.M.Y. & H., Varanasi, 12:3, 1977)
180. Singh, P.P.
Das, P.K. Effect of *Cannabis* on locomotor activity in rats. (Ind. Jour Exp. Biology, 15, October, 1977)
181. Singh, R.H.
Mehta, A.K.
Agarwal, V.K. Studies on the psychotropic effect of the Medhya Rasayana drug *Shankhapushpi* (Part III). (J.R.I.M.Y. & H., Varanasi 12:3, 1977)

- Gupta, M.L.
Kohli, R.P. toxicity in mice and rats.
(Quart. J. Crude Drug—Res. Vol. 15,
U.S.A. 1977)
191. Srivastava, S.K. Thyroid function and mucosal pattern in
Tripathi, S.N. patients of malabsorption caused by intestinal
Mishra, A.K. parasites.
(Asian Congress of Parasitology Bombay,
Feb., 1978)
192. Subramaniam, K. Studies on Indian Utricularias open-
Yoganarasimhan, S.N. dichotomous pattern of venation in
leaves.
193. Suganthan, D. Antifertility activity of an Indigenous
preparation.
(Decennial Conf. of India, Pharmacological Society, Calcutta).
194. Surange, S.R. Pharmacognostic study of leaf of *C. dacty-*
Pataskar, R.D. *lon*.
Pandse, G.S. (J.R.I.M.Y. & H., Varanasi).
195. Tewari, P.V. 'K' tablets as an oral contraceptive agents.
Sharma, S.K. (J.R.I.M. June, 1977).
Basu, K.
196. Togunashi, V.S. Shreevalli—the correct Ayurvedic name
Venkataram, B.S. for *Acacia sinnuata* (Lam) Merr.
Yoganarasimhan, S.N.
197. Togunashi, V.S. A new source for the Ayurvedic drug
Venkataram, B.S. *Sariva*—indentification of *Sweta sariva*.
Yoganarsimhan, S.N.
198. Togunashi, V.S. *Eichhornia crassips* (Mart)
Solms—the water—hyacinth.
(B H.U. Seminar, Varanasi, 1977)
199. Togunashi, V.S. Discussion on the origin and identifica-
Venkataram, B.S. tion of *Kudhuhunchee*—a hitherto un-
Yoganarasimhan, S.N. known Ayurvedic drug introduced by
Rajananhari
(J.R.I.M.Y. & H., 1977)

200. Tripathi, R.M. Further studies on mechanism of action of *Albizzia lebbek* in albino rats. (X annual conference of Indian Pharmacological Society at Calcutta Dec., 1977)
201. Tripathi, R.M. Biswas, M. Das, P.K. General Pharmacological studies of *Albizzia lebbek*. (Jour Res. Ind. Med. Yoga & Homoco. 12-3,39, Sept., 1977)
202. Tripathi, R.M. Das, P.K. Anti-asthmatic and anti-allergic activity of *Albizzia lebbek*. (Ind. Jour. Pharmacology, 9-3-9-189-194, 1977).
203. Tripathi, S.N. Shukla, P. Mishra, A.K. Udupa, K.N. Experimental and clinical studies on adrenal functions in *bronchial asthma* with special reference to the treatment with *Sirish*.
204. Trivedi, V.P. Gupta, M.V. Singh, S.P. Singh, N. Kohli, R. P. An evaluation of Antihistaminic and anti-asthmatic effects of *Terminalia bellerica* Roxb.
205. Trivedi, V.P. Nesamany, S. Sharma, V.K. A clinical study of the effect of *Vibhitak phal* churna in cases of kas & swas. (C.C.R.I.M.H. Seminar.)
206. Trivedi, V.P. Nesamany, S. Standardisation of Indigenous drugs with the help of available data. (B.H.U. Seminar, Varanasi)
207. Trivedi, V.P. Nesamany, S. Sharma, V.K. A clinical study of the effect of *Tr. Rakta karveera patra* on the respiratory tract involvement in the cases of CHF. (G.A. University Seminar, Jamnagar).
208. Trivedi, V.P. An approach for utilising the recorded data for the purpose of standard marketing with special reference to *Brahat Panchmula*. (G.A.V.M. Seminar, Ahmedabad).

209. Trivedi, V.P. Pharmaceutical studies on *Parkinsonia aculata* Linn.
210. Trivedi, V.P. Sharma, J.P. A few suggestion for preparing pharmacopoeia for rural area.
211. Trivedi, V.P. Dixit, R.I. Lal. V.K. Orchids in the drugs market in Bareilly, Kanpur and nearby District.
212. Trivedi, V.P. Nesamany, S. Sharma, V.K. A clinical study of the effect of *Bilva majja* churna on intestinal parasites (udarkrimi).
213. Trivedi, V.P. Trivedi, N.D. An enumeration of pharmaceutically important vegetable drugs of central Himalayas (U.P. Hills) with their special reference in *Brihatrayi*.
214. Trivedi, V.P. Singh, J. Vegetable Psychotropic drugs of India.
215. Trivedi, V.P. Nesamany, S. Sharma, V.K. A study of cardio-vascular tonic—Effect of *Tinctare karveer*.
216. Tyagi, M.K. Tyagi, R.K. Sharma, Keerti, Bio-medical survey of village Hassanpur.
217. Tyagi, M.K. Tyagi, R.K. The concept of *Sadvritta* and *Swasth vritta* in Ayurveda.
218. Tyagi, R.K. Tyagi, M.K. Goyal, H.R. Sharma, Keerti A clinical study on krimi roga. (Ay. Mahasammelan patrika, 78)
219. Tyagi, R.K. Tyagi, M.K. Goyal, H.R. Sharma, Keerti Arithelmintic effect of an Ayurvedic compound in cases of ankus krimi (*Ankylostomiasis*) (Nagarjun, 1977)
220. Tyagi, R.K. Tyagi, M.K. Sharma, Keerti Anthelmintic properties of two Ayurvedic compound.

221. Tyagi, R.K. Krimi roga par ek Ayurvedeeya yog ka
 Tyagi, M.K. krimighna prabhava.
 Goyal, H.R. (Sachitra Ay., 1977)
 Sharma, Keerti
222. Varma, M.D. Amalaki Rasayana in the treatment of
 Singh, R.H. chronic peptic ulcer.
 Udupa, K.N. (JRIMY & H, Varanasi, 12-4, 1977)
223. Vankatraghavan, S. Prakriti (Constitution and temperament)
 Rajagopalan, V. as an aid to the prediction of peptic
 Janaki, (Mrs) K. ulcer (*Parinamasoola*)-II
224. Vankatraghavan, S. Ayurvedic approach to total health care.
 (B.H.U. Conference, Varanasi)
225. Varma, M.D. Ayurvedic education
 Sinha, B.N. (All India Seminar on Shareera, 1978)
226. Vyas, D.S. Antidiabetic and other activities of
 Sharma, V.N. A-marmelos and E-Liltorale,
 Sharma, H.K. (JRIMY & H, Varanasi)
227. Warriar, P.K. Effect of *Tiktaka Ghrata* on *Parinama-*
 Pillai, S.M. *shoola*.
 Santakumari, K. (JRIMH & Y, Dec, 1977)
228. Warriar, P.K. Effect of *Tiladi gutika* and *Matravasti*
 Pillai, S.M. of sahachara taila, on *Parinamashoola*
 Shantakumari, K. (JRIMY & H, Sep. 1977)
229. Yoganarasimhan S.N. Studies on the flora of Chikmagalur
 District, Vegetation.
 (65th Sess. of IPCA, Ahmedabad, 1978)
230. Yoganarasimhan, S.N. Pharmacognostical studies on the bark
 of *Acacia nilotica* sp indica—Babbula.
 (2nd Common health IPCA, Bombay)
231. Yoganarasimhan, S.N. *Oldenlantia nudicaulis*—a new record for
 Nayar, R.C. Karnataka state.
232. Yoganarasimhan, S.N. *Gaultheria fragrantissima*—a new record
 Nayar, R.C. for Karnataka state.
233. Yoganarasimhan, S.N. Studies on the flora of Chikmagalur
 Subramanyan, K. District.
 Razi, K. Vegetation.

234. Uniyal, M.R.
Chaubey, S.N. Traditional economical and important medicinal plants used in Amchi system at Laddakh.
235. Uniyal, M.R.
Mishra, O.P. Indigenous traditional medicines in vaterinary.
(Sachitra Ayurveda, June, 1977)
236. Uniyal, M.R.
Mishra, O.P.
Dixit, R.S. Botanical exploration Luhual, area in Himachal Pradesh (Indian forester).
237. Uniyal, M.R.
Tiwari, J.
Dixit, R.S.
Purohit, G.N. Bundelkhand—A home for *G. glabra* Linn (Mulahati)
(JRIMY & H, Varanasi)
238. Uniyal, M.R.
Tiwari, J.
Dixit, R.S. Important traditional medicinal plants of Bundelkhand recorded from Lalitpur forest Sub-division.
(JRIMH & Y, Varanasi).
239. Uniyal, M.R.
Tiwari, J.
Dixit, R.S. A market study of some controversial drug supplied from Haridwar & Dehradun.
(JRIMY & H)
240. Uniyal, M.R.
Tiwari, J.
Dixit, R.S. An effective drug in respiratory disorder 'Zufa' and its new botanical source *Nepeta longibracteata* Benth.
(Presented in Ayurvedic Research Seminar, Jamnagar)
241. Uniyal, M.R.
Tiwari, J.
Chaubey, S.N.
Dixit, R.S. Establishment of doubtful drug *Hastikarn*
Lea macrophylla.
242. Yoganarasimhan, S.N.
Subramanyan, K.
Razi, B.A. Studies on the flora of Chikmagalur district, Enumeration of Taxa.
(Vignana Bharati, Banglore, 1977)
243. Yoganarasimhan, S.N.
Togunashi, V.S.
Bhat, A.V. Preliminary observation on plants from Mysore district.

244. **Yoganarasimhan, S.N.** Studies on additional source for Indian
Togunashi, V.S.
Nayar, R.C.
Mary, Z.
245. **Udupa, K.N.** Stress and Cancer, Role of Indian Medi-
cine and Yoga in the Management.
(U.G.C. Seminar on Cancer, Varanasi,
1978).
246. **Uniyal, M.R.** Pariwar Kalyan Main Ayurved
(Madaliya pariwar kalyan Goasht at
Jhansi).
247. **Uniyal, M.R.** Uttarakhand Himalaya ki Van Sampada
Avem Jadibhutiyan
(Ayurveda Vikas.)
248. **Uniyal, M.R.** Gharelu chikitsa me Upyogi 'Haldi'.
(Patrika, May, 1977)
249. **Uniyal, M.R.** Khanijon ka pradesh Laddakh.
(Ayurveda Vikas).
250. **Uniyal, M.R.** Sanhhitokt Ajnat avem Sandigdha Dravya
vira vnishchaya.
(Sachitra Ayurveda, Jan., 1978)
251. **Uniyal, M.R.** Himachal Pradesh Ki Van Sampada
avam Jadibutiyan.
(Special issue of Samelan patrika Oct.
1977)
252. **Uniyal, M.R.** Agnikarma for piles in Laddakh regions.
(Suddha nidhi—April, 1977).
253. **Azeez Pasha, M.** Biographies of Unani, physicians found in
al-Hawi of rhasas.
(Bulletin of I.I.H.M. Hyderabad, Vol.
VII, Nos. 1 & 2. 1977)
254. **Govinda Reddy, C.** Indian Medical Historiography, Biblio-
graphy for 1965.
(Bulletin of I.I.H.M. Hyderabad, Vol.
VIII, Nos. 1 & 2, 1977)

255. Hussain, S.A. Development of Unani during Nizams' dynasty.
(Scientific seminar of Unani medical association, Hyderabad).
256. Jopat, P.D. Effect of Nakshatras on the growth and active principles of *Acorus calamus* (*Vacha*) (Nagarjun).
257. Jopat, P.D. Cultivation trials of *Allium sativum* (*Lashuna*) Linn. on different phase of Moon. (Nagarjun).
258. Jopat, P.D. Abstracts of medico-historical articles in Hindi journals.
(Bulletin of I.I.H.M. Hyderabad Vol. VII, Nos. 1 & 2, 1977)
259. Karnick, C.R. Cultivation trials of *Asteracantha longifolia* Nees (Talmakhana) used in Indian system of medicine, Part XI.
(J.R.I.M.Y. & H, 12:3, 1977)
260. Karnick, C.R. Studies on Indian medicinal plants, cultivation trials of *Vince rosea* linn.
(JRIMY & H-12 (1) : 101, 108, 1977)
261. Karnick, C.R. Cultivation of *Kurantaka*,
(J.R.I.M.Y. & H.—13 (1), 1978.
262. Karnick, C.R. Cultivation of *Ashvagandha*.
(JRIMY & H—No. 13, (1), 1978)
263. Karnick, C.R. Cultivation of *Kakamachi*,
(J.R.I.M.Y. & H., No. 13 (1), 1978)
264. Karnick, C.R. *Rakta Punarnava*
Sachitra Ayurveda, p.218-220, 1977)
265. Karnick, C.R. Cultivation trials of *Solanum nigrum* Linn. (*Kakamachi*) used in Indian system of *Barleria prioritis* Linn. (*Vajradandi*, *Kantajati*, *Katsareya* used in Indian System of Medicine—Part II.
(Indian Science Congress—65th Session Calcutta, 1978).

266. Karnick, C.R. Cultivation trials of *Withania somnifera* Dunal (*Asvagandha*) used in Indian System of Medicine, Part XIX. (Indian Science Congress—65th session, Calcutta, 1978)
267. Karnick, C.R. Ayurveda—The foundation source of the medical science of the World. (Sachitra Ayurveda—pp-568-579)
268. Karnick, C.R. Cultivation trials of *Coleus aromaticus* (Nagarjun).
269. Karnick, C.R. Cultivation trials of *Asparagus racemosus* willd. (Nagarjun).
270. Karnick, C.R. Studies on *Achyranthes aspera*. (Nagarjun).
271. Karnick, C.R. Studies on indigenous plants exhibiting anti-asthmatic and anti-cancerous properties—*Tylophora asthmatica* W.A. etc. (Symposia/seminar—Poona University, 1977)
272. Karnick, C.R. Pharmacognostical aspects of some crude drug samples of *Cinnamomum species* of Indian markets. (Symposia/seminar—Poona University, 1977).
273. Karnick, C.R.
Jopat, P.D. Effect of the crude plant extract of *Tylophora asthmatica* W. & A. on bronchial lesions. (XVI Maharashtra State Tuberculosis & chest diseases conference, 1978).
274. Karnick, C.R.
Jopat, P.D. Some observations on the reduction of obesity by the use of *Achyranthes aspera* Linn—grown in lunar phases. (Indian Science Congress, 65th Session Calcutta).

275. Karnick, C.R.
Jopat, P.D. Effect of *Argyria speciosa* sweet in cure
of various types of absesses.
(JRIMY & H).
276. Karnick, C.R.
Jopat, P.D. Effect of Lunar phases on growth, active
principles and clinical trials of *Aristo-
lochia indica*.
(Nagarjun).
277. Nand Raj, Changing pattern of homoeopathic
practice,
(XXXII International Homoeopathic
medical congress—Delhi, 1977).
278. Nand Raj,
Raghunathan, K. Reflections from the life of Dr. Karl
Julius.
(Bulletin of I.I.H.M. Hyderabad, Vol.
VII, Nos. 1 & 2, 1977).
279. Nand Raj,
Raghunathan, K. Edward back—A Medico-Historical study
of his contributions to Homoeopathy.
(Bulletin of I.I.H.M., Hyderabad, Vol.
VII, Nos. 1 & 2, 1977).
280. Pandey, A.
Raghunathan, K, Sukira sudhira.
(Bulletin of I.I.H.M., Hyderabad, Vol.
VII, Nos. 1 & 2, 1977).
281. Rama Rao, B. Medicine and health in the *Srishtikhand*
of *Padmapurana*
(Bulletin of I.I.H.M., Hyderabad, Vol.
VII, Nos. 1 & 2).
282. Rama Rao, B. Introduction to the study of history of
Ayurveda.
(To the students of Govt. Ayurvedic
College, Hyderabad).
283. Rama Rao, B. Importance of historical evidences and
manuscripts literature for medical history.
(To the students of Govt. Ayurvedic
College, Hyderabad).

284. Rama Rao, B. Importance of medical manuscripts for history of Ayurveda.
(Dhanwantari Jayanti celebrations, A.L. Govt. Ayurvedic College, Warrangal).
285. Rama Rao, B. Origin and development of *Dravyaguna* in India.
(Scientific seminar, Dhanwantari Jayanti celebrations, Warrangal, 1977).
286. Subba Reddy, D.V. Personal reminiscences of Dr. P. Kutumbaiah.
(Bulletin of I.I.H.M. Hyderabad, Vol. VII, Nos. 1 & 2, 1977).
287. Subba Reddy, D.V. XXV International congress of history of medicine.
(Bulletin of I.I.H.M. Hyderabad, Vol. VII, Nos. 1 & 2, 1977).
288. Subba Reddy, D.V. International news and events.
(Bulletin of I.I.H.M. Hyderabad, Vol. VII, Nos. 1 & 2, 1977).
289. Nand Raj,
Raghunathan, K. News and Notes.
(Bulletin of I.I.H.M. Hyderabad, Vol. VII, Nos. 1 & 2, 1977).

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YOGA SECTION

Abstract : Shivanand Math (Umachal Yogashram) and Yogic Hospital, Gauhati

The Institute provides yogic treatment for various health problems. Facilities for indoor (50 beds hospital, as well as out door patients treatment is available. Alongwith yogic treatment emphasis is laid on the dietic regime. It is felt that a vegetarian food, free from concentrated and refined products is essential for keeping a healthy body. Certain modification in the yogic technique has been done and put into practice for treatment. In place of traditional pranayamic techniques, Sahaj Pranayama and Bhraman, Pranayama (Breathing exercise while walking) have been introduced-Similarly, new asanas and mudra, viz marjar-asaa, and Hasta Mudra, Pada mudra etc. have also been introduced.

The research work on asthma is almost complete with cure of about 98% of the asthmatic patients. The present research work has confined to :-

1. Various gastro-intestinal disorders.
2. Diabetes mellitus
3. Hypertension.

During the period under review, indoor treatment was provided to the patients suffering from following diseases :-

Table-I

1. Gastro-intestinal disorders:-	
i. Chronic peptic ulcer.	231
ii. Chronic ameobic dysentary	62
2. Diabetes millitus	12
3. Hypertension	10
	<u>315</u>

The total number of patients treated indoor as well as out patients is given in.

Table II

Gastro-intestinal disease	893
Hypertension	47
Asthma	111
Arthritis	40
Chronic Dysentery	346
Diabetes mellitus	42
Heart disease	54
Fistula	2
Hernia	9
Headache	110
Indigestion and less appetite	335
Constipation	596
Anemia	186
Cancer	10
Leucorrhoea	18
Leucoderma	5
Menstrual trouble	85
Piles	49
Paralysis	20
Pyorrhoea	217
Spondylitis	24
Other diseases	414
	<u>3613</u>

On average about 95% indoor patients were cured and result of cure for outpatients were 50%.

The Branch Ashram at Calcutta with 50 beds Hospital where treatment and Training in Yogic system is provided also in the rural sector of Midnapore. A junior residential High School has been established where sattvika diet is provided to students and research on dietic principle is being conducted. Most of students are from poor families and Harijan community. There is reason to believe that yoga practice and satvikadiet is bringing positive changes in their physical and mental health. It is proposed to carry out the following research studies.

- (i) Study of effect of various fruitjuices on the patients.
- (ii) Effect of various vegetables on the patients.
- (iii) Effect of different types of Asanas, mudras, pranayama Dhauti, etc.

It is also proposed to undertake a new scheme for research on cancer.

It is felt that there is necessity of a laboratory and additional staff to conduct work.

Abstract : Government Yogic Treatment-Cum-Research Centre, Bapunagar, Jaipur :

Report of the work for the Period Ending March, 78

This yogic treatment-cum Research Centre was established in 1971 with the objective of establishing scientifically the role of yogic therapy in the treatment of bronchial asthma and chronic gastro-intestinal disorders. For the study of yogic treatment in these group of diseases, two well equipped laboratories, one for routine investigations and other for research work were set up. The salient features of the study done from the date of inception the project till the period 31st March, 1978 are:-

1. Bronchial Asthma :

Only established cases of bronchial asthma of various types like perennial, irregular or seasonal, were admitted for treatment of patients suffering for any infections or cardiac problems were excluded. The assess-

ment is based upon the subjective changes such as frequency, duration and severity of attack and objective parameters such as rate of respiration, lung sings, chest expansion peripheral blood picture and esnophil count in nasal secretion and sputum etc. The treatment consisted of the practice of Shat Karma, Sukhshym Vyayam, Asana and pranayama for 2½ hours. Upto the period March' 78. 219 patients of bronchial asthma were admitted for treatment, 56 patients left the treatment. Out of the 163 patients who completed the course of treatment, 113 showed improved (69%) In the period under review i.e. 1977-78, 53 patients were admitted improvement was observed in 22 cases (41.5%).

2. Gastro Intestinal Disorders

In this group, patients suffering from any gastro-intestinal disorder of chronic nature were admitted. The common disease which included in the study were

1. Hyperacidity/Hypoacidity
2. Chronic gastritis
3. Chronic Enteritis
4. Chronic colitis of any nature
5. Malabsorption syndrome
6. Maldigestion
7. Chronic constipation

Patients suffering from any cardiovascular or lung disease where exercises were contraindicated were excluded from the study. The assessment was based upon clinical findings and laboratory investigation like, routine stool examination, stool examination by concentration method, fractional test meal analysis. Barium X-ray studies were also done, whenever, indicated.

The yogic treatment in principal was same as in bronchial asthma, with some difference in yogic techniques applied. In the period upto March,78, 148 patients were admitted, out of which 100 completed the course of treatment and 69 (69%) showed improvement. In the period

under review, 26 cases were admitted and 8 left without completing the treatment and 8 showed improvement out of the remaining 14 patients (57%).

ANNUAL Report 1977-78, Grant-In-Aid Unit of Scientific basis of Yoga (Therapeutic Studies), Institute of Medical Sciences, Bhu, Varanasi.

In the period under review, 163 patients suffering from various psychosomatic problems had been treated by yogic therapy. The various problems under study and results of treatment were as under :

S. No.	Disease	Partial to complete relief	No. relief	L.A.M.A.	Deterioate	Total
1.	Hypertention	17 (68%)	2 (8%)	4 (16%)	2 (8%)	25
2.	Diabetes	10 (50%)	4 (20%)	4 (20%)	2 (10%)	20
3.	Bronchial Asthama	14 (70%)	1 (5%)	4 (20%)	1 (5%)	20
4.	Rheumatoid Arthritis	24 (72%)	2 (6.25%)	4 (12.5)	2 (6.25%)	32
5.	G.I.T. disorder	16 (64%)	3 (12%)	4 (16%)	2 (8%)	25
6.	Thyrotoxicosis	5 (100%)	—	—	—	5
7.	Anxiety Neurosis	17 (85%)	—	3 (15%)	—	20

A review of the result of clinical treatment on various diseases is given below :

(1) Hypertension :

The results in this group were not uniform. About 32% patients showed symptomatic relief with significant decrease in blood pressure and drug requirement. In the rest of the patients the results were not very satisfactory.

(2) Diabetes Mellitus :

In this group about 50% cases responded well to a combined therapy of yogic practices and oral hypoglycemic drugs. In the rest of the cases the results were not satisfactory while the remaining cases showed either no change or deterioration.

(3) Bronchial Asthma :

About 70% cases showed good response to yogic treatment. No attempts were made for radiological assessment. Also a few cases could not be followed up.

(4) Gastro-Intestinal Disorders :

Patients suffering from chronic dyspepsia ulcerative colitis and other colon problems were treated. Most of the patients showed improvement in their symptoms.

(5) Thyrotoxicosis :

Although number of patients in this group were small but all of them showed relief in their symptoms. Evaluation of thyroid function could not be done.

(6) The patients of anxiety neurosis showed relief symptomatically and also in their requirement of tranquilizers.

Apart from that some patients suffering from chronic tonsillitis, epilepsy and bleeding piles were also treated with good results. However, this was a preliminary study.

A study of changes in biochemical parameters influenced by yogic therapy was conducted. For this, an attempt was made to study urinary excretion of choline, adrenaline, noradrenaline, 5-hydroxyindoleacetic acid, (5-HIAA), 17-Hydroxycorticosteroids (17-OHCS). The results are not uniform, however the present data indicates the possibility that yogic practice may normalize these biochemical metabolites.

**Abstract : The Indian Institute of Research in Yoga in Allied Sciences
Tirupati :**

The work started in Patanjali Yoga Research Institute, Hyderabad in 1968. The Institute was merged with present Indian Institute for Research in Yoga and Allied Sciences, Tirupati in 1975. The work slowed down temporarily due to various problems but has considerably gained momentum since 1977. In the year 1977-78, the following patients were treated at this Institute as indoor patients. (at annexure I)

The problems undertaken for study work:

1. Promotional and Maintenance of Health.

2. Therapeutic remedy and treatment of diseases like diabetes mellitus, respiratory allergy, hypertension, cardiac ischaemia, gastric ulcer, constipation, parkinsonism etc. All the persons admitted for yogic treatment were clinically examined by the qualified physicians and routine pathological investigations of urine, stool, blood were conducted, screening, X-Ray were also done in all cases particularly in the cases of respiratory allergy and cardiac problems. Biochemical investigations like glucose tolerance test, serum cholesterol, serum urea and uric acid estimation were also done whenever required. In the physiology Deptt., the following investigations were conducted.

1. Lung function test
2. Oxygen consumption
3. Efficiency studies
4. Blood for pCO_2 , HCO_3 and pH

EEF, EKG and other investigations were conducted in Physiology Department.

The work conducted shows that yogic treatment is beneficial in the following diseases.

1. **Respiratory Allergy** :Yogic treatment was effective in giving relief and there is possibility of even bringing a cure.

2. **Hypertension** : By the practice of Yoga, blood pressure decreased and it was found to be a preventive measure of recurrent attacks of cardiac ischaemia and paralysis.

3. **Diabetes mellitus** : It is found that adult subjects showed an improvement while juvenile diabetics required further study.

4. **Other problems** : Cases of arthritis, colitis constipation, cold etc. were either relieved or cured by yogic treatment. It is proposed to conduct research on many new projects.

- a) Refractive errors of the eye by special yogic technique for the eye.
- b) Yoga for varicose veins.
- c) Yoga for Athletic competition.
- d) Yoga for enlarged prostate, particularly in obese people.
- e) Improvement of memory and intellect of students.
- f) Maintenance of Health in the aged.
- g) Improvement of the mentally retarded.
- h) Spondylitis.
- i) Neurological disorders like Sciatica.
- j) Epilepsy through Yoga and Biofeedback treatment. Apart from research work on clinical and fundamental aspects of Yoga, training was also provided by many Yoga training courses of one month duration and from period 1975 to 1978 about 300 people have been trained. Many of them were engineers, army persons and students. The Institute also participated in many conferences and seminars.

INPATIENTS

ANNEXURE I

1977	Bronchial Ashtma		Diabetes mellitus		Hypertension		Other cases	Total	Type of cases admitted
	M	F	M	F	M	F			
April	3	0	2	—	—	—	—	5	
May	2	0	1	1	—	—	—	4	cervical spondylites stammering
June	3	2	1	—	—	—	—	6	Epilepsy Hypertension and Asthma
July	4	3	1	—	—	—	—	8	Hypertension and Asthma Hypertension and Bronchial Asthma
August	5	2	—	—	2	—	1	10	
September	5	1	—	—	4	—	1	11	

October	6	3	—	—	5	—	1	15	
November	8	6	—	—	9	—	1	24	
December	14	9	3	—	10	—	1	37	Number of patients fell in treatment due to
Jan.	9	1	1	—	2	—	6	19	improvement in bronchial asthma cases.
February	8	1	2	—	3	—	5	19	and also due to absence of Dr. Melkote for about 15 days from middle of Feb.
March	5	1	1	—	2	—	1	20	to Ist week of march as he had gone to Banaras University to attend the National Conference on Ayurveda and Yoga also to Delhi.

72	29	12	1	37	—	17	168
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UNANI SECTION

Central Research Institute (Unani), Hyderabad

Clinical studies on the following problems were continued at Central Research Institute (Unani), during the year under report.

- | | |
|----------------------------|---------------|
| 1. Bars | (Vitiligo) |
| 2. Warm-a-Kuliya | (Nephritis) |
| 3. Yarqan | (Jaundice) |
| 4. Iltehab Tajaweef-e-Anaf | (Sinusitis) |
| 5. Sailanur Reham | (Leucorrhoea) |

The problem of Malaria has been taken up in collaboration with National Malaria Eradication Programme. The studies were carried out in OPD and IPD of the Hospital of the Institute with the co-operation of other departments i.e. Pathology, Pharmacy etc.

A. Clinical Research Programme

1. Bars.

This year also the cases of Bars, like previous years, dominated in number, as compared to the number of cases studied for other problems. A total number of 2246 cases (2167 in OPD and 79 in IPD) were studied this year. Out of the 2167 cases who attended OPD, 1343 were new cases where as 824 were old cases. Among the 1343 new cases 860 (64%) were of local residence, 270(20.1%) were from other parts of Andhra Pradesh, 206 (15.3%) from other States of India and 7 (0.5%) from other countries.

The drugs used were as under :-

- a) S and KZF, KZ and RH (New Formulae)
- b) Zemad, Zulal and Sufoof (Old Formulae)

The trials with the new formulae, S and KZF, KZ and CH have been completed and their efficacy is under assessment. The age group in which the incidence of Bars was highest, was recorded as 11-20 years.

Other relevant studies i.e. sex, dietary habits, social status, were continued and the data was recorded. According to the distribution of the lesions, the cases could be grouped as under:-

Unilateral-133 (9.9%), Bilateral 584 (43.5%), Bilateral & Symmetrical 253 (18.8%), Lips only 81 (6.1%), Genitals only 22 (1.6%), Lips and Genitals 5 (0.4%), Front side 125 (9.3%), Back side 26 (1.9%), Front and back side 114 (8.5%).

It was noted that the number of bilateral and bilaterally symmetrical cases was the highest among the cases studied. It indicates that the lesions tend to spread and adopt bilateral and bilaterally symmetrical appearance in majority of cases.

The incidence of heredity assessed on the basis of family history was recorded 16% this year.

Association of Bars with other diseases was insignificant except that helminthic manifestation was reported positive in 209 cases.

The chronicity of Bars ranged from below 3 months to above 30 years. The response of the treatment is shown in the table below :

Response	No. of patients	
	OPD	IPD
100%, Complete cure	16	—
91%—99%	29	3
71%—90%	132	6
51%—70%	87	3
41%—50%	101	6
Poor response below 41%	394	8
No response	139	7
Other categories	565	15
Shifted to I.P.D/OPD	38	18
LAMA	666	13
	<u>2,167</u>	<u>79</u>

As shown in the table above, the general response of treatment was noted 64.26% whereas the average percentage of cure was 42.88 percent. It was however observed that the efficacy of the new formulae i.e. S + KZF, KZ and CH is not so encouraging as that of old formulae, ZI, SF and Zulal. No particular toxic effects were found in the drugs under trial in prescribed dosage. However some of the cases, who were given KZF tablets (orally) complained of abdominal gripping and some of those given RH, complained of nausea and vomiting. The side effects were not significant and were controlled promptly.

2. Warm-E-Kuliya

The total number of the cases who attended the OPD of the Institute, was 109 from which 19 patients were admitted in the I.P.D., 62 were referred, to other Institutions as these were declared non-study cases after the final diagnosis, and 17 cases discontinued the treatment against medical advice. Of the remaining 11 cases, one cured completely, 4 relieved, one partially relieved and 5 were under treatment.

25 cases remained under study in I.P.D., out of which 8 were referred to other Institutions being non-study cases, 3 cured completely, 7 relieved and 7 discontinued the treatment against medical advice.

The results were assessed as per criteria laid down for the study.

3. YARQAN

The studies were carried out in O.P.D. and I.P.D. The number of cases who attended OPD was 54, out of which 9 cases were admitted to IPD, 22 cases (non study) were referred to other Institution and 9 discontinued the treatment against medical advice. Out of remaining 15 cases, 10 cured completely and 5 relieved.

14 cases were treated in I.P.D. of which 7 cured completely, 2 relieved, one discharged against medical advice and 4 were referred to other Institutions (non study cases)

4. ILTAHAB TAJAWEEF-E-ANAF

The number of cases recorded for study in O.P.D. was 111, out of which 8 were shifted to I.P.D., 11 non-study cases referred to other Institutions and 59 cases were discharged against medical advice. Out of

remaining cases 4 were cured completely, 16 relieved, 11 partially relieved and 2 cases did not show any response to the treatment.

7 cases were treated in I.P.D. 4 were cured completely, and relieved, one partially relieved and one discontinued treatment against medical advice.

5. SAILAN-UR REHAM

230 cases of Sailanur Rehan were studied in the O.P.D. of these 46 cases were shifted to I.P.D. 7 (non-study) were referred to other Institutions, 104 discontinued treatment against medical advice and 16 were continuing treatment. Out of remaining cases, 11 were cured, 13 relieved, 26 partially relieved and 7 cases did not show any response to the treatment.

53 cases were treated in I.P.D., out of which 17 were cured, 14 relieved, 3 partially relieved, 3 showed no response, 3 (non study cases) were referred to other Institutions and 13 discontinued treatment against medical advice.

(B) Pathology Department

During the period under report 2210 cases falling under various problems were referred to this Department for various Investigations both from out patients and in patients Sections. A total 8712 investigations were carried out (complete Blood Picture 1947, ESR 1718, routine urine analysis 2091 stool 1778, Bactirial Exam. 141, and Blood Smear for Malarial Pasantite 1037).

(C) Biochemistry Department

Following investigation were carried out in Biochemistry Laboratory in various problem under study.

- (i) **In cases of Bars :** Total proteins - 636, A/G ratio 636, Fibrinogen 596, Serum copper 629.
- (ii) **In cases of Yarcen :** Serum bilirubin 47, Venden bergh 35, SGPT 5, Blood Urea 1, Serum Cholesterol 17, Total protein 37, AG ratio 37, Fibrinogen 17.

- (iii) **In cases of Warm-e-Kuliya** : Blood Urea 30, Blood Sugar 4, Serum Cholestrol 26, Total protein 32, A/G. ratio 32, Febrinogen 21.
- (iv & v) **In cases of Sai lanur Reham and Iltihab Tajaweef Anaf** : Total protein 9, A/G ratio 9, Fibrinogen 7, Serum cholestrol 8, Blood urea 2, Blood Sugar 4, SGPT 3.

(D) Pharmacy Department

Pharmacy department prepared different types of medicines required for the use in Institute's Hospital and also for supply to the Clinical Research Unit, New Delhi. In total 2435 kg. of medicine was prepared for research purpose. Out of which 90 kg. of medicine was supplied to the Clinical Research Unit, New Delhi.

(E) Photographic Section

1212 patients of Bars were referred to this section for photographic record. 994 were fresh cases where as 218 were follow up cases. This section maintained the photographic record systematically for research purpose.

(F) Statistical Section

This section continued to work and appropriate statistical methods were utilised for various research investigations (both Clinical and Laboratory) carried out in the Institute.

(G) Library

Steps have been taken to expand the small reference library of the Institute so that it may be better utilised by the research workers of the Institute.

Other

The Institute arranged various clinical meetings and symposia during the year and 43 papers on different topics related to the problems under study were presented/read by the research workers.

Clinical Research Unit (Unani) New Delhi

Study of the following Clinical problems was continued during the reporting year:

1. Kasrat-e-Tams (Menorrhagia)
2. Zaheer-e-Muzmin wa Zoosantaria mewi (Chronic Dysentery)
3. Bars (Vitiligo)

1. Kasrat-E-Tams

The total number of patients who received treatment under this problem was 85, out of which 74 were old patients being followed up. The number of new cases registered for study was 11. The single drug Tukhm-e-Bartang (*Plantago major*, Seeds) was administered to the patients in three forms (1) Biryani (2) Sheera (3) Plain.

The cases were studied as per criteria already laid down. Out of 4, cases who underwent treatment 2 were cured, 1 relieved and one showed no response.

2. Zaheer-E-Muzmin Wa Zoosantaria Mewi

The number of cases studied under this problem was 398, out of which 69 were new and 329 were old cases continuing the treatment.

Laboratory investigations were carried out as per schedule for diagnostic as well as follow up purpose.

Two drugs (1) (Post Bekh-e Madar (Single drug), and (2) Tiryagu-e-Pechish (compound) were tried.

The drug Post Bekh Madar (D2) showed comparatively better results than Tiryag Pechish (P2).

The results of 69 cases observed may be catagorised as under :
Drug - D2, Cases - 42 Cured - 14, Relieved - 19, No response - 5,
Drug P2, Cases - 5, Cured - 1, Relieved - 3, Adverse effect - 1,
22 cases discontinued treatment against medical advice.

3. Bars

The problem of Bars (Leucoderma), was studied with two group of medicines : (1) S1, Z1, & Z11 (for continuing patients) (2) Safoof-e-Bars (control group).

The first group was further divided into sub group for detailed study.

1106 cases including 5 new patients treated with first groups of drugs. Further new cases in this group were stopped and only follow up cases were continued. 448 cases were treated by the second group of medicine. Two female patients got cured in the first group and one male patient got cured in second group. The result and response in other cases observed may be shown as under :

Ist group

Percentage relief	No. of Cases
81-99%	16
61-80%	16
41-60%	9
21-40%	7
1-20%	17
	<hr/> <u>65</u>

Second group

81-99%	-
61-80%	1
41-60%	7
1-20%	2

Various investigation were carried out in the Pathology/Biochemistry laboratory of the Unit for the purpose of diagnosis and assessment of the results.

Clinical Research Unit (Unani) Madras

The Unit has continued studies on the following problems :

- (1) Wajaul Mufasil (Rheumatoid Arthritis)
- (2) Zeequn Nafas (Bronchial Asthma)
- (3) Yarqan (Jaundice).

This Unit has already completed pilot study on the problem of Wajaul Mafasil and Zeequan nafas and two monographs i.e. 'Clinical study of Wajaul Mafasil' and Clinical study of Zeequan nafas, have since been published during the year under report. However, further extensive studies were continued on these problems. The number of cases who attended the OPD and IPD of the unit in different problems, may be shown as under :

	Zeequn nafas		Wajaul Mafasil		Yarqan		Total cases
	New	Old	New	Old	New	Old	
OPD	875	3,000	43	98	2	-	4018
IPD	22		21		11		54

(a) Wajaul Mafasil

In Wajaul Mafasil the efficacy of the drugs Majoon-e-Barg-e-Sambhalu and Majoon Post Sambalu, by administering 10 gm of each thrice a day for 21 days, under separate groups has been studied. The cases have been followed up in order to observe any recurrence or relapse of the disease. It has been observed that the drug Majoon Barg Sambhalu shows better results in comparison to Majoon Post Sambhalu.

(b) Zeequan nafas

The efficacy of the drugs Majoon maghz-gajga, Majoon maghz Karang and Majoon-e-Zeeq, by administering 10 gm thrice a day for 21

days in each group in the cases of Zeequn nafas has been assessed. All the three preparations have been found effective. specially Majoon maghz gajya which acts as antieosinophilic.

(c) Yarqan

The cases of Yarqan were studied with the drugs Majoon Tukhm Kasni, Majoon gul Babool and Majoon Sumbul-uttech. 10 gms of each drug was administered thrice a day for 21 days in separate groups of patients. All the three preparations have been observed effective in the treatment of Yarqan particularly the Majoon Gul Babool was found more effective.

Routine and special laboratory investigations were carried out while studying the above problems for the purpose of diagnosis and assessment of results.

Drug Standardisation Research (Unani) Delhi

The Unit is engaged in standardisation of single drugs used in Unani System of medicine. The studies carried out may broadly be categorised as under :

A Pharmacognostic and Chemical work

B. Documentation Programme on drugs

A. Pharmacognostic and Chemical work

Studies on following drugs were carried out.

1. Satar-farsi

2. Ustukhudus

3. Aftimoon

4. Babchi

5. Zufa

6. Gul-e-Gaozaban

7. Marzanjosh

1. Satar-farsi

Different samples of the medicine were examined, botanical identification work of the source plant also carried out, macroscopic and microscopic studies completed and chemical analysis was also completed.

2. Ustukhudus

Market samples of the imported drugs examined. Botanical identification work carried out. The Indian drug named as Ustukhudus also examined. Chemical analysis work completed. Comparative study of the imported *Lavendula* sps. and India herb *Prunella vulgaris* was carried out.

3. Aftimoon

The study of the herbaceous parasites was undertaken. Botanical identification of the source plants confirmed. Macroscopic and microscopic studies continued. Chemical analysis work completed. Comparative study of three parasites was carried out.

4. Babchi

Chemical analysis work on the commercial sample completed. Further work was continued to report the chemical work not done so far.

5. Zufa & Dyanku

The studies on the imported Unani drug 'Zufa and Indian drug Dayanku' was completed.

6 & 7 Gul-e-Gaozabaun and Mirzanjosh

Efforts were continued to confirm the botanical identification work of the market sample of Gul-e-Gaozaban and chemical work was continued. Preliminary work on identification of the source plant of *Mirzanjosh* was continued. Detailed work on Pharmacognostic and chemical analysis lines is in progress.

B. Documentation work

Documentation work on the following unani drugs consulting classical and modern books was carried out.

- | | | |
|----------------------------|------------------------|---------------------|
| 1. <i>Gul-e-Gaozaban</i> | 2. <i>Aftimoon</i> | 3. <i>Atrilal</i> |
| 4. <i>Anjir Dashti</i> | 5. <i>Laung Dashti</i> | 6. <i>Unnab</i> |
| 7. <i>Nilofar</i> | 8. <i>Alsi</i> | 9. <i>Aslussoos</i> |
| 10. <i>Tukham-e-Khatmi</i> | | |

Clinical Screening Unit (Unani and Allopathy) CDRS, Aligarh

The Unit continued trial of following single drugs in certain clinical conditions.

1. *Ustukhudoos* (*Lavandula stoechas* Linn.) in cases of *Iltihab Muzmin* (Chronic Sinusitis)

2. *Artital* (*Ammi majus* Linn.) in cases of *Bars*.

3. *Karanjwa* (*Caesalpinia bonducella*) in cases of acute malaria.

Ustukhudoos was given orally in the form of tablet (0.75 gm), 4 to 6 tablets in two or three equally divided dosage according to the condition of patient. The duration of therapy ranged from 10 to 60 days (average 35 days) depending upon response of the drug. The cases were subjected to physical and laboratory investigations for the purpose of diagnosis and assessment of results. 16 cases of *Iltihab-e-Khaishoom muzmin* were kept on two drugs and the results were encouraging. The findings are that the drug is effective irrespective of age and sex of the patient, all the cases showed significant improvement as shown below :

Results	No. of cases	Percentage
Cure	—	—
Improved	14	87.5%
No change	2	12.5%

Symptomatic response in various clinical findings may be shown as below :

Feature	No. of cases	Improvement	Percentage
1. Headache	14	14	100%
2. Nasal obstruction	10	10	100%
3. Nasal discharge	10	9	90%
4. Frontal tenderness	13	13	100%
5. Fever	2	2	100%
6. Sneezing	3	2	66.66%
7. Transillumination	16	14	87.5%
8. X-ray-P.N.S.	16	14	87.5%

The trial of drug *Atrilal* was continued in the cases of *Bars* (Vitiligo). It was found that the drug is effective in cases of *Bars* irrespective of age, sex, extent of lesion and duration of illness. The studies were carried out as per parameters already laid down. 264 cases were selected for study out of which 96 patients continued from last year. The following table shows the results :

Result	No. of cases	Percentage
Good	91	34.46
Fair	102	38.63
No change	8	3.03
Continued	42	15.09
LAMA	21	7.98

Karanjwa was tried in 19 cases of Malaria, but it did not show any response in such cases.

Pharmacognosy Research Unit CDRS, Aligarh

This Unit continued the pharmacognostic studies of unani single drugs. The pharmacognostic studies of the following two drugs were completed during the period under report.

1. *Ammi visnaga* Linn. (Fruit)
2. *Portulaca quadrifida* Linn. (leaf)

The study of the following drugs have been continued and is in progress :

1. *Portulaca quadrifida* Linn. (stem)
2. *Caesalpinia bonducella* Linn. (seeds)
3. *Plantago major* Linn. (Seeds)

The fruit of *Ammi visnaga* Linn is the adulterant to *Ammi majus* Linn. The detailed macro and microscopic structures alongwith fluorescence analysis, quantitative microscopic studies and some preliminary

phyto-chemical examination etc. were carried out with an idea to identify it when adulterated or substituted by allied Umbelliferous fruit.

Macro/microscopic characters of the drug *Portulaca quadrifida* were studied and fluorescence analysis of the powdered drug was performed.

Pharmacology Research Unit CDRS, Aligarh

The Unit is engaged in Pharmacological screening of single Unani drugs to study the mechanism of action and toxicity. The study on the following drugs was carried out.

Ghungchi Sufaid (*Abrus precatorius* Linn.)

Aqueous and alcoholic extracts of *Sufaid ratti* (*Ghungchi*) were pharmacologically investigated for the following parameters :

- (i) Local anaesthetic activity (surface and infiltration anaesthesia in G. pigs, sciatic nerve block in frog.)
- (ii) General behaviour in rats
- (iii) Acute toxicity in rats
- (iv) Total temperature in rats
- (v) Metrazol induced seizures in rats
- (vi) Pentobarbitone sleeping time in rats
- (vii) Diuretic activity in rats
- (viii) Rabbit intestine
- (xi) Rectus abdominis muscle of frog
- (x) Uterus of rats
- (xi) Frog heart perfusion
- (xii) Oestrogenic and antioestrogenic activity in rat (4 day uterine weight assay, vaginal opening).
- (xiii) Antiimplantation activity in rat.

The drug was tried in various log doses of 100 μ 300 mg (Alc. Ext.) and 100 μ -10 gm (Aq. Ext.). The drug did not possess any significant effect on the studies with nervous system reported here and did not afford any protection against metrazol-induced seizures. No diuretic activity was observed. The drug at higher doses caused irreversible systolic cardiac arrest and had no significant chronotropic and inotropic effect in lower doses. Volume of cardiac out put was not significantly modified. The drug is not a uterine and intestinal stimulant. The skeletal muscle was also not significantly affected. No oestrogenic/antioestrogenic activity has been observed. Aq. Ext. does not seem to possess any anti-implantation activity in rats.

The drug is quite safe and non toxic since it neither caused any mortality nor morbid change in the animals so treated with 1 gm/kg (Alc. Ext.) and 10 gm/kg. (Aq. Ext.) doses. No gross pathological changes were observed in the viscera of the rats subjected to toxicological studies.

Sapistan & Dilenia pentagyna were studied for some of the parameters such as on isolated rat, uterus rectus muscle of frog, frog's heart perfusion and diuretic activity in rat. There was no significant effect on the uterus and skeletal muscle. No diuretic activity (100 mg, 300 mg, and 1 gm/kg) was observed. Lower doses did not seem to influence the contractivity of the heart whereas with the larger doses (30 mg & 100 mg) reversible cardiac arrest occurred.

Chemical Research Unit (Grant-in-Aid) CDRS, Aligarh

The Unit is engaged in Chemical investigations of Indigenous drugs. The following studies were carried out during the reported period.

Atrilal (Ammi majus) was studied but apart from the furocoumarins reported in the literature no other constituents were obtained.

Sophora secundiflora species of *Arghawan* was studied, owing to the reports in the literature that *Sophora* species produce compounds with antiulcer and antitumour properties. It has been found that this plant contains several compounds of which six were isolated in previous year. Another new compound has also been isolated.

The results have also been obtained from some other plants collected from Simla and Goa region i.e. *Glochidion acuminatum*, *Flacourtia*

cataphracta, *Calophyllum wightianum* and *Mammea longifolia*. Workable amounts of products could be isolated from these plants.

Literary Research Unit (Unani) Aligarh

This Unit has taken the following work.

1. Compilation of *Amraz-e-Qalb-o-Riya* (Diseases of Heart and Lungs)
2. Edition and translation of '*Kitab al Taisir*'

Four following chapters were completed in preceeding year.

- (1) Cardio vascular system
- (2) Coronary Circulation
- (2) Ischaemic Heart Disease
- (4) Circulatory failure

The following chapters have been completed during the period under report.

(5) Hypertensive Heart Disease (This chapter deals with all the aspects of hypertensive heart disease). (6) Pulmonary Hypertension and Pulmonary Heart Disease. This chapter is to elaborate the following aspects.

(i) Causes and varieties of the disease (ii) Primary pulmonary Hypertension (iii) Acute cor pulmonale (iv) Chronic pulmonary Heart disease.

In addition to the above material data are being collected for chapter 7 which deals with chronic vulver disease. Work on *Kitab al Taisir* has been in progress. Calligraphy, edition and compilation has been done upto page 284, whereas translation into Urdu has been carried out upto page 158.

Literary Research Unit (Unani) Lucknow

The Unit is engaged in editing, translation etc. of rare classical books/manuscripts on the subject of Unani medicine.

The following work was accomplished during the period under report.

i. Kulliyat Ibn-ur-Rushd :

- i) The first half of Kitab al Kulliyat by Ibn al-Rushd which was completed earlier was reviewed and finalised.
- ii) The second half of Kitab al Kulliyat was also revised and finalised. Transcription of the Arabic text was also completed and final draft prepared.

2. Kitab al-Jame Limufradat al adwiyab wal Aghziyah by Ibn Baitar

Ist volume of this book has already been translated. Work on II, III and IV volumes is in progress. In all 79 pages of the text have been translated (from Arabic to Urdu).

**Research Scheme on Screening of Contraceptive Agents (Unani).
Hyderabad**

The Unit is functioning with the aim to clinically screen the Unani indigenous oral contraceptives to ascertain its effects on females during their reproductive age. The females in reproductive age having two children were contacted and persuaded to take the oral contraceptives administered in the Unit.

During the period under report, the oral contraceptive given exclusively to all the cases was Baqlatul Humqa (*Portulaca quadrifida*). The leaves of the plant were plucked, dried and powdered. The powder in the tablet form was given in dose of 6 gm. twice a day for 6 days after menses during each menstrual cycle. White *ghungchi*-whole, and *chob-Toohar* were given to old cases who came for their yearly repetition.

In all 1820 cases were contacted to take the medicine (*Baqlatul Humaqa*) and it was given to a total number of 161 cases during the period under report. Very few and mild side effects were noted in 15 cases as follow.

Excessive bleeding	6
Shortened menstrual cycle	7
Spotted bleeding	2

	15

Out of the total 161 cases given the drug, 18 cases discontinued due to various reasons and 51 cases became pregnant. The majority of cases became pregnant after 3 cycles, 92 cases were being followed up regularly.

Most of the subjects were in the age group of 20 years to 35 years. 102 subjects were in lactating phase and the remaining 59 were non Lactating. The study is in progress.

Survey of Medicinal Plants Unit Jammu (Unani Section)

About 330 plants species in two tours of 23 days were collected/observed and the, habitat, type of soil, flowers, colours, fruits, seeds and character of the bark were also recorded, Special attention was paid to collect the folklores of the plants used by the local inhabitants for cure of various ailments.

Out of 330 about 100 species having Unani medicinal importance were collected and identified. A few of them are :

Mirzanjosh (Origanum vulgare Linn.), Badranjboya (Nepeta hindostana (Roth) Haines), Brinjasif (Achillea millefolium Linn.), Vaj (Acorus Calamus Linn.), Hasha (Thymus sarpyllum Linn.), Kabeekaj (Ranunculus scleratus Linn.) etc.

About 18 crude drugs were supplied to various Units/Institutes under the Council.

Indian Institute of History of Medicine Hyderabad (Unani Section)

The Unani section of the Indian Institute of History of Medicine continued its activities in pursuance of the programme allotted by the Council.

The work included studies of the 14th volume of Al-Hawi and compilation of the summaries of the next seven chapters relating to venesection in fevers, Hammam in fevers, difference between fevers, caused by putrefaction of fevers and other types of fevers, difference between 'Ghibb-e-Khalisa and Naiba, Differential diagnosis of fevers, Humma-e-Dayima, Humniyat-e-Mutbiqua.

Further work on compilation of History of Unani Medicine in India was continued. 10 books were studied in depth and compilation was done.

A list of 88 Unani medical books in Arabic language was prepared with authors, contents, place and year of publication, by conducting survey of several libraries of Hyderabad.

Various rare manuscripts were traced and consulted for compilation of a note on concept of Unani Medicine.

Biography of famous, Unani physician and philosopher called 'Arastu' of 4th century is also being compiled.

List of the Papers/Articles Published/Under Publication/Read Out in The Seminars

S. No.	Author's Name	Title of Research Papers etc.
1.	L. Kareemullah, (Mrs.) Versha Taneja, Mrs. Snghra Begum P.K.M. Sarma, H.A. Baig.	Association of ABO blood group and vitiligo-Journal of Medical Genetics London—June, 1977.
2.	Syed Quamaruddin, H.T. Qureshi, Muneer Ahmed.	Rapidly Progressive vitiligo associated with Hyperthyroidism. Accepted for publication in Indian Journal of Dermatology, Venerology-Vellore.
3.	Syed Quamaruddin	A study of Erythrocyte Sedimentation-Rates in cases of vitiligo (To be submitted for publication in Indian Journal of Dermatology, venerology, Vellore).
4.	Muneer Ahmed	A successful response to a single application of Unani Drugs on vitiliginous patches a "Trigger Mechanism"-Case Report. (To be submitted for publication to IJDV, Vellore).
5.	Bahauddin	<i>Bars (vitiligo)</i> Lesion on Scalp-A Clinical study of Therapeutic Response. (To be submittrd for publication to IJDV, Vellore).

6. M. Iqbal Ali
A clinical study of Vitis lesions.
(To be submitted for publication to
IJDV, Vellore).
7. M. Iqbal Ali
Pulse and Blood Pressure in
Vitis-A preliminary Study. (To be
submitted to IJDV, Vellore).
8. S. G. Mohiuddin
Gouhar Sultana
S. K. Khadri
Clinical Study of Zeequn-Nafas
(Monograph) CCRIMH-Publica-
tion-29.
9. S. G. Mohiuddin
Gouhar Sultana
S. K. Khadri
"Clinical study of Vajaul Mufasil"
(Monograph) CCRIMH-Publication
No. 30.
10. Salahuddin
S.M.S. Hussain
S.H.T. Kazmi
H.M. Taiyab
Clinical trial of *Atrilal* in the treat-
ment of Vitis (sent for publica-
tion to JRIMY&H, Varanasi)
11. J. Lal
Pharmacognostic investigation on
the fruit of *Ammi majus* Linn. Pub-
lished in JRIMY&H, Varanasi-12
(3) 1977
12. J. Lal
Cultivation of *Atrilal* in Aligarh-
A short research communication.
Published in JRIMY&H, Varanasi
12 (3) 1977.
13. J. Lal
Pharmacognostic studies on the leaf
of *Lavandula stoechas* Linn.
(Presented in Seminar at Institute
of Medical Sciences, Banaras Hindu
University, Varanasi, 20-23 April,
1977.
14. J. Lal
Foliar Pharmacognosy of *Tylophora*
indica Burm. f. Merr. Presented in
Seminar at Gujarat Ayurved Uni-
versity, Jamnagar - Nov. 4-6 1977.

29. K. A. S. Azmi
Sartan aur Uska Ilaj, Tibb-e-Unani main. (Cancer and its treatment in Unani System of Medicine) Published in the magazine of A & U Tibbia College. Delhi-77.
30. S. M. A. Usmani
A study on Unani Plant *Ustukhudoos* published in JRIMY&H.
31. S. J. Hussain
Some investigated Pharmacological properties of Musk (*Kasturi*) Published in "Sachitra Ayurved" 30 (6).
32. S. J. Hussain
A review on Standardisation of Unani Medicine with special reference to Methodology (Part I) published in "Herbal Cure" 1 (218-222) Nov. 1977.
33. S. J. Hussain
T. N. Srivastava
Identity of Unani Medicinal Plant *Ustukhudoos* and *Badranjboya* — submitted for the proposed 2nd Scientific Seminar of CCRIMH.
34. S. J. Hussain
Physico-Chemical studies on Musk. A review-II. Under publication in Sachitra Ayurved.
35. S. J. Hussain
A study on the adulteration commercial varieties of Musk Under publication in Sachitra Ayurved.
36. S. J. Hussain
T. N. Srivastava
A study of Unani Plant *Nilofar* (Under publication JRIMY&H).
37. Ummul Fazal
'Uqr aur Uska Ilaj' - published in "Hamdard" fortnightly - Delhi - 1st Jan., 1978.

15. J. Lal
Pharmacognostic studies on the fruit of *Ammi visnaga* Linn. (Presented in 29th IPCA — Andhra Pradesh University, Waltair Dec. 28-30, 1977.
16. R. K. Issar
A. H. Israili
Pharmacognostic study of the Unani drug "Magz-e-Karnaj" (*Pongamia pinnata* (L) Lerr. Published in JRIMY&H Varanasi Vol. XII No. 3 September 1977.
17. R. K. Issar
A. H. Israili
Quest for substitute of imported herbal drugs used in Unani System of Medicine. (Submitted for the 29th Session of the Indian Pharmaceutical Congress held at Waltair during December, 1977.)
18. R. K. Issar
Pharmaco-chemical studies of some imported and substituted Unani drugs. Paper submitted for the proposed 2nd Scientific Seminar of CCRIMH.
19. R. K. Issar
A. H. Israili
Comparative chemico-morphological studies of the imported Unani drugs 'ZUFAH-YABIS' and Indian herb 'DYANKU' - Presented at the Ayurvedic Research Seminar on Respiratory Diseases held at Gujarat Ayurved University, Jamnagar in Nov. 1977.
20. R. K. Issar
Botanical identification of the commercial sample of Unani drug SAATAR FARSI (Paper Submitted for the proposed 2nd Scientific Seminar of CCRIMH.)

21. R. K. Issar *Achillea millefolium* Linn-Floristic Variability of morphological characters. Published in the Indian Forester, F. R. I. Dehradun, Vol. 104, No. 2, Feb., 1978.
22. R. K. Issar, A. H. Israili Comparative Pharmacognostic study of the Unani drug "GULNAR & ANARKALI" (*Punica granatum* L. Flowers) (under publication in JRIMYH, Varanasi.
23. A. H. Israili R. K. Issar A note on the occurrence of Alkaloids in the root bark of *Calotropis procera* (Ait) R. Br. (under publication in JRIMY&H, Varansi).
24. R. K. Issar A. H. Israili Pharmacognostic studies of the Unani drug 'GHUNGHCHI SUFAID' (*Abrus precatorius* Linn). Under publication in JRIMY&H, Varanasi.
25. K. J. Shamsi *Phalon-se Elaj* (Urdu)-Submitted for publication to Urdu Journal of CSIR.
26. K. J. Shamsi Medicinal Properties of Urine referred by Ibnul Baitar (Submitted to the Council for proposed 2nd Scientific Seminar of CCRIMH).
- 27 K. A. S. Azmi Sartan aur Tibbe Unani, *Tarikhi pas-e-manzar*. (Cancer and Unani System of Medicine - Historical background) Published in Husn-o-Sahat monthly Calcutta Jan. 1978.
28. K. A. S. Azmi *Takallum Ki Kharabian* (The defects of speech) Published in Husn-o-Sahat monthly Calcutta Jan., 1978.

38. Ummul Fazal 'Kalazar' - published in Hamdard fortnightly-Delhi - 1st Jan., 1978.
39. Ghulam Mehdi "Siddha System of Medicine - Ek Taaruf" published in Hamdard fortnightly - Delhi - 1st June, 1st July and-15th July, 1977.
40. Siddiqui M. Khalid 'Platy helminth's - Published in 'Herbel Cure' Hyderabad Vol. I-7-1. 4. 1977.
41. Siddiqui M. Khalid 'Khilqi Naqais' published in 'Hamdard' fortnightly Delhi - 1. 4. 1977.
42. Siddiqui M. Khalid "Hazards of Intestinal Protozoal Parasites" - published in Herbal-cure - Hyderabad Vol. I-IX-X 1.5. 1977 - 16.5.1977.
43. Siddiqui M. Khalid 'Khud Ilaji ke muzir Asarat' - published in 'Hamdard' fortnightly Delhi - 15. 5. 1977.
44. Siddiqui M. Khaild 'Tibb-e Unani Ka Ek Azeem Sutoon Hakim Mohd. Ilyas Khan' - published in Aljamiat Delhi - Vol. 63-62 - 6. 3. 1978.

HOMOEOPATHY SECTION

Research Projects in Homoeopathy have been broadly classified into

1. Clinical Research
2. Drug Proving (Hahnemannian Method)
3. Drug Standardization, and
4. Literary Research.

and these have been undertaken at the following units under the Council.

Central Research Institute, Calcutta ; Regional Research Institutes at New Delhi and Kottayam ; Clinical Research Unit, Gudiwada ; Clinical Research Enquiry, A.I.I.M.S., New Delhi ; Clinical Research Enquiry, Surgical Research Laboratory, B.H.U., Varanasi ; Drug Standardisation Unit, Patna ; and Drug Proving Research Units at Calcutta, Lucknow, Midnapore and Bhagalpore.

The individual report of the units principally with their achievements are placed below :

1. Central Research Institute (H), Calcutta

Clinical Research Section

a) The following drugs were tried on the symptom complex related to gastrointestinal disorder of amoebiasis :

1. *Cynodon dactylon*
2. *Holarrhena antidysenterica*
3. *Glycosmis pantaphylla*

Though the total number of cases screened were 897 with positive evidence of *E. histolytica* in 137 cases, but only 19 cases could be followed up uninterruptedly with following.

TABLE 1

Drugs	Total No. of cases	Improvement	Stationary	Worse
<i>C. dactylon</i>	13	11	2	—
<i>H. antidysentrica</i>	3	2	1	—
<i>G. pentaphylla</i>	3	3	—	—

The drugs were administered in mother tincture and 3x potencies on pre-decided parameters.

No toxicity was noticed. Criteria of the assessment was based on (a) total disappearance of G. I. symptoms (b) Disappearance of symptoms obtained in proving and (c) Disappearance of symptoms not obtained during proving.

As is evident from the Table-I, the G. I. disorders of amoebiasis correspond more to *Cynodon Dactylon* than to other two drugs. It is also observed that *Cynodon dactylon* was found effective on gastro intestinal symptom syndromes related to other organism like *G. Intestinalis* etc.

The study confirms the earlier reports in respect of symptoms obtained from Drug Proving as well as Clinical symptoms and accordingly a form of Monograph is under perparation.

- b) Research work in respect of Paroxysmal respiratory dyspnoea as being carried over from the previous year is a continuous phenomenon.

Drugs tried : *Cassia sophora*, *Tylophora indica*, *Grindelia robusta* on symptom syndrome of respiratory dyspnoea. The cases were related to chronic Bronchitis, Asthmatic, Bronchitis and Bronchial Asthma.

Though total number of cases screened with respiratory disorder are 694 of which respiratory Dyspnoea cases were 81, but only 69 cases could be persued uninterruptedly as reported herein.

TABLE II

Drugs	Total cases	Improvement	Stationary	Worse
<i>C. sophora</i>	40	30	10	—
<i>Tylophora india</i>	15	9	6	—
<i>Grindelia robusta</i>	14	12	2	—

Necessary investigations in respect of Clinico-pathology and rediology were done in order to establish the causation of respiratory dyspnoea and to eliminate various conditions other than those of respiratory causes. Cassia Sophera in particular was administered in Q, 6 and 30 potencies in predetermined dosages. Other two drugs have been administered in 200 potencies as well. No toxicity was observed in the trial.

Criteria for assessment of improvement was based on the clinical evidence of relief in intensity and frequency of the paroxysms.

Discussion

Cassia sophera

Catarrhal symptoms like coryza, sneezing and feverish feeling preceded the attack of dyspnoea; Dyspnoea with thirst for luke warm water, perspiration, restlessness with a feeling of heat in general; amelioration by fanning are indicative of Cassis Sophera, Cassia Sophera mother tincture has been found effective in controlling the acute attacks and subsequently in reducing the frequency of the attacks.

Tylophora indica

The Gastro-intestinal disorders and some psychosomatic complication have been noticed as concomittant to dyspnoea cases. It is found suitable in patients of older age group and where secondary changes in the lungs have taken place.

Grindelia robusta

Dyspnoea with Cardiac involvement and urinary disorders were observed to respond effectively to this drug. Older age group was once again the age group of choice.

(c) Experiments with 'Insulin 30' in Hyperglycaemic subjects :

A clinical trial with potentised form of the drug Insulin was instituted to verify whether the exogenous insulin which is said to inhibit the secretion of endogenous-insulin, re-established its function or not. Criterina for assessment of progress was based on blood-sugar level. Out of 65 subjects under trial from the OPD of the Institute only 28 could be reported. The subjects were grouped as 'A' and 'B'.

Group 'A'

Constituted those subjects whose post prandial BSL was above normal limit but their fasting level was within normal limit (i. e. 80 mg. to 120 mg/100ml.). None of these subjects had taken any antidiabetic treatment.

Group 'B'

Constituted those whose fasting blood sugar level was beyond normal limits and who were confirmed diabetics. They were already on oral antidiabetic therapy but none of them had any time received soluble insulin.

Laboratory investigation report :

Blood sugar estimation was carried out by the method of Folin and Wu.

Details of drug administration

Insulin 30 was administered. Subsequent repetition of doses was decided on the basis of the response obtained. The drug was discontinued when the BSL showed normal values.

Result

In both the groups A and B, most of the subjects showed a tendency of fall in BSL from first month of the trial and the fall became evident by third month at the trial.

Another significant observation is that almost all the subjects reported a sense of general well being and their disturbing symptoms disappeared.

Summary :

Insulin 30 has shown in this experiment a remarkable potentiality as a Hypoglycaemic agent. It is more effective in those subjects who were hyperglycaemic but have not taken any hypoglycaemic drugs.

(d) Additionally, research has been conducted on the following disease conditions in respect of the efficacy of known Homoeopathic drugs :

TABLE III

Disease	Total cases	Improved
Rheumatism	92	57
Lumbago	4	3
Arthritis	56	36
Sciatica	15	10
Gout	1	1
Rheumatic myopathy	1	—
Spondylosis	2	2
Urticaria	3	2
Tonsillitis	27	15

The work relates to the patients dealt in out-patient deptt. as well as in inpatient deptt. of the Institute as detailed:-

I.P.D. TABLE IX

Total	Admission		Total	Total attendance	
	Male	Female		Male	Female
183	108	75	6219	3756	2463

O.P.D.

Total	New	Old
37441	6414	31027

Drug Standardisation Section

Physico Chemical and Pharmacological standardisation was done in respect of *Tylophora indica* and on *Cynodon dactylon* with the study for column chromatography and thin layer chromatography.

Pharmacognostical study was initiated in respect of *Bryonia laciniosa*, *Accampa papillosa* and *Vanda Roxburghii* with the idea of having the substitutes of exotic drugs.

As a special feature C.R.I., received some American and German delegations (International Homoeopathic Congress 1977 held in Vigyan Bhawan, New Delhi) who went through the research activities with

satisfaction. The institute also arranged a lecture at Grand Hotel on 'Molecular Structure of solvents in Homoeopathic dilutions' by Dr. Gerard Reich and also a garden party at New Kenilworth Hotel during the period.

Several Papers/Articles have been published in the journals during the period and received acknowledgement, (including 5 papers read at International Homoeopathic Congress 1977). 2 papers by Dr. M.S. Pramanik, and 7 papers conjointly by Dr. K. P. Muzumdar, Dr. B. N. Dutta, Dr. S. Das, Dr. K. Ghosh Chaudhary, Miss Minati Nandi, and Dr. K. Shanbhag and Dr. V. Shah.

Regarding Drug Proving work which had been recently introduced, Preliminaries were started during the period.

The various other departments of Pathology, Biochemistry, Radiology and Photography had been working efficiently in coordination with the output of the work assigned to the institute.

2. Regional Research Institute (H), New Delhi.

Clinical Research Section conducted study for assessing the efficacies of known homoeopathic drugs on several common conditions related to the following symptom syndromes :

S. No.	Symptoms Syndromes	No. of cases studied	No. of cases improved
1.	Rhinitis	39	38
2.	Sinusitis	3	3
3.	Bronchial Asthma	32	32
4.	Allergic Dermatitis	52	51
5.	Tonsillitis	20	18
6.	Infective hepatitis	4	4
7.	Eruptive fever	1	1

Material or subjects for clinical research were received from Institute's out patient deptt. Though the total No. of cases seen at O.P.D. was quite large but only the above mentioned cases could be studied. It may be noted that in addition to the above, improvement in respect

of the associated complaints was there. Also that in most of the disease conditions Psora was the dominating miasm involved.

Literary Research Sections

Work on review and revision of Kent's repertory-5 chapters have been completed and one partially completed in respect of additions from the William Boericke's materia medica and repertory with reference to Clark's dictionary, Allen's encyclopaedia and Hering's guiding symptoms.

For the purpose of recommending additions or rubrics/drugs the following procedure was followed. Rubrics were studied in order of their placing in different chapters. Rubrics were taken from Boericke's repertory and then studied in Kent's repertory. If similar rubric were found in both the repertories, the drugs placed under them were compared. The drugs common to the rubric studied in both the repertories were left and drugs which were included only in Boericke's repertory were studied further. Such drugs were studied in each of the reference books. If any of the reference book confirmed the rubric under the drug studied, the drug was recommended for inclusion in Kent's repertory. If none of the reference books confirmed the rubric, the drug was left for further discussion. The rubric which are included in Boericke's repertory and not in Kent's repertory were also recommended for inclusion.

Drug Standardisation Section :

Work on the standardisation of crude drugs in respect of preliminary physico chemical standardisation of Homoeopathic mother tinctures were carried out on the following.

Allium Cepa, Allium Sativum, Abroma Augusta, Craetegus Oxycantha, Crocus Sativus, Menta Piperata, Nicotiana Tabacum, Zingibera Officinale.

3. Clinical Research Enquiry, All India Institute of Medical Sciences, New Delhi.

The scheme was initiated to conduct comparative study of the efficacies of Allopathy, Homoeopathy and the control by Xeropyllum (Placebo) upon the various disease conditions related to the following

including upper respiratory tract infections and the result is brought forth as below with the number of cases studied/No. of cases improved.

S. No.	Disease	Homoeopathy	Allopathy	Xerophyllum (Placebo)
1.	Tonsillitis	28/14	17/4	4/1
2.	Allergic rhinitis	38/22	10/1	5/1
3.	Sinusitis	14/8	11/1	3/0
4.	Chronic Pharyngitis	24/11	21/6	3/0
5.	Otitis Media	7/1	13/4	1/0
6.	Post dental extraction	74/52	50/25	53/26
7.	Trigeminal Neuralgia	1/0	16/5	0/0

Study was conducted through controlled trial. Cases were referred to various experts and specialists for careful screening and diagnosis and were subject to regular followup by Homoeopathic staff as well as by specialists of respective departments of All India Institutes of Medical Sciences, New Delhi.

When a case did not respond to the treatment and became worse, it was converted to other system of treatment i.e. from Homoeopathy to allopathy or from zerophyllum to allopathy/Homoeopathy. The time limit fixed for conversion, if any, was in no case more than 21 days but if the case became worse it was converted even earlier.

Allopathic drugs were prescribed by the specialists of the otorhinolaryngology department of the AIIMS.

Zerophyllum constitutes of pure milk sugar and non-medicated sugar globules, was given by the homoeopathic staff of the Enquiry.

Homoeopathic drugs used :

Various homoeopathic drugs (as per available literature) in potencies varying from 6 to 10M were found to be of use in Upper Respiratory Tract infections depending upon the available individual indications and these disease confirmation.

Observation :

During the course of study the following observations were made :

Sex Group -- Males were found to be slightly more prone to URTIS than females.

Age Group :- Persons of age-group 16-30 years were found to be more prone than other age-groups.

Side or after effects : No side or after effects of homoeopathic drugs were observed during the course of studies.

4. Clinical Research Unit, Gudivada

Clinical Research Work Problem undertaken

Total cases studied

Rheumatic Fever	55	Improvement index is under compilation.
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Bronchial Asthma	23	
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a) Rheumatic Fever :

The above mentioned 23 cases were of the following types : Acute, Chronic and followup cases. Acute cases came for the first attack; chronic cases were those which came after having suffered for more than one attack and their treatment, were assessed within one month to two months and one month to four years respectively.

Followup cases were those which were kept under observation for further treatment after some favourable homoeopathic aid but where

the study of recurrence and predispositional, constitutional eradication were yet to be achieved.

While selecting the cases for study and assessment of improvement, in addition to the evidence of subjective and clinical symptoms the following investigations were done :

- a) Blood for ESR, total count differential count Hb% and VDRL.
- b) Urine analysis : Microscopic and Macroscopic.
- c) X-ray and/or Screening
- d) E.C.G.

The 23 cases under study and report were selected from a large no. of cases examined at the OPD of the hospital presenting various cases of joint pains with/without swelling, fever, pain in chest, dyspnoea by exertion, palpitation, cough with or without expectoration, associated with pain and congestions of throat and/or enlarged tonsils.

The majority of the cases belong to age groups 6-25 years and sex group with 12 females and 11 males.

Observations :

Complete subjective and clinical improvement has been observed in nearly 90% cases. Subjective improvement is observed to be ahead of the improvement of clinical features and average to normal in the blood picture, E.C.G and other laboratory findings.

There is considerable reduction in the enlargement of tonsils (8 out of the 10 cases) found to be involved as such at the commencement of the treatment. Tendency for recurrences is checked in all the cases; observed that the homoeopathic remedies are capable of lessening the frequency, duration and seriority of attacks and preventing the involvement of heart over a period of time; observed that the general conditions of the patient alongwith associated complaints such as periodical headache, Scabies etc. showed remarkable relief and many of the cases showed considerable fall in E.S.R. and improvement in Hb%.

Medicine found useful in this trial :

1. Antimiasmatics-Lycopodium, Sulphur Thuja. Calcarea Carb, Natrum Mur. etc. 2. Nosodes :- Medorrhinum, Tuberculinum, and

Psorinum. In addition many others were found useful as per therapeutic aid and such other existing Homoeopathic literatures.

Potencies commonly used during trial-30, 200, 1M (and Q of certain drugs).

b) Bronchial Asthma :

Out of 55 cases, 32 had associated complaints of suppressed skin diseases (almost invariably treated with application for local medicines) some had headaches, some with chronic tendency for catching cold on exposure to either hot or cold, damp weather and also some had exciting precipitating causes in respect of diet, drenching, inhaling dust etc. Age group varied from 4-25 years. Sex group with 14 males and 41 females. Most of these were from low income group who are undernourished and people living in low lying areas.

Observations :

Acute paroxysms are controlled in short time varying from 2-3 minutes to 2-3 hours, and the relief, in many cases is preceded by cough with easy and profuse expectoration. The high Eosinophil and WBC count had been lowered to normal levels in many cases.

In two cases along with the relief in the paroxysms, the vital capacity increased upto 320 and 450 cc. from the previous 200 and 250cc respectively within 1-2 months. 14 cases were relieved of their skin ailments which is indicative of exteriorization of latent psoric miasm. In one case the recurrence was completely absent for the last 1½ years although he was subjected to the previous irritants, of course these need further followup.

Medicines found useful :- As antimiasmatics, Sulphur, Calcarea Carb, Thuja, Lycopodium, Sepia; as nosodes : Medorrhinum, Tuberculinum, Psorinum and as those that decreased the ESR and Eosinophil count- apulphur, Lachesis, C. Veg. Medorr, Rhustox, Natrum Sulf. Antim Tart, Pulsatilla etc. in addition to many others as per indications through available therapeutics and such literatures.

5. Grant-in-aid Unit at Surgical Research Laboratory, B.H.U., Varanasi. Pulsatilla Research Scheme

Problems assigned : Effect of Pulsatilla and Caulophyllum on the ovaries and hypothalamo hypophyseal complex of rats.

Conclusion :

- i) **Caulophyllum** has been proved to have Oestrogenic properties inhibiting maturation of the ovum and an effective implantation interruptor.
- ii) **Pulsatilla** has been found to possess antioestrogenic progesterogenic properties by action through pituitary glands. Further work is being continued to assess the effect of **Pulsatilla** on Pregnant rats and effect of **Pulsatilla** 1000, 10,000 on the ovary, uterus and brain of female albino rats.

6. Drug Standardisation Unit, Dinapore Cantt. Patna.

Work on the following drugs was undertaken and completed in respect of preliminary physicochemical standard i. e. **Curcuma Longa**, **Rawolfia Serpentina**, **Tinospora Cordifolia**, **Acalypha Indica**, **Jatropha Curcas**, and **Syzigium Jambolinum**.

7. Drug Proving Research Unit, Midnapore

Proving of coded drug on 4th drug proving programme is completed and proving on 5th drug proving programme has been partially completed.

8. Drug Proving Research Unit, Calcutta

Proving of coded drug on 4th drug proving programme has been completed in the given period.

Papers prepared and published :

Six papers are prepared by Dr. Basu, Research Officer of the Unit, including (1) 'Indigenous drugs known to have action on respiratory disease. (2) 'Can Homoeopathy modify the infected, inherited or abnormal DNA and RNA code molecules and genes etc. (3) Indigenous plants regarding plant products in fertility control with their folk-lore use.

9. Drug Proving Research Unit, Lucknow :

Drug proving of the coded drugs on 5th drug proving programme is completed.

10. **Drug Proving Research Unit, Bhagalpur :**

Drug proving of coded drug on 4th drug proving programme is completed.

11. **Regional Research Institute, Kottayam**

Clinical Research Work

Problems allotted	No. of cases studied		
	I.P.D.	+	O.P.D.
A. Mental diseases including Schizophrenia & Anxiety neurosis	104	+	129
B. Bronchial Asthma	80	+	854
C. Diabetes Mellitus	16	+	39
D. Infective hepatitis	8	+	47
Total	<hr/> 1277 <hr/>		

Total 1277 cases had been studied from large number of patients at the Institute's Inpatient and Out patient departments.

For selection and assessment of cases for the study, necessary laboratory investigations had been conducted with due considerations along-with subjective and other objective sign symptoms. The drugs were selected with fixed parameters.

The cases were assessed twice a week by visiting Consultants including Allopaths.

Observations :

(a) Bronchial Asthma

Homoeopathic drugs could relieve the acute attacks as well as the exacerbations of chronic conditions :

Also the conditions of status Asthmaticus could be eased by drugs viz Ipecac, Carboveg, Kalicarb, Phosphorus, Sulphur etc. Prevention of recurrence and subjecting for a milder attack in recurrent cases could be possible by drugs such as Phosphorus, Silicea, Tuberculinum, and Lachesis.

As an important feature the increased eosinophilic count in some cases could be reduced by drugs such as Tuberculinum, Lachesis, Arsenic album, Pulsatilla, Sulphur, Psorinum and Calcarea. Ars etc.

Study revealed that most of the cases were involved with the miasm psora followed by sycosis and psora mixed with sycosis.

Age Group involved between 10-20 years and **Sex wise** females were usual sufferers.

(b) Mental diseases

Out of total 233 cases, 129 were schizophrenic, and the remaining comprised of Anxiety Neurosis, Psychosis Mania & depression.

Observations :

The various acute exacerbations could be safely controlled by drugs like Belladonna, Tarentula, & Phosphorus and the recurrences could be checked in the sense of making them milder and with larger lucid intervals. The miasm Psora was found to be involved most, followed by Sycosis and mixed miasms. In this study attempts had been made to confirm the Hahnemannian theory or concept of mental diseases.

Age cum sex wise incidences were observed to be between 20-30 in males and 30-40 in females.

(c) Diabetes Millitus : Out of 55 cases, though none could be fully recovered except one being symptom free and ten with remarkable improvement, Tarentula Cubensis in potencies of 30 & 200 could show better results in 14 cases, alongwith other drugs such as Sulphur 30. Aurum Mett 6. Pepsin 6. etc.

In some cases the effective results could be observed within a short period of 2—4 days and the blood sugar level could be appreciably reduced even with unrestricted diet.

(d) Inactive hepatitis : All the cases under study responded well. The drugs found useful with admirable results were Lycopodium, Iodium, Merc. Sol. etc, Commonly age wise victims were below 10 years and sex wise were males.

List of the Papers/Articles Published/Under Publication/Read out in the Seminars

S. No.	Author's Name	Title of Research Papers etc.
1.	Suresh Prashad, K. Chandrashekhar	Effect of Pulsatia treated pituitary extracts of ovariectomized rats on the ovary, uterus and thyroid of normally cycling recipient, Indian Journal of Experimental Biology.
2.	Sunil Kumar, S. Prasad, K. Chandrasekhar	Effect of Caulophyllum 200 and 10,000 potencies on the uterus of immature rats. Journal of Research in Indian Medicine, Yoga and Homoeopathy.
3.	Suresh Prashad, K. Chandrasekhar	Parallel effect of Pulsatilla and exogenous leucocyclin on the ovary, uterus and thyroid of the rat. The British Homoeopathic Journal.
4.	Dr. S. S. Sidhu	Read the paper 'Effectiveness of Arnica Montana in post dental extraction cases'. Paper was submitted by Dr. S. S. Sidhu Dr. Jugal Kishore, Dr. Chanda Joshi. The paper has been published in the official transactions of the Congress.

Central Council for Research in Indian Medicine and Homoeopathy

Statement of Receipts and Payments for the Year 1977-78

(Schemes Financed by the Department of Health)

R E C E I P T S			P A Y M E N T S		
Sl. No.	Particulars	Amounts	Sl. No.	Particulars	Amounts
		Rs.			Rs.
1.	Opening balance		1.	Headquarter's office	
	i) Headquarter's office		a)	Pay and allowances	6,99,255.93
	a) Cash in hand	1,000.00	b)	Travelling allowance	1,65,748.73
	b) Cash at Bank	<u>1,93,554.86</u>	c)	Contingencies	
		1,94,554.86	i)	Consumable stores and miscellaneous expenses	4,45,146.18
	ii) Opening balance with the decentralised units	-	ii)	Non-consumable stores	53,103.06
		1,00,441.32	d)	Advance	
	iii) Lumpsum released in the month of March, 1977 but received in the month of April, 1977 by some decentralised units		i)	Travelling allowance	<u>1,100.00</u>
		4,82,017.65			13,64,353.90
	iv) Imprest advance	80,535.93	e)	Payment of income tax, leave salary and pension contri- bution, CPF etc. (Headquarter's office and centralised units) (details in Annexure III)	7,00,647.28
	v) Advance given to R.R.I. Calcutta, DPRU Lucknow and Calcutta and R.R.C. Jogindernagar to open bank account	800.00	f)	Council's contribution to CPF account	8,00,000.00
	vi) Suspense account	5,959.12	g)	Payment of CD(DA) (final payment)	17,334.93
2.	Grant-in-aid received from the Govt. for the Council	1,30,00,000.00	h)	Payment of II instalment of CD(DA)	2,12,695.54
3.	Grant-in-aid received from the Govt. for Central Research Institute (Yoga)	1,00,000.00	i)	Payment of DA(CPF) with interest	442.80
4.	Recovery of income tax, CPF, CD (DA) etc. made in the pay bills of the centralised units and the Head- quarter's office (details in Annexure I)	<u>5,31,018.02</u>	j)	Refund of security	<u>955.70</u>
		C/o 1,44,95,326.90			C/o 30,96,430.15

Sl. No.	Particulars	Rs.	Rs.	Sl. No.	Particulars	Rs.	Rs.
		B/F.	1,44,95,326.90			B/F.	30,96,430.15
5.	Recovery of income tax, CPF etc. made in the pay bills and other receipts by the decentralised units (details in Annexure II)		9,06,951.36	2.	Documentation Centre-cum-Library		
6.	T.A. advance paid in the past years but adjusted during 1977-78		15,653.70	a)	Pay and allowances	1,64,142.87	
7.	Contingent advances paid in the past years but adjusted during 1977-78 (Rs. 11,000.49+Rs. 68,037.14)		79,037.63	b)	Travelling allowance	1,095.00	
8.	Subscriptions for bulletin of IIHM		3,326.32	c)	Contingencies		
9.	Subscriptions for JRIM		5,638.04	i)	Consumable stores and miscellaneous expenses	40,054.99	
10.	Application fee		5,420.50	ii)	Non-consumable stores	7,489.12	2,12,781.98
11.	Interest earned on fixed deposits of CPF		2,60,753.50	3.	Advances		
12.	Refund of pay, allowances, T.A. and contingent advances relating to past years		19,939.55	a)	Scooter advance	21,000.00	
13.	Purchase fee from patients		1,563.75	b)	Cycle advance	10,430.00	
14.	Earnest money			c)	Festival advance	31,600.00	
	i) Centralised units	1,157.75		d)	Flood advance	10,000.00	
	ii) Decentralised units	3,148.00	4,305.75	e)	Cyclone relief advance	4,078.00	
15.	Proceeds from sale of old articles etc.		5,979.99	f)	Warm clothing advance	3,750.00	80,858.00
16.	Recoveries of cycle, festival, scooter and foodgrains advances remitted by the decentralised units.		26,591.15	4.	Drug Research Schemes (CDRS, Ayurveda)		
17.	Sale of publications		7,482.51	a)	Pay and allowances	12,41,364.32	
18.	Refund of loan by the National Institute of Ayurveda, Jaipur		50,000.00	b)	Travelling allowance	4,369.90	
		C/o	1,58,87,970.65	c)	Contingencies		
				i)	Consumable stores and miscellaneous expenses	79,091.93	
				ii)	Non-consumable stores	2,981.33	
				d)	Advance		
				i)	Contingencies	1,000.00	13,25,807.48
				5.	Drug Research Schemes (C.D.R.S., Unani)		
				a)	Pay and allowances	91,330.45	
				b)	T. A.	843.20	
						C/o	47,15,877.61

Sl. No.	Particulars	Rs.	Rs.	Sl. No.	Particulars	Rs.	Rs.
19.	Reimbursement of expenditure in respect of Nepalese delegate by the DGHS.	B/F.	1,58,87,970.65			B/F.	47,15,877.61
20.	Recovery of charges for private use of staff cars		1,893.29		c) Contingencies		
21.	Refund of unspent balance of grant-in-aid by Delhi Yoga Sabha, New Delhi.		229.72		i) Consumable stores and miscellaneous expenses	8,264.60	
22.	Leave salary and CPF contribution		360.00		ii) Non-consumable stores	4,661.71	
23.	DA(CD) received from the RPFC for final payment.		16,916.93		d) Grant-in-aid	<u>59,000.00</u>	1,64,099.96
24.	II instalment of DA(CD) received from the RPFC		2,12,891.64	6.	Survey of Medicinal Plants Scheme		
25.	Transfer from the CPF A/c of excess amount of contribution of CPF, interest etc. credited in the past year.		27,719.45		a) Pay and allowances	3,82,744.94	
26.	Cyclone relief fund		688.00		b) T.A.	13,687.35	
27.	Forfeiture of Council's contribution to C.P.F.		4,965.00		c) Contingencies		
28.	Time barred cheques cancelled and credited		7,668.73		i) Consumable stores and miscellaneous expenses	34,585.29	
29.	Interest on S.B. A/c (centralised units)		53.81		ii) Non-consumable stores	200.00	
30.	Miscellaneous receipts etc.		4,354.96		d) advances		
					i) T.A.	1,028.00	
					ii) Contingencies	<u>10,290.25</u>	4,42,535.83
				7.	Jawaharlal Nehru Ayurvedic Medicinal Plants Garden and Herbarium, Poona		
					a) Pay & allowances	94,175.15	
					b) T. A.	331.90	
					c) Contingencies		
					i) Consumable stores and miscellaneous expenses	11,285.47	
					ii) Non-consumable stores	<u>—</u>	1,05,792.52
				8.	Journal of Research in Indian Medicine		
					a) Pay & allowances	66,227.20	
					b) T.A.	<u>—</u>	
		C/o	<u>1,61,67,112.13</u>			C/o	<u>54,28,305.92</u>

Sl. No.	Particulars	Rs.	Rs.	Sl. No.	Particulars	Rs.	Rs.
		B/F.	1,61,67,112.13			B/F.	54,28,305.92
					c) Contingencies		
					i) Consumable stores and miscellaneous expenses	37,957.03	
					ii) Non-consumable stores	<u>288.00</u>	1,04,472.23
				9.	Drug Standardisation Research Scheme (Ayurveda, Siddha, Unani and Homoeopathy)		
					a) Pay & allowances	3,87,649.65	
					b) T.A.	4,594.80	
					c) Contingencies		
					i) Consumable stores and miscellaneous expenses	13,729.49	
					ii) Non-consumable stores	1,424.00	
					d) Advance		
					i) Contingencies	<u>215.00</u>	4,07,612.94
				10.	Literary Research Scheme (Ayurveda, Siddha and Unani)		
					a) Pay & allowances	1,74,464.30	
					b) T. A.	990.15	
					c) Contingencies		
					i) Consumable stores and miscellaneous expenses	5,174.64	
					ii) Non-consumable stores	<u>966.06</u>	1,81,595.15
				11.	Indian Institute of History of Medicine, Hyderabad		
					a) Pay & allowances	1,79,468.30	
					b) T. A.	—	
		C/o	<u>1,61,67,112.13</u>			C/o	<u>61,21,986.24</u>

Sl. No.	Particulars	Rs.	Rs.	Sl. No.	Particulars	Rs.	Rs.
		B/F.	1,61,67,112.13			B/F.	61,21,986.24
					c) Contingencies		
					i) Consumable stores and miscellaneous expenses	18,972.19	
					ii) Non-consumable stores	<u>1,026.70</u>	1,99,467.19
				12.	Clinical Research Scheme (Ayurveda, Unani, Siddha and Homoeopathy)		
					a) Pay & allowances	10,98,229.35	
					b) T. A.	2,226.80	
					c) Contingencies		
					i) Consumable stores and miscellaneous expenses	51,906.49	
					ii) Non-consumable stores	6,436.59	
					d) Advances		
					i) Contingencies	470.00	
					e) Grant-in-aid	<u>24,961.55</u>	11,84,230.78
				13.	Dr. Lakshmi pathi Unit for Research in Indian Medicine, Madras		
					a) Pay & allowances	1,47,750.00	
					b) T. A.	1,759.80	
					c) Contingencies		
					i) Consumable stores and miscellaneous expenses	12,782.56	
					ii) Non-consumable stores	<u>—</u>	1,62,292.36
				14.	Ayurvedic Research Unit, Bangalore		
					a) Pay & allowances	1,34,924.53	
					b) T. A.	2,655.30	
		C/o	<u>1,61,67,112.13</u>			C/o	<u>76,67,976.57</u>

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Sl. No.	Particulars	Rs.	Rs.	Sl. No.	Particulars	Rs.	Rs.
		B/F.	1,61,67,112.13			B/F.	76,67,976.57
					c) Contingencies		
					i) Consumable stores and miscellaneous expenses	8,669.61	
					ii) Non-consumable stores	<u>130.40</u>	1,46,379.84
				15.	Central Research Institute (Ayurveda, Unani, Siddha and Homoeopathy) Patiala, Cheruthuruthy, Calcutta, Madras and Hyderabad		
					a) Pay & allowances	23,27,860.68	
					b) T. A.	14,829.10	
					c) Contingencies		
					i) Consumable stores and miscellaneous expenses	5,17,151.93	
					ii) Non-consumable stores	<u>64,910.24</u>	29,24,751.95
				16.	Regional Research Institutes (Ayurveda and Homoeopathy) Jaipur, Bhubaneswar, Calcutta, Kottayam, New Delhi and Tri- vandrum.		
					a) Pay and allowances	15,44,561.11	
					b) T.A.	15,183.41	
					c) Contingencies		
					i) Consumable stores and miscellaneous expenses	2,55,857.34	
					ii) Non-consumable stores	<u>16,694.34</u>	18,32,296.20
				17.	Regional Research Centres (Jogindernagar, Nagpur, Jhansi, Banglore and Vijayawada)		
					a) Pay & allowances	5,76,692.50	
					b) T.A.	14,935.95	
		C/o	<u>1,61,67,112.13</u>			C/o	<u>1,25,71,404.56</u>

Sl. No.	Particulars	Rs.	Rs.	Sl. No.	Particulars	Rs.	Rs.
		B/F.	1,61,67,112.13			B/F.	1,25,71,404.56
					c) Contingencies		
					i) Consumable stores and miscellaneous expenses	84,496.62	
					ii) Non-consumable stores	9,574.94	
					d) Advances		
					i) T.A.	600.00	
					ii) Contingencies	<u>3,363.00</u>	6,89,663.01
18.	Captain Srinivasamurthy Research Institute, Madras.						
	a) Pay and allowances					2,64,103.70	
	b) T.A.					1,542.55	
	c) Contingencies						
	i) Consumable stores and miscellaneous expenses					59,102.38	
	ii) Non-consumable stores					<u>8,695.40</u>	3,33,444.03
19.	Amalgamated Unit, Ranikhet						
	a) Pay & allowances					3,33,590.00	
	b) T.A.					5,789.55	
	c) Contingencies						
	i) Consumable stores and miscellaneous expenses					52,742.58	
	ii) Non-consumable stores					<u>73.66</u>	3,92,195.79
20.	Yoga (grant-in-aid) units						64,549.00
21.	Central Research Institute Yoga, New Delhi.						1,00,000.00
22.	Drug Proving Research Scheme (Homoeopathy)						
	a) Pay & allowances					1,21,218.70	
	b) T.A.					586.50	
							<u>1,41,51,236.39</u>
		C/o	<u>1,61,67,112.13</u>			C/o	<u>1,41,51,236.39</u>

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Sl. No.	Particulars	Rs.	Rs.	Sl. No.	Particulars	Rs	Rs.
		B/F.	1,61,67,112.13			B/F,	1,41,51,256.39
					c) contingencies		
					i) Consumable stores and miscellaneous expenses	30,071.14	
					ii) Non-consumable stores	—	
					d) Grant-in-aid	<u>7,926.83</u>	1,59,803.17
23.	Tibetan Medicines Research Scheme						
	a) Pay & allowances					19,567.80	
	b) T.A.					921.10	
	c) Contingencies						
	i) Consumable stores & miscellaneous stores					1,965.55	
	ii) Non-consumable stores					<u>2,184.00</u>	24,638.45
24.	Loan to Family Welfare Research Scheme A/c					4,61,509.93	
	Less refund					<u>3,91,546.97</u>	69,962.96
25.	Payment and remittance of recoveries made in the bills and receipts by the decentralised units (details in Annexure-IV)						8,71,950.09
26.	Closing balance						
	i) Headquarter's office						
	a. Cash in hand					1,000.00	
	b. Cash at Bank					<u>3,23,654.31</u>	3,24,654.31
	ii) Closing balance with the decentralised units						3,97,863.66
	iii) Lumpsum released in the month of March, 78 but received in the month of April, 78 by some decentralised units						81,072.55
							<u>1,60,81,201.58</u>

Sl. No.	Particulars	Rs.	Rs.	Sl. No.	Particulars	Rs.	Rs.
		B/F.	1,61,67,112.13			B/F.	1,60,81,201.58
				iv)	Imprest advance as on		
					1-4-1977	80,535.93	
					Add paid during 77-78	<u>175.00</u>	
						80,710.93	
					Less refund	1,550.00	
					Less adjustment	<u>9.50</u>	79,151.43
				v)	Advances given to RRI, Calcutta,		
					DPRU, Calcutta & Lucknow, RRC,		
					Jogindernagar		800.00
				vi)	Suspense account		5,959.12

Total 1,61,67,112.13

Total 1,61,67,112.13

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Central Council for Research in Indian Medicine and Homoeopathy

Statement of Income and Expenditure for the Year 1977-78

(Schemes Financed by the Department of Health)

EXPENDITURE			INCOME		
Sl. No.	Particulars	Amounts Rs.	Sl. No.	Particulars	Amounts Rs. Rs.
1.	Headquarter's office		1.	Grant-in-aid received from the Government for CCRIMH	1,30,00,000.00
	a) Pay & allowances	6,99,255.93	2.	Grant-in-aid received for C.R.I.(Y.)	1,00,000.00
	b) Travelling allowance	1,65,748.73	3.	Recovery of Income-tax CPF etc.	
	c) Consumable stores & miscellaneous expenses	4,45,146.18	i)	Centralised units & Headquarter's office	5,31,018.02
2.	Other units		ii)	Decentralised units	<u>9,06,951.36</u> 14,37,969.38
	a) Pay & allowances	93,50,065.55	4.	Contingent advance and TA advance paid in the past years but adjusted during 1977-78	
	b) T.A.	86,342.36	i)	Contingent advance	79,037.63
	c) Consumable stores & miscellaneous expenses	13,20,861.83	ii)	T.A. advance	<u>15,653.70</u> 94,691.33
3.	Grant to grant-in-aid units	1,56,437.38	5.	Subscriptions for Bulletin of IIHM	3,326.32
4.	Payment of income-tax, leave salary, pension contribution & CPF etc. (Headquarter's office and centralised units)	7,00,647.28	6.	Subscription for JRIM	5,638.04
5.	Council's contribution to CPF	8,00,000.00	7.	Application fee	5,420.50
	Less excess credited	<u>72,579.65</u>	8.	Interest earned on fixed deposit of CPF	2,60,753.50
		7,27,420.35	9.	Refund of pay, allowances, T.A. & contingent advances relating to past years	19,939.55
6.	Final payment of CD(DA)	17,334.93	10.	Purchase fee from patients	1,563.75
7.	Payment of IInd instalment of CD(DA)	2,12,695.54	11.	Proceeds from sale of old articles	5,979.99
8.	Payment of DA(CPF) with interest	442.80			<u>1,49,35,282.36</u>
9.	Grant-in-aid to Central Research Institute (Y)	1,00,000.00			
		<u>C/o 1,39,82,398.86</u>			

Central Council for Research in Indian Medicine and Homoeopathy

Balance Sheet as on 31st March, 1978

(Schemes Financed by the Department of Health)

LIABILITIES			ASSETS		
Sl. No.	Particulars	Amounts	Sl. No.	Particulars	Amounts
		Rs.			Rs.
1.	Capital fund		1.	Closing balance	
	i) Value of assets acquired, advances outstanding, security deposit as on 31st March, 1977	75,92,977.37		i) Headquarter's office	
	ii) Less contingent advance (Rs. 21,162) T.A. advance (Rs. 21,220.00) advance (Rs. 68,037.14) adjusted and other amounts due received (Rs. 50,000.00 & Rs. 25,013.90) and recovery of refundable advance (Rs. 53,161.22)	2,38,594.26		a) Cash in hand	1,000.00
		<u>73,54,383.11</u>		b) Cash at Bank	<u>3,23,654.31</u>
	iii) Add excess of income over expenditure transferred from the income & expenditure statement	95,243.24		ii) Closing balance with decentralised units	3,97,863.66
		74,49,626.35		iii) Lumpsum released in the month of March, 1978 but received in the month of April, 1978 by some decentralised units	81,072.55
2.	Outstanding liabilities (Salary etc. outstanding for payment)			iv) Imprest advance	79,151.43
	a) Pay & allowances	2,18,266.95		v) Advances given to RRI Calcutta, DPRU Calcutta and Lucknow, RRC Jogindernagar for opening Bank A/c	800.00
	b) T.A.	3,018.65		vi) Suspense A/c	9,959.12
	c) Contingencies	39,748.40	2.	Assets	
	d) Additional D.A.	41,300.20		i) Non-consumable stores	
	e) Income-tax, CPF etc.	45,805.10		a) Headquarter's office	3,43,121.05
		<u>C/f 77,97,765.65</u>		b) Documentation centre-cum-library	3,20,746.46
				c) Publication (JRIM)	12,240.71
					<u>C/f 8,89,501.07</u>

Sl. No.	Particulars	Rs.	Rs.	Sl. No.	Particulars	Rs.	Rs.
		B/F.	78,11,970.80			B/F.	75,22,780.86
				5. Advances refundable			
				i) Scooter advance			
				a) As on 1-4-1977	3,660.00		
				b) Add paid during 1977-78	21,000.00		
					<u>24,660.00</u>		
				c) Less refunded during 1977-78	<u>5,260.00</u>	19,400.00	
				ii) Cycle advance			
				a) As on 1-4-1977	1,060.00		
				b) Add paid during 1977-78	10,430.00		
					<u>11,490.00</u>		
				c) Less refunded during 1977-78	<u>4,225.00</u>	7,265.00	
				iii) Flood advance			
				a) As on 1-4-1977	6,837.20		
				b) Add paid during 1977-78	10,000.00		
					<u>16,837.20</u>		
				c) Less refunded during 1977-78	<u>8,122.60</u>	8,714.60	
				iv) Festival advance			
				a) As on 1-4-1977	1,560.00		
				b) Add paid during 1977-78	31,600.00		
					<u>33,160.00</u>		
				c) Less refunded during 1977-78	<u>26,340.00</u>	6,820.00	
				v) Foodgrain advance			
				a) As on 1-4-1977	9,451.47		
				b) Less refunded during 1977-78	<u>9,219.62</u>	237.85	

C/f 78,11,970.80

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105

C/f 75,65,218.31

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Sl. No.	Particulars	Rs.	Sl. No.	Particulars	Rs.	Rs.
	B/F.	78,11,970.80			B/F.	75,65,218.31
				vi) Cyclone relief advance		
				a) As on 1-4-1977	—	
				b) Add paid during 1977-78	4,078.00	
				c) Less refunded during 1977-78	—	4,078.00
				vii) Warm clothing advance		
				a) As on 1-4-1977	—	
				b) Add paid during 1977-78	3,750.00	
				c) Less refunded during 1977-78	—	3,750.00
				6. Advance payment to the PWD for carrying out repair to the building of CRI (H), Calcutta.		
				a) As on 1-4-1977	76,131.00	
				b) Less adjustment	68,037.14	
				c) Balance due from PWD	8,093.86	8,093.86
				7. Security deposit		4,061.13
				8. Loan due from the Family Welfare Research Scheme grant A/c		
				a) As on 1-4-1977	74,106.60	
				b) Add loan paid during 1977-78	69,962.96	1,44,069.56
				9. Amount due from the Deptt. of Health towards expenditure on conference		10,120.29
				10. Amount due from the CPF A/c of the Council		72,579.65
				Total		78,11,970.80
				Total		78,11,970.80

Sd/-
(P.N.V. KURUP)
Director (CCRIMH)

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Sd/-
(K.K. SUBRAMANIAN)
Assistant Director (Admn.) (CCRIMH)

Sd/-
(J.K. DASS)
Accounts Officer (CCRIMH)

(Auditor's Certificate Awaited)

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ANNEXURE—I

Statement showing the details of recoveries of Income-tax, CPF, GD(DA) etc. made in the pay bills of the Headquarter's office and centralised units.

Sl. No.	Particulars	Amount (Rs)
1.	C.P.F.	7,101.00
2.	CPF subscriptions to CCRIMH, CPF A/c	4,04,720.00
3.	Income-tax	59,684.00
4.	Festival advance	8,560.00
5.	Flood advance	2,862.60
6.	Cycle advance	2,275.00
7.	Scooter advance	4,510.00
8.	Foodgrain advance	6,057.65
9.	Professional tax	3,816.00
10.	CGHS contribution	3,513.00
11.	C.D.(DA)	31,532.00
12.	Rent	48.00
13.	Interest on scooter advance etc.	414.60
14.	Miscellaneous	1,924.17
	Total	5,31,018.02

ANNEXURE—II

Statement showing the details of recoveries of Income-tax, CPF, DA(CD) etc. made in the pay bills and other receipts by the Decentralised units during 1977-78.

Sl. No.	Particulars	Amount (Rs.)
1.	Income-tax	32,063.50
2.	C.P.F.	3,32,577.80
3.	CD(DA)	91,181.60
4.	Festival advance	17,780.00
5.	Cycle advance	1,950.00
6.	Scooter advance	750.00
7.	Flood advance	5,260.00
8.	Foodgrains advance	3,155.97
9.	Purchase fee	1,376.55
10.	Subscription for Bulletins	3,316.27
11.	Auction fee/Tender fee	48.50
12.	Pay & allowances not disbursed	12,637.88
13.	Security deposit	4,855.00
14.	CPF advance received from Council	72,386.00
15.	Sale of old articles etc.	1,826.40
16.	Pay, allowances and TA etc. received from other offices	28,262.90
17.	Professional tax	2,235.00
18.	LIC Premiums/FPBF	31,165.20
		<u>6,42,828.57</u>

C/o

Sl. No.	Particulars	Amount (Rs.)
		B/F. 6,42,828.57
19.	Festival advance received for Council	19,700.00
20.	CD(DA) received for RPF	1,35,533.11
21.	Loan (inter Unit)	40,744.89
22.	G.P.F.	6,583.00
23.	CPF (DA)	2,032.20
24.	Cycle advance received for Council	6,000.00
25.	Scooter advance received for Council	6,000.00
26.	Flood advance received for Council	10,900.00
27.	Miscellaneous (cancellation of cheques, salaries, interest on advance, house rent etc)	36,629.59
	Total	9,06,951.36

ANNEXURE—III**Statement showing the details of payment of Income-tax, CPF etc.
of Headquarter's office and Centralised units**

Sl. No.	Particulars	Amount (Rs.)
1.	G.P.F. subscriptions remitted	6,331.00
2.	C.P.F. subscriptions deposited to CPF A/c	3,93,126.80
3.	CPF(DA) creditable to CPF A/c	33,083.05
4.	Income-tax paid	52,182.00
5.	Professional tax paid	3,915.00
6.	Leave salary and pension contribution paid	4,101.60
7.	CD(DA) paid	1,82,357.00
8.	Interest on CPF(DA) credited to CPF A/c	24,323.90
9.	Cyclone relief fund	688.00
10.	Miscellaneous	538.93
	Total	7,00,647.28

ANNEXURE—IV

**Statement of payment and remittances of recoveries made in the bills
and others receipts by the Decentralised units during 1977-78**

Sl. No.	Particulars	Amount (Rs.)
1.	Income-tax	32,063.50
2.	CPF	3,32,622.80
3.	CD(DA)	91,262.00
4.	Festival advance	17,780.00
5.	Cycle advance	1,906.65
6.	Scooter advance	750.00
7.	Flood advance	3,984.50
8.	Foodgrains advance	2,851.47
9.	Subscription for journals	3,316.27
10.	Purchase fee	1,376.55
11.	Auction fee/Tender fee	8.00
12.	Security deposit	2,186.00
13.	Refund of CD(DA)	1,37,380.18
14.	CPF(DA)	2,032.20
15.	Payment of festival CPF advances etc.	1,10,098.00
16.	Sale of proceeds of old articles etc.	1,184.65
17.	Payment of pay & allowances received from other offices	24,767.07
18.	LIC/FPBF	31,165.20
19.	Professional tax	2,235.00
20.	Loan paid	40,744.89
21.	GPF	6,583.00
22.	Miscellaneous (reissue of cancelled cheques etc.)	25,652.16
	Total	8,71,950.09

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Central Council for Research in Indian Medicine and Homoeopathy

Statement of Receipts and Payments of C.P.F. A/c for the Year 1977-78

R E C E I P T S				P A Y M E N T S			
Sl. No.	Particulars	Amounts		Sl. No.	Particulars	Amounts	
		Rs.	Rs.			Rs.	Rs.
1.	Opening balance (S.B. A/c)			1.	Amount transferred to fixed deposit A/c		22,00,000.00
	i) Cash in hand	—		2.	C.P.F. advance paid		2,71,178.00
	ii) Cash at Bank	<u>1,77,683.98</u>	1,77,683.98	3.	Final payment of C.P.F.		
2.	C.P.F. subscriptions for 1976-77		36,593.70	i) Subscription A/c	62,759.00		
3.	Interest on CPF subscriptions for 1976-77		1,22,317.40	ii) Contribution A/c	<u>24,895.00</u>	87,654.00	
4.	Council's contribution for 1976-77		4,37,296.00	4.	Transfer to current A/c of Council's contribution forfeited		4,965.00
5.	Interest on Council's contribution for 1976-77		83,520.00	5.	Payment of D.A. (CPF)		652.40
6.	C.P.F. subscriptions for 1977-78			6.	Refund of excess recovery of CPF advance		40.00
	i) Amount credited to subscriptions A/c	7,42,854.00		7.	Transfer of DA(CPF-I) to current A/c		2,452.55
	ii) Excess transferred from current A/c	<u>38,644.60</u>	7,81,498.60	8.	Refund of loan to current A/c		2,712.00
7.	Interest on CPF subscriptions A/c for 1977-78		1,93,728.00	9.	Transfer of excess CPF contribution to current A/c		22,301.90
8.	Council's contribution to CPF for 1977-78			10.	Transfer of DA(CD) to current A/c		253.00
	i) Amount credited to current A/c	4,54,077.00		11.	Interest on fixed deposit A/c transferred to current A/c		2,60,753.50
	ii) Excess transferred from current A/c	<u>56,236.95</u>	5,10,313.95	12.	Closing balance		
9.	Interest on Council's contribution A/c for 1977-78		1,27,049.00	i) Cash in hand	—		
10.	Bonus on subscriptions A/c			ii) Cash at Bank	<u>16,454.89</u>	16,454.89	
	i) Arrears for 1975-76 & 1976-77	17,530.00					
	ii) Arrears for 1977-78	<u>8,668.00</u>	26,198.00				
		C/o	<u>24,96,198.63</u>			C/o	<u>28,69,417.24</u>

Central Council for Research in Indian Medicine and Homoeopathy

Balance Sheet of C.P.F. Account as on 31st March, 1978

LIABILITIES				ASSETS			
Sl. No.	Particulars	Amounts Rs.	Rs.	Sl. No.	Particulars	Amounts Rs.	Rs.
1.	Subscriber's Account			1.	Fixed deposit account		
	a) Opening balance	18,19,906.90			a) Opening balance	29,74,712.00	
	b) Subscriptions due for 1976-77 received and deposited	36,593.70			b) Add deposit during 1977-78	<u>22,00,000.00</u>	51,74,712.00
	c) Interest on subscriptions due for 1976-77 received and deposited	<u>1,22,317.40</u>		2.	Subscriptions and advances received in March, 1978 to be credited in April, 1978 (Contra)		40,072.00
	d) Subscriptions due for 1977-78 received and deposited	7,42,854.00		3.	Closing balance		
	e) DA(CPF-I) credited to the subscriber's A/c (transfer from DA(CPF) account)	4,835.00			i) Cash in hand	—	
	f) DA(CPF-II) credited to the subscriptions A/c (transfer from DA(CPF) account)	2,71,750.00			ii) Cash at Bank	<u>16,454.89</u>	16,454.89
	g) Arrear of bonus for 1975-76 and 1976-77 received and credited	17,530.00					
	h) Bonus for 1977-78 received and credited	8,668.00					
	i) Interest on subscription A/c for 1977-78 received and credited	1,93,728.00					
		32,18,183.00					
	Less withdrawal (Rs. 2,71,178 + Rs. 62,759 + Rs. 40)	<u>3,33,977.00</u>	<u>28,84,206.00</u>				
		C/f	<u>28,84,206.00</u>			C/f	<u>52,31,238.89</u>

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25. 12/74

Sl. No.	Particulars	Rs.	Rs.	Sl. No.	Particulars	Rs.	Rs.
		B/F.	28,84,206.00			B/F.	52,31,238.89
2.	Council's contribution account						
	a) Opening balance	11,36,216.00					
	b) Contribution due for 1976-77 received and deposited	4,37,296.00					
	c) Interest on contribution for 1976-77 received & deposited	83,520.00					
	d) Contribution due for 1977-78 received & deposited	4,54,077.00					
	e) Interest on contribution due for the year 1977-78 received and credited	<u>1,27,049.00</u>					
		22,38,158.00					
	- Less withdrawal (Rs. 24,895 + Rs. 4,965)	<u>29,860.00</u>	22,08,298.00				
3.	Interest on Fixed A/c & Savings Bank A/c						
	a) Opening balance	19,005.51					
	b) Interest earned on fixed deposit A/c	2,60,753.50					
	c) Interest earned on S.B. A/c	<u>2,709.31</u>					
		2,82,468.32					
	Less transfer to current A/c	<u>2,60,753.50</u>	21,714.82				
4.	D.A. (CPF) Account-I (From 1-6-74 to 31-12-74)						
	a) Opening balance	5,180.20					
	b) Less transfer to current A/c	<u>4,835.00</u>	345.20				
		C/f	<u>51,14,564.02</u>				
						C/f	<u>52,31,238.89</u>

Sl. No.	Particulars	Rs.	Rs.	Sl. No.	Particulars	Rs.	Rs.
		B/F.	51,14,564.02			B/F.	52,31,238.89
5.	D.A. (CPF) Account-II (From 1-10-74 to 31-8-75)						
	a) Opening balance	1,67,791.80					
	b) Transfer from current A/c	<u>1,08,041.80</u>					
		2,75,833.60					
	c) Less transfer to subscription A/c	<u>2,71,750.00</u>					
		4,083.60					
	Less refund	<u>652.40</u>	3,431.20				
6.	D.A. (CPF-I) received in excess from the current A/c						
	a) Opening balance	2,452.55					
	b) Less transfer to current A/c	<u>2,452.55</u>	—				
7.	D.A. (CD) received from the current A/c						
	a) Opening balance	253.00					
	b) Less transfer to current A/c	<u>253.30</u>	—				
8.	Loan taken from the current A/c						
	a) Opening balance	2,712.00					
	b) Less transfer to current A/c	<u>2,712.00</u>	—				
9.	Amount due to the current A/c						
	a) Subscriptions transferred in excess	38,644.60					
	b) Contribution transferred in excess	56,236.95					
	c) Income-tax transferred	<u>1,714.00</u>					
		96,595.55					
	d) Less transfer to the current A/c	<u>22,301.90</u>					
		74,293.65					
		C/R	<u>51,17,995.22</u>			C/R	<u>52,31,238.89</u>

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Sl. No.	Particulars	Rs.	Rs.	Sl. No.	Particulars	Rs.
		B/F.	51,17,995.22			B/F. 52,31,238.89
	e) Less adjustment of amount transferred to the current A/c in the past years & Bank commission charges (Rs. 922.10+199.88)	<u>1,121.98</u>	73,171.67			
10.	Subscriptions and advance received for March, 1978 to be credited in April '78		40,072.00			
	Total		<u>52,31,238.89</u>		Total	<u>52,31,238.89</u>

Sd/-
(P.N.V. KURUP)
Director (CCRIMH)

125

Sd/-
(K.K. SUBRAMANIAN)
Assistant Director (Admn.) (CCRIMH)

179

Sd/-
(J.K. DASS)
Accounts Officer (CCRIMH)

(Auditor's Certificate Awaited)

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Central Council for Research in Indian Medicine and Homoeopathy

Statement of Receipts and Payments for the Year 1977-78

(Schemes Financed by the Department of Family Welfare)

R E C E I P T S			P A Y M E N T S				
Sl. No.	Particulars	Amounts		Sl. No.	Particulars	Amounts	
		Rs.	Rs.			Rs.	Rs.
1.	Opening balance			1.	Headquarter's office		
	i) Cash in hand	—			a) Pay & allowances	60,706.70	
	ii) Cash at bank	—			b) T.A.	—	
		—			c) Contingencies	—	60,706.70
2.	Grant-in-aid received from the department of Family Welfare		3,75,000.00		d) Remittance of recoveries etc.		
					i) C.P.F. subscription	23,964.00	
3.	Recoveries made in the pay bills				ii) Income tax	1,069.00	
	i) C.P.F. subscriptions	23,087.00			iii) Professional tax	112.00	
	ii) Income tax	959.00			iv) C.P.F. (DA)	1,548.40	
	iii) Festival advance	740.00			v) CD(DA)	12,454.00	39,147.40
	iv) C.G.H.S.	136.25		2.	Other Research Units		
	v) CD (DA)	2,046.00			a) Pay & allowances	2,89,306.45	
	vi) Professional tax	144.00	27,112.25		b) T.A.	2,224.30	2,91,530.75
4.	Loan received from the grant account of Health Scheme		4,61,509.93		c) Contingencies		
					i) Consumable stores and miscellaneous expenses	45,217.11	
					ii) Non-consumable stores	1,456.00	46,673.11
				3.	Payment of festival advances		700.00
				4.	Loan refunded to grant account of Health Scheme		3,91,546.97
				5.	Council's contribution to CPF, interest and bonus on CPF		24,000.00
				6.	Closing balance		
					i) Cash in hand	—	
					ii) Cash at bank	9,317.25	9,317.25
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Central Council for Research in Indian Medicine and Homoeopathy

Statement of Income and Expenditure for the Year 1977-78

(Schemes Financed by the Department of Family Welfare)

EXPENDITURE				INCOME			
Sl. No.	Particulars	Amounts		Sl. No.	Particulars	Amounts	
		Rs.	Rs.			Rs.	Rs.
1.	Headquarter's office			1.	Grant-in-aid received from the department of Family Welfare		3,75,000.00
	a) Pay & allowances		60,706.70	2.	Recoveries made in the bills		
	b) T.A.		—		i) CPF subscription	23,087.00	
	c) Consumable stores and miscellaneous expenses		—		ii) Income tax	959.00	
2.	Other Research Units				iii) CD (DA)	2,046.00	
	a) Pay & allowances		2,89,306.45		iv) Professional tax	<u>144.00</u>	26,236.00
	b) T.A.		2,224.30	3.	Excess of expenditure over income transferred to balance sheet		63,659.79
	c) Consumable stores and miscellaneous expenses		45,217.11				
3.	Remittance of recoveries made in the pay bills		39,147.40				
4.	Council's contribution to CPF bonus and interest on CPF		24,000.00				
5.	Outstanding liabilities						
	a) Contingencies	593.83					
	b) Additional D.A.	1,422.00					
	c) CPF subscription	2,246.00					
	d) Professional tax	<u>32.00</u>	4,293.83				
	Total		<u>4,64,895.79</u>			Total	<u>4,64,895.79</u>

Central Council for Research in Indian Medicine and Homoeopathy

Balance Sheet as on 31st March, 1978

(Schemes Financed by the Department of Family Welfare)

LIABILITIES				ASSETS			
Sl. No.	Particulars	Amounts		Sl. No.	Particulars	Amounts	
		Rs.	Rs.			Rs.	Rs.
1.	Loan due to the grant account of the Health Scheme			1.	Closing balance		
	i) As on 1.4.77	74,106.60			i) Cash in hand	—	
	ii) Addition during 1977-78	<u>69,962.96</u>	1,44,069.56		ii) Cash at Bank	<u>9,317.25</u>	9,317.25
2.	Recovery of cycle advance and CPF contributions transferrable to the grant account of the Health Scheme			2.	Assets (non-consumable stores) (Rs. 66,696.20 + Rs. 1,456.00)		68,152.20
	i) As on 1.4.77			3.	Refundable advance		
	a) Cycle advance	210.00			i) Festival advance		
	b) CGHS	137.50			a) As on 1.4.1977	100.00	
	ii) CGHS during 1977-78	<u>136.25</u>	483.75		b) Add paid during 1977-78	<u>700.00</u>	
3.	Outstanding liabilities					800.00	
	i) During 1976-77				ii) Less recovery	<u>740.00</u>	60.00
	a) CPF subscription	579.00		4.	Amount due from the grant account of the Health Scheme towards payment of DA (CPF) during 1976-77		163.65
	b) CD (DA)	259.00		5.	Excess of expenditure over income transferred from the statement of income and expenditure		
	ii) During 1977-78				i) As on 1.4.1977	23,476.65	
	a) CPF subscription	2,246.00			ii) During 1977-78	<u>63,659.79</u>	
	b) Professional tax	32.00				87,136.44	
	c) Contingencies	593.83			Less outstanding liabilities as on 1.4.1977 paid during 1977-78	15,144.40	71,992.04
	d) Additional D.A.	<u>1,422.00</u>	5,131.83			<u>15,144.40</u>	
	Total		<u>1,49,685.14</u>		Total		<u>1,49,685.14</u>

Sd/-
(P.N.V. KURUP)
Director
C.C.R.I.M.H.

Sd/-
(K.K. SUBRAMANIAN)
Assistant Director (Admn.)
C.C.R.I.M.H.

Sd/-
(J.K. DASS)
Accounts Officer
C.C.R.I.M.H.

(Auditor's Certificate Attached)