

आयुर्वेदीय स्नातकोत्तर प्रशिक्षण एवं अनुसन्धान संस्थान



Annual Report

वार्षिक प्रतिवेदन

2007 - 2008

GRADUATE TEACHING &

INSTITUTE FOR

GUJARAT AYURVED UNIVERSITY, JAMNAGAR

गुजरात आयुर्वेद विश्वविद्यालय, जामनगर

# Annual Report 2007-08

(A bird's eye view)

Institute for Post Graduate Teaching & Research in Ayurveda was established in Jamnagar as Central Institute for Research in Indigenous system of Medicine in 1952 and Post Graduate Training Centre in Ayurveda in 1956. Since then 51 batches have been admitted and more than 1300 graduates have received PG Degree and 110 PhD Degree from this Institute. Post Graduates of this Institute have managed premier Institutions of Ayurveda in India and abroad like Nepal, Mauritius, Bangladesh and Sri Lanka.

The Institute, being a premier Institute of Govt. of India always participates in the National Health Programmes of Govt. of India. During last year Govt. of India has started two National campaigns i.e. National Campaign in Geriatric Health Care and National Campaign on Kshara Sutra. Institute is implementing these programmes and organizing various out-reach activities for these programmes and conducted Nidan-Chikitsa camps in rural areas of Gujarat. During the year six diagnostic and treatment camps were organized at the remote villages of Jamnagar district having predominantly SC, ST & OBC population. Diagnostic camps in the schools of the Jamnagar were also organized for the welfare of the Children and to access their Health Status.

Another programme of Govt. of India is to develop the man power of AYUSH and under this programme Institute is organizing the Reorientation Training Programme (RoTP) for the teachers of Ayurveda. During the reporting year 6 RoTP were conducted i.e. Basic, Principles (July 2007), Rasashastra (August 2007), Rogavijnan (November 2007), Shalakyia (January 2008), Samhita (February 2008) and Rasashastra (March 2008). These programmes were conducted under the Sponsorship of Govt. of India and were well attended. Renowned experts of Ayurveda imparted training to the teachers of Ayurveda.

52<sup>nd</sup> foundation day of Institute for Post Graduate Teaching and Research in Ayurveda was celebrated on 20<sup>th</sup> July 2007 and on this occasion a two days National workshop on Research Methodology was organized. More than 150 teachers and students of the Institute were given orientation in research methodology.

Pharmacovigilance workshop under WHO bi-annual support scheme has been organized by the Institute during December 3<sup>rd</sup> & 4<sup>th</sup>, 2007. The workshop was well attended and as an outcome Govt. of India is considering to declare this Institute as National Resource Centre for Pharmacovigilance in Ayurveda, Siddha & Unani drugs (ASU). The Institute has established a Pharmacovigilance cell first ever in any of the Ayurvedic Institutes. A workshop on Ayurvedic Technical terminology was organized during January 3<sup>rd</sup> - 5<sup>th</sup>, 2008. During this Workshop, nearly 2000 words of Ayurveda have been finalized for their definition.

AYU Journal: Research is an integral part of higher education and unless the outcome of the research is made known to people it is of no use. The Gujarat Ayurved University was already publishing a journal titled 'AYU', to give more credibility to the articles published, it was handed over to the Institute for Post Graduate Teaching & Research in Ayurveda and converted into a quarterly peer reviewed journal of research in Ayurveda with effect from year 2006 (Volume 27).

Data Base preparation : In order to make the data of research works carried out in this institution available for scientific society outside the institute, a Data Base of Research was prepared and released in the form of CD ROM containing full transcription of 235 M.D.(Ayu) / M.S. (Ayu) thesis carried out from the year 2000 to 2007. This CD was prepared by Dr. Girish K. J. under the guidance of Dr. M. S. Baghel.

Submission of technical reports to APC and CCRAS: During the reporting year, Standard Operating Procedures (SOP) for about 10 preparations of Ayurveda were prepared by the Institute through the Dept. of Rasashastra, Bhaishajya Kalpana including Drug Research and were submitted to Ayurvedic Pharmacopoeia Committee (APC) being managed by CCRAS.

CME on paper writing: A special CME programme on the topic "How to read and write a scientific research paper" was organized on 16<sup>th</sup> & 17<sup>th</sup> October 2007 through the Dept. of Rasashastra, Bhaishajya Kalpana including Drug Research. Seven guest lectures were delivered in the programme and it was well attended and appreciated. The aim of this CME programme was to train and inculcate the art of technical paper drafting for scientific journals and presenting them before the scientific fraternity at large for popularization of this ancient science.

At present the institute is having 9 departments offering post graduate degree in 12 specialities. Institute was facing severe shortage of the teachers hence under guidance of Department of AYUSH a recruitment drive was conducted and 10 new appointments for faculty members were made out of which 2 are from SC category and 2 OBC category. Appointment letters for other 5 Lecturers on contract basis were also issued. Thus the total number of faculty members became 32 first times in last 20 years. This will give new impetus for the development of the Institute.

During the academic year 2007-2008 an All India Entrance Test for the admission of 53<sup>rd</sup> batch of M.D. (Ayu) / M.S. (Ayu) course was conducted on 24.06.2007 in which 986 candidates had appeared. Total 34 admissions were given including Govt. of India nominees and one foreign candidate from Sri Lanka. Amongst these candidates 40% were females. During the year total 120 students were studying in the Institute out of which 17 were Ph.D. scholars.

This Institute also conducts the courses of M. Pharma (Ayurveda) and M.Sc. (Medicinal Plant Sciences) as part of Self finance activity. During the year 15 students have been given admission in M Pharma (Ayurveda) course and Guest lectures of experts from outside were also organized.

In June 2007 the regular examinations for M.D. (Ayu.) first year and final year were conducted. Total 83.33% students of first year and 100% students of final year passed the exam. Total 35 weekly seminars were organized at the Institute level, on every working Thursday in which final year post graduate scholars presented their research work.

The I.P.G.T. & R.A. is organizing various training programs for foreigners. A three months Introductory Course of Ayurveda was conducted during November to January 2008 with 13 students from the countries like Spain, Latvia, Brazil, Canada, France, Germany, Switzerland, and U.S.A. Gujarat Ayurved University has MOU with 6 Foreign Institutes under which clinical and practical training is provided to students of these MOU Institutes. During the year 2007-08 students from Fundacion De Salud, Ayurveda Prema of Argentina belonging to the Latin American countries like Uruguay, Paraguay, Bolivia, Mexico, Spain and Brazil were given 10 days intensive clinical and practical training. During the year many foreigners visited the Institute including Dr. (Mrs) Barzac, ex Health Minister, France and her husband Prof. Lebas a Professor of community medicine in Paris.

The Institute had been a WHO collaborating centre, at present the process of re-designation is in progress. During the reporting year 06 persons from Myanmar visited the Institute as WHO fellows. Five traditional medicine doctors from Bhutan have been given training in Panchakarma for four months on deputation from Govt. of Bhutan. Dr. M. S. Baghel, Director visited Budapest (Hungary) being deputed by Govt. of India along with the Minister of State, Ministry of Health & FW and Joint Secretary, Dept. of AYUSH, Govt. of India for popularization of Ayurveda, in the month of September 2007.

The Teachers and students of the Institute are continuously participating in the academic and research activities at all India level. Many teachers are being invited by the National Institutes and Ayurvedic colleges for delivering guest lectures in Seminars, Symposia, Workshops of National and International level.

This institute has a well managed Hospital with O.P.D. & I.P.D. facilities. During the year total 124851 patients were treated as out door patient, which included 61134 female and 7461 children. Total 1642 patients were admitted to the various wards of the hospital as I.P.D. patients. The Panchakarma section of the hospital is providing facilities to the patients. During the year nearly 50638 Panchakarma procedures were performed on the patients out of whom 24276 were done on female.

Govt. of India has sanctioned Rs. 700 Lacs as Plan money for the development of the Institute. This was the first time that Govt. of India has sanctioned this much big amount for the development of the Institute. The money has been deposited with CPWD for the construction of new Institute building and internal roads were revamped with concrete and construction of Director Quarter has started. The Architectural design of the Institute has been approved and construction will start very soon.

During the reporting year three meetings of PG Board have taken place in which important decisions were made. Board has taken radical decisions to revamp the examination pattern of PG courses and adopted scoring/grading system in place of conventional marking system. It has also taken decision to update and to increase the standards of Ph.D. researches; Board has increased total number of Ph. D. scholarships from 16 to 20 and sanctioned creation of 4 new departments with full-fledged staff and 6 student admission capacity.

On this occasion I convey my sincere thanks to Govt. of India, Authorities of the Dept of AYUSH, Dept of ISM & H Govt. of Gujarat, Gujarat Ayurved University, Jamnagar for their cooperation provided for the running of this Institute. Special thanks are due to the members of PG Board and other regulating committees who provided their expertise and support for the development of the Institute. The development of this Institute is the result of whole hearted effort of the Faculty, staff, PG & Ph.D. students of this Institute; I convey my sincere thanks to them also.

**(Prof. M. S. Baghel)**  
**Director**

**BOARD OF POST GRADUATE TEACHING & RESEARCH IN AYURVEDA**

1	Dr. S. S. Savrikar Prof. M.S. Baghel Vice-Chancellor Gujarat Ayurved University, Chanakya Bhavan, Jamnagar - 361 008	(up to 15.03.2008) (I/c Vice-Chancellor from 16.03.2008)	-	Chairman
2	Shri Shiv Basant, I.A.S. The Joint Secretary Department of Ayush, Ministry of Health & Family Welfare, Indian Red Cross Society Building, Red Cross Road, New Delhi - 110 001		-	Member
3	Financial Adviser (AS&FA) Ministry of Health & Family Welfare Govt. of India, Nirman Bhavan, New Delhi - 110 001		-	Member
4	Dr. S. K. Sharma / Dr. S. Madhvan Adviser (Ayurveda), Department of Ayush Ministry of Health & F. W., Govt. of India, Indian Red Cross Society, Red Cross Road, New Delhi - 110 001		-	Member
5	Shri J.C. Rathod, The Joint Secretary, Deptt. of Health & Family Welfare, Sachivalaya, Govt. of Gujarat, Gandhinagar		-	Member
6	Dr. A. P. Singh, Director, I.S.M. & H. Gujarat State, Block no. 1, Old Sachivalaya, 2 <sup>nd</sup> floor, Dr. Jeevraj Mehta Bhavan, Gandhinagar (Gujarat)		-	Member
7	Rajvaidya Shri Dhanshankar G. Pandit Nominated by Govt. of Gujarat, Brahmipuri Pole, Near Patasa pole, Near Police Chawki Gali, Gandhi Marg, Ahmedabad - 380 001		-	Member
8	Prof. Haridas N. Patel Nominated by Govt. of Gujarat, 21, Nalanda Nagar College Road, Nadiad.		-	Member
9	Dr. Alankruta R. Dave Lecturer & Senate Syndicate member Kayachikitsa Department, I.P.G.T. & R.A., Gujarat Ayurved University, Jamnagar - 361 008		-	Member
10	Dr. A. R. Trivedi Reader & Senate Syndicate member Kaumarbhritya Department, Shri Gulabkunwerba Ayurved Mahavidyalaya, Gujarat Ayurved University, Jamnagar		-	Member
11	Prof. M. S. Baghel Director of I.P.G.T. & R.A., Gujarat Ayurved University, Jamnagar - 361 008.		-	Member
12	Prof. P. P. Sharma Prof. H.M. Chandola Dean - I.P.G.T. & R.A., Gujarat Ayurved University, Jamnagar - 361 008.	- upto 29.02.2008 - from 01.03.2008	-	Member
13	Shri R.M. Jhala Registrar, Gujarat Ayurved University, Jamnagar - 361 008.		-	Member / Secretary

**THE SCIENTIFIC ADVISORY COMMITTEE OF I.P.G.T. & R.A.  
(up to 15-03-2007)**

1. Dr. S.S. Savrikar, (up to 15.03.2008) - Chairman  
Prof. M.S. Baghel, (I/c. Vice Chancellor from 16.03.08)  
Vice-Chancellor, Gujarat Ayurved University,  
JAMNAGAR
2. Prof. Banwarilal Gaur, - Member  
Vice-Chancellor, Rajasthan Ayurved University,  
JODHPUR (RAJASTHAN)
3. Prof. B.D. Nandurbarkar, - Member  
G-1, Mahaveer Baug Apartment,  
Near Shreyas School, Shreyas Tekra, Ambavadi,  
AHMEDABAD - 15.
4. Prof. Tanuja Nesari, - Member  
Professor & Head of Dravyaguna Deptt., Tilak Ayurvedic College,  
PUNE.
5. Dr. Shobha G. Hiremath, - Member  
Professor, Department of P.G. Studies in Rasa Shastra,  
Taranath Govt. Ayurved College,  
BELLARY (Karnataka) - 583101
6. Dr. G.S. Lavekar, - Member  
Director,  
Central Council for Research in Ayurveda & Siddha (CCRAS),  
Jawaharlal Nehru Kendriya Chikitsa Evam Homoeopathy  
Anusandhan Bhavan, 61-65 Institutional Area  
Opp. D Block Janakpuri, NEW DELHI.
7. Dr. Manjari Dwivedi, - Member  
N-9/31-32 Brij Enclave Extension, P.O. Bajardiha,  
VARANASI - 221010
8. Dr. C.H.S. Shastry, - Member  
Side Road of Congress Office, Near Ayyappa Temple,  
Vill. Undavalli - 522501 P.O. Phadepalli,  
Dist. GANTUR (A.P.)
9. The Secretary, - Member  
Central Council of Indian Medicine,  
61-65 Institutional Area, Opp. D Block , Janakpuri  
NEW DELHI
10. Dr. S. K. Sharma, - Member  
Adviser (Ayurveda), Deptt. of AYUSH,  
Govt. of India, Ministry of Health and Family Welfare,  
Red Cross Building, Opp. Parliament, Red Cross Road,  
NEW DELHI.
11. Vd. Hardas N. Patel, - Member  
21, Nalanda Nagar, College Road, NADIAD (Gujarat)
12. Dr. A. R. Trivedi, - Member  
Shri Gulabkunverba Ayurved Mahavidyalaya,  
Gujarat Ayurved University, JAMNAGAR.
13. Prof. M.S. Baghel, - Member  
Director, I.P.G.T. & R.A., Gujarat Ayurved University, JAMNAGAR.
14. Prof. P. P. Sharma, - up to 29.02.2008 - Member  
Prof. H. M. Chandola, - from 01.03.2008  
Dean, I.P.G.T. & R.A., Gujarat Ayurved University, JAMNAGAR.
15. Shri R.M. Jhala, Registrar, - Member/Secretary  
Gujarat Ayurved University, JAMNAGAR.

## ACADEMIC COMMITTEE

- |    |   |  |   |                  |
|----|---|--|---|------------------|
| 1. | Dr. S.S. Savrikar,<br>Prof. M.S. Baghel<br>Vice-Chancellor,<br>Gujarat Ayurved University,<br>Jamnagar                  | (up to 15.03.2008)<br>(I/c. Vice-Chancellor from 16.03.2008) | - | Chairman         |
| 2. | Dr. A.P. Singh<br>Director, ISM&H,<br>Govt. of Gujarat<br>Gandhinagar   |  | - | Member           |
| 3. | Dr. S.K. Sharma<br>Adviser - Ayurveda,<br>Deptt. of AYUSH,<br>Government of India (or his representative)<br>New Delhi. |  | - | Member           |
| 4. | All Heads of the Teaching Depts. of Institute of Post<br>Graduate Teaching & Research in Ayurveda, Jamnagar             |  | - | Member           |
|    | 1. Prof. R.R. Dwivedi, H.O.D. of Basic Principles   |  |   |                  |
|    | 2. Prof. P.P. Sharma, H.O.D. of Dravyaguna  |  |   |                  |
|    | 3. Dr. V.D. Shukla, H.O.D. of Panchakarma   |  |   |                  |
|    | 4. Dr. S.N. Vyas, H.O.D. of Kayachikitsa  |  |   |                  |
|    | 5. Dr. M.A. Pandya, H.O.D. of Stri Roga & Prasuti Tantra  |  |   |                  |
|    | 6. Dr. P.K. Prajapati, H.O.D. of Rasa Shastra & B.K.  |  |   |                  |
|    | 7. Dr. Chaturbhuj Bhuyan, H.O.D. of Shalya Tantra   |  |   |                  |
|    | 8. Dr. Manjusha R., H.O.D. of Shalakyia Tantra  |  |   |                  |
|    | 9. Dr. K.S. Patel, H.O.D. of Kaumarabhritya   |  |   |                  |
| 5. | Two members nominated by the Board of IPGT & R  |  |   |                  |
|    | 1. Dr. Gurdip Singh, Director,<br>Research, Hassan  | (up to 26.03.08)   | - | Member           |
|    | 2. Dr. B.L. Gaur, Vice-Chancellor,<br>Rajasthan Ayurved University,<br>Jodhpur  | (up to 26.03.08)   | - | Member           |
|    | 1. Dr. A.K. Sharma, Professor Kayachikitsa,<br>N.I.A., Jaipur   | (from 27.03.08)  | - | Member           |
|    | 2. Dr. Manoranjan Sahoo, Professor Shalakyia,<br>BHU, Varanasi.   | (from 27.03.08)  | - | Member           |
| 6. | One Principal on rotation of the affiliated colleges where there is an up graded Dept.                                  |  |   |                  |
|    | 1. Dr. S.G. Bhaliya, Principal,<br>Govt. Akhandanand Ayurved Mahavidyalaya,<br>Bhadra, Ahmedabad.                       |  | - | Member           |
| 7. | Prof. M.S. Baghel, Director,<br>I.P.G.T. & R.A.   |  | - | Member           |
| 8. | Prof. P.P. Sharma, Dean, I.P.G.T. & R.A.<br>Prof. H.M. Chandola, Dean, I.P.G.T. & RA.                                   | ( upto 29.02.2008)<br>( from 01.03.2008)                     | - | Member           |
| 9. | Shri R.M. Jhala,<br>Registrar<br>Gujarat Ayurved University, Jamnagar.  |  | - | Member Secretary |



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## DEPARTMENT OF BASIC PRINCIPLES( MAULIK SIDDHANTA)

### INTRODUCTION :

The department of Basic Principles (Maulika Siddhanta) conducts teaching, training and research in two specialities viz. (i) Ayurved Siddhanta evam Darshana (ii) Samhita. The department also teaches the compulsory subjects i.e. Research Methodology and Medical Statistics in both 'Ka' and 'Kha' groups of first year M.D. (Ayu.). Moreover for 'Ka' group the subjects like Basic Principles of Sharira and Basic Principles of Ayurveda are being taught by the department of Basic Principles. For the second and final year M.D. (Ayu.) scholars the subjects like Padarth Vijnana, Darshanika Siddhanta, Aadharabhuta Siddhanta, Charaka Samhita, Sushruta Samhita, Ashtanga Samgraha and Ashtanga Hridaya are also taught throughout the year.

### ACADEMIC ACTIVITIES :

Summary of the Academic activities of the department for 2007- 08

No.	Activity	Total No.
1.	No. of M.D. (Ayu) students in the Department	13
2.	No. of Ph.D. (Ayu) students in the Department	04
3.	Total number of Ph.D. awarded during the year	01
4.	Total number of theory classes conducted for 1 <sup>st</sup> M.D.(Ayu) during the year	106
5.	Total number of theory classes for samhita(2 <sup>nd</sup> & final) conducted during the year	242
6.	Total number of theory classes conducted for siddhanta (2 <sup>nd</sup> & final) during the year	235
7.	Total number of paper presented in the national / international seminar during the year	10
8.	Total number of paper published by the Department during the year	02
9.	Total number of reorientation programmes conducted (RoTP)	02
10.	Total number of workshop / seminar / symposia conducted	01

### RESEARCH ACTIVITIES :

#### M. D. (Ayu.) Research Projects (Completed) :

#### SAMHITA :

1. The conceptual and Applied study of Medha and Manas in Ayurveda.

Scholar : Dr. Neeta Patel,

Guide: Dr. Hitesh Vyas,

Co - Guide : Dr. Mahesh Vyas.

The study was carried out on 37 healthy volunteers. They were divided in two groups. In groups - A Yashtimadhu granules and in group - B Roasted Suji granules + sattavajay cikitsa was given to improve medha.

In group - A, 4.41% improvement was found which is statistically highly significant ( $<0.01$ ) and in group - B, 4.5 % improvement is obtained which is statistically significant ( $<0.05$ ). Thus both were proved beneficial in promoting the medha of healthy volunteers.

2. Concept of Ahara in Relation to Matra, Desha, Kala and their effect on Health.

Scholar : Dr. Rohit Dangayach,

Guide : Prof. R.R. Dwivedi,

Co - Guide: Dr. Mahesh Vyas.

In this work, the survey study was carried out to find out the relation between Ahara Matra, Desha and Kala. For this 204 persons were registered out of which 72 persons in healthy groups and 132 in unhealthy group. It was found that 35.29% persons were taking Ahara, according to matra; 73.04% were taking Ahara according to Desha 39.22% were taking Ahara according to Kala. The study conducted shows an equal importance of all three factors but kala dominates over the other.

**MAULIKA SIDDHANTA :**

3. Conceptual and Applied study on effect of Rtus on Bala as per the Sutra - "Adavante Ca.....nirdishet".

Scholar : Dr. Chhagan Jangid,

Guide : Prof. R.R. Dwivedi,

Co-Guide : Dr. Hitesh Vyas

A randomized survey was carried out in Hemanta - Vasanta and Varsha Rtus. In healthy volunteers group total, 80 HV were assessed and it is found that group wise as well as mean score level of Bala wise declination is found according selected sutra (Ch. Su. 6/8). While in patients of svasa roga group, total 671 patients were surveyed and declination in number of patients were observed in these Rtus, which is suggestive of decreasing pattern of Vyadhibala.

4. Process and Principles of Varnotpatti and assessment of Varnaprasadana in Tvakvaivarnya.

Scholar : Dr. Shilpa Savalia,

Guide : Dr. Mahesh Vyas,

Co-Guide : Dr. Hitesh Vyas.

In the research work total 35 patients have been registered, they were divided randomly into two groups. Patients in Group - A, were given Kanakatailam cream for local application for 60 days. Patients in group - B were given Manjishthadi Ghanavati internally for the same duration.

In group - A, 32.73% improvement was observed, which is statistically highly significant ( $p<0.001$ ) and in group - B, 38.1 % improvement was observed, which is also statistically highly significant ( $p<0.001$ ).

**M. D. (Ayu.) Research Project (Continued) :**

**SAMHITA :**

1. Critical study on "Vividhasitpeeteeya Adhyaya W.S.R. to principle of management in Rasa Pradoshaja Vikara.

Scholar : Dr. Ami Rajani ,

Guide : Dr. Mahesh Vyas,

Co-Guide : Dr. Hitesh A. Vyas.

2. Conceptual and critical study of Bhesaja catuska W.S.R. to Agnidipana.

Scholar : Dr. Sangita More,

Guide : Prof. R.R. Dwivedi.

3. Concept of Drava Guna and its Role in Physio-Pathology W.S.R. to Amlapitta.

Scholar : Dr. Hemant Pol,

Guide : Dr. Mahesh Vyas,

Co-Guide : Dr. Hitesh Vyas & Dr. B. Ravishankar.

4. A Comprehensive and applied study of "Aturparijnana Hetwah" in context of Desha Pariksha.

Scholar : Dr. Rupesh Wadher,

Guide : Prof. R. R. Dwivedi.

#### **M. D. (Ayu.) Research Project (Continued) :**

##### **MAULIKA SIDDHANTA :**

1. The Fundamental study of 'Swapna' in the aspect of its Prakta-Vaikrta Avastha and Satvavajaya Cikitsa.

Scholar : Dr. Sonali Tendulkar,

Guide : Prof. R.R. Dwivedi.

2. Conceptual and Applied study of Paradiguna W.S.R. to sanyoga guna.

Scholar : Dr. Ajay Kumar Rout,

Guide : Prof. R.R. Dwivedi.

3. Conceptual and Applied study of Badhana and Sanubadhana W.S.R. to Adverse Drug Reaction and ADR scale for Ayurvedic Drugs.

Scholar : Dr. Megha J. Pathak,

Guide : Dr. Hitesh A. Vyas,

Co-Guide : Dr. Mahesh Vyas & Dr. B. Ravishankar.

4. Conceptual and Applied study of Satkaryavada in Ayurveda.

Scholar : Dr. Akansha Anupam,

Guide : Prof. R.R. Dwivedi.

5. A Pharmacovigilant approach of Ayurveda in Dietetics w.s.r. Goghrita and Avighrit.

Scholar : Dr. Dipali J. Shukla,

Guide : Dr. Hitesh A. Vyas,

Co-Guide : Dr. Mahesh Vyas & Dr. B. Ravishankar.

#### **Ph.D. Research Project (Continued) :**

1. Ashtangahridaya Sutrasthan Adhyaya 1 se 10 ki Sahityika Saiddhantika, Prayogika Evam Anusandhanatmaka Samiksha.

Scholar : Dr. Hitesh Vyas,

Guide : Prof. R.R. Dwivedi.

The study is divided into two parts - conceptual study and survey study. The compilation and analysis of literature is completed. The survey study of Adhyashana is in progress and till date approximately 250 detailed survey forms have been filled.

2. Evolution And Evaluation of some objective parameters For Ushna And Sheeta Gunas based on Pancabhautika Theory and experiments.

Scholar : Dr. Santosh Mane,

Guide : Prof. R.R. Dwivedi,

Co-Guide : Dr. Mahesh Vyas & Dr. B. Ravishankar.

The study is divided into conceptual study and experimental study. In conceptual study the compilation and presentation of concept of guna has been done.

In the experimental study, Pharmacognostical, Pharmaceutical and Pharmacological experiments have been completed.

In the clinical study 131 patients of Amlapitta completed the course out of 175 registered patients.

3. Fundamental and applied study of Snigdha and Ruksha gunas with special reference to Rasaraktagata Sneha (Hyperlipidemia).

Scholar : Dr. Sangram Mishra,

Guide : Prof. R.R. Dwivedi,

Co-Guide : Dr. B. Ravishankar.

This study is divided into conceptual study and experimental study. In conceptual study, the collection of concepts and presentation of Guna has been completed.

In the experimental study, Pharmacognostical, Pharmaceutical and Pharamcological experiments has been completed.

In the clinical study 110 patients of Rasaraktagata sneha (hyperlipidemia) completed the course out of 150 registered patients.

4. An applied concept of Dhatusharata and Vyadhiksamtva (Immunity).

Scholar : Dr. Indra Kumar Parvani,

Guide : Prof. R.R. Dwivedi,

Co-Guide : Dr. J.R. Joshi.

#### **LITERARY RESEARCH UNIT :**

Following works were carried out by literary research unit in reporting year. Dr. R.K. Jakhmola, Bhashashastry is busy in literary research activities and also working as library in charge. Hindi translation of Sarasamgraha of Atreya is in progress.

#### **EXTRA CURRICULAR ACTIVITIES**

Department organized "Akhandam Samhita Path" of "Madhav Nidana" in September, 2007 in which the entire institutional staff and scholars took part.



## DEPARTMENT OF DRAVYAGUNA

### INTRODUCTION :

The department of Dravyaguna is concerned mainly on the teaching, research and training. This branch deals with plants, minerals and animal products described in Ayurveda. It includes fundamental principles of Dravyaguna, identification of medicinal plants and their different parts, cultivation, collection and preservation, etc. In addition, the department gives support for students doing research in the Pharmacognostical, Analytical, Pharmacological and Pharmaceutical fields attached with I.P.G.T. & R.A. Its primary aim being teaching Dravyaguna as a subject for M.D. (Ayu.) students and the department is equipped with well-furnished museum with various drug specimens collected from different parts of the country as well as standard drugs and controversial drugs. It has 170 theses and about 400 compilations, 100 laminated photographs and around 500 standard drugs. Apart from the above, the department provides assistance to the scholars of short-term Ayurveda courses conducted by the University for Foreign nationals and WHO nominated scholars.

### ACADEMIC ACTIVITIES :

Summary of the Academic activities of the department for 2007- 08

No.	Activity	Total No.
1	No. of M.D.(Ayu) students in the Department	012
2	No. of Ph.D.(Ayu) students in the Department	003
3	Total number of Ph.D. awarded during the year	003
4	Total number of theory classes(1 <sup>st</sup> MD Ayu) conducted during the year	46
5	Total number of Theory/ pra. / clinical (2 <sup>nd</sup> -3 <sup>rd</sup> MD Ayu)conducted during the year	449
6	Total number of paper presented in the national / international seminar during the year	016
7	Total number of paper published by the Department during the year	003

**Visiting professor :** Prof. Gyanendra Pandey worked as visiting professor in department from 13.02.2008 to 31.03 2008.

### RESEARCH ACTIVITIES :

#### Ph.D. Research Projects (Completed) :

1. An Advanced Investigative study of controversial Ayurvedic drugs with particular reference to Amlavetas.

Scholar : Dr. Giriraj Singh Gohil, Guide : Prof. P. P. Sharma,  
Co-Guides : Dr B. Ravishankar, Dr. N. H. Pandya.

Pharmacognostical study to establish anatomical identities of Hippophae salicifolia and Garcinia indica. Pharmacological activities on the extract of both the drugs on albino rats carried out. Clinical study completed and encouraging results obtained.

2. Pharmaco-clinical study of Chandrashura (Lepidium sativum Linn.) w.s.r. to Sandhivata (Osteoarthritis).

Scholar : Dr. Nita D. Raval, Guide : Dr. T. N. Pandya,  
Co-Guides : Dr. Ravishankar, Dr. Subrata De.

Pharmacognostical study: Microscopic examination of Chandrashura seed and powder was carried out. Analytical study: To analyse Chandrashura churna following parameters were carried out: Ash value, Acid insoluble ash, Methanol soluble extractive, volatile oil, fixed oil, alkaloid test, TLC etc.

Pharmacological study: In experimental study following parameters was studied i.e., Anti inflammatory, Analgesic and Anti arthritic activities. Clinical study was carried on patients of Sandhivata. Chandrashura gave good result in relieving pain, swelling, tenderness and stiffness.

3. Pharmacognostic, Pharmacological, Phytochemical and Pilot clinical study on *Lobelia nictianaefolia*, Heyne (Devanala) a Folk medicine.

Scholar : Dr. Ravi Rao Sorake, Guide : Prof. P. P. Sharma,  
Co-Guides : Dr. B. Ravishankar, Dr. Subrata De.

Pharmacognostical study to lay down some identification characters, pharmacological activities on the following were carried out. Antihistaminic activity on guinea pigs. Diuretic property evaluated on rats; phyto-chemical studies on following aspect carried out. (a) Estimation of Na<sup>+</sup>, K<sup>+</sup> by flame photometry., (b) Estimation of chlorides. Clinical study completed and obtained good results on Tundikeri patients.

#### **Ph. D. Research Projects (Continued) :**

1. A comprehensive study of Virataru (*Dicrostachys Cineria*) w.s.r. to Mutrakrichra.

Scholar : Vd. Bhupesh R. Patel, Guide : Prof. P. P. Sharma,  
Co - guides : Dr. Subrata De & Dr. B. Ravishankar.

Pharmacognostic study on the bark of virataru (*Dicrostachys cinera*) was carried out to establish anatomical characters. Preliminary phyto-chemical studies such as physicochemical parameters, identification of phyto-constituents carried out. Isolation of active principles. Clinical study is under progress.

2. A Comparative Pharmaco-Therapeutic study of Tugaksheeree [*Curcuma angustifolia* Roxb. (Fam. Zingiberaceae) and *Maranta arundinacea* Linn. (Fam. Marantaceae)] w.s.r. to Amlapitta.

Scholar : Dr. Rajashekhara N., Guide : Prof. P. P. Sharma,  
Co-Guide : Dr. B. Ravishankar.

Theoretical compilation about the drugs, disease and drug collection were carried out and Pharmacognostical, Analytical and Pharmacological studies are completed. Clinical study is under progress.

3. Evaluation of Anti-Ulcerogenic and Anti-Oxidant activities of Jivanti (*Leptadenia reticulata* Retz. wt. et Arn).

Scholar : Dr. Atanu Pal Guide : Prof. P. P. Sharma,  
Co-Guide : Dr. B. Ravishankar.

Theoretical compilation about the drug and disease, drug preparation, Pharmacognostical and Analytical studies are completed and Pharmacological and Clinical studies are continuing to assess the anti-oxidant activity.

#### **M.D. (AYU.) Research Projects (Completed) :**

1. A Pharmaco therapeutic study on "Kushmandabeeja" with special reference to "Vrishya Karma.

Scholar : Dr. Shiromani Mishra, Guide : Prof. P. P. Sharma,  
Co-Guides : Dr. B. Ravishankar; Dr. T. N. Pandya.

Pharmacognostical, analytical, pharmacological and clinical studies were conducted. Under pharmacological study, 4 groups comprising of 6 animals each were studied. The result showed the presence of mild to moderate androgenic activity in the test preparation especially at therapeutically equivalent dose in the rats. clinical study, 25 patients are treated in comparison with the placebo control groups. Kushmanda beeja granules gave good results on sexual health as it increase penile erection, rigidity, orgasm etc. up to significant level.

2. A Pharmacobotanical study of "Shinshapa" Dalbergia sissoo and its effect on Gridhrasi.

Scholar : Dr. Arti Rupani, Guide : Prof. P. P. Sharma,  
Co-Guides : Dr. B. Ravishankar & Dr. B. R. Patel.

Pharmacognostical, analytical, pharmacological and clinical studies were conducted. Under pharmacological study, weak to moderate results were observed in comparison with the standard control drug Parijata ghanvati. In clinical study, 30 patients were treated in comparison with standard control group. Parijata ghanvati group showed better results in the symptoms like ruk, toda etc and overall effect over Gridhrasi.

1. An Evaluation of ethnomedicinal property of Saptaparna w.s.r. to Essential Hypertension (UCCHARAKTACHAP).

Scholar : Dr. Kamlesh Bhogayata, Guide : Vd. Bhupesh Patel,  
Co-Guides : Prof. P. P. Sharma & Dr. Usanash Bhatt.

Pharmacognostical, analytical and clinical studies were conducted. In clinical study, 30 patients are treated in comparison with Sarpagandha ghanvati. It was observed that Saptaparna has more beneficial effect where systemic involvement is present like vibandha, pindikodwestana, bhrama, dourbalya etc. It is more effective on diastolic blood pressure.

#### **M.D. (AYU.) Research Projects (Continued) :**

1. A comparative study of "Ativisha" and "Katuki" with special reference to Lekhaniya Karma.

Scholar : Dr. Kusum Sadiya, Guide : Dr. T. N. Pandya,  
Co-Guide : Prof. P. P. Sharma; Dr. B. Ravishankar.

Study is under progress.

2. Evaluation of a folklore plant Kanoti (Linaria ramosissima) in the management of Ashmari.

Scholar : Dr. Vitthal Khunt (November 2006 batch), Guide : Dr. T. N. Pandya,  
Co-Guides : Prof. P. P. Sharma; Dr. B. R. Patel.

Study under progress.

3. A Comparative Evaluation of Anti Cough and Anti-Inflammatory Activity of Choti Pippali and Badi Pippali w.s.r. to Tamaka Shwasa.

Scholar : Dr. Kumari Mamta, Guide : Prof. P. P. Sharma,  
Co-Guides : Dr. T. N. Pandya; Dr. B. Ravishankar.

Study under progress.

4. A comparative Phyto-Pharmacognostical study for identification and evaluation of Kusha and Darbha and assessment of their Mootral Karma.

Scholar : Dr. Niti Tushar Shah, Guide : Dr. T. N. Pandya,  
Co-Guides : Prof. P. P. Sharma; Dr. B. R. Patel & Dr. B. Ravishankar.

Study under progress.

5. A comparative appraisal of Brihati and its substitutes W.S.R. to its Pharmacognostical, Phytochemical and Pharmacological profile.

Scholar : Dr. Neha K. Kotak, Guide : Dr. B. R. Patel,  
Co-Guides : Prof. P. P. Sharma & Dr. B. Ravishankar.

Study under progress.



## DEPARTMENT OF RASASHASTRA AND BHAISHAJYA KALPANA INCLUDING DRUG RESEARCH

Department of Rasashastra and Bhaishajya Kalpana including Drug Research, the pioneer branch of Ayurveda for Drug Research is involved in the standardization of single and compound formulations since last 50 years. Besides evolving in house SOPs to the Ayurvedic formulations, the main objectives of the department are : **1.** To develop a data on physico-chemical parameters **2.** To assess safety, toxicity profile and **3.** To establish clinical efficacy of the Ayurvedic formulations.

During the span of April 2007 to March 2008, the Dept. is involved in various activities; brief data on which is as follows:

### ACADEMIC ACTIVITIES :

Summary of the Academic activities of the department for 2007- 08

No.	Activity	Total No.
1	No. of M.D.(Ayu) students in the Department	12
2	No. of M Pharm(Ayu) students in the Department	17
3	No. of Ph.D.(Ayu) students in the Department	8
4	Total number of Ph.D. awarded during the year	-
5	Total number of theory classes conducted(MD Ayu) during the year	99
6	Total number of theory classes conducted(M Pharm. Ayu) during the year	82
7	Total number of practical classes conducted(MD Ayu) during the year	493
8	Total number of practical classes conducted(M Pharm. Ayu) during the year	73
9	Total no. of theory and pra. classes conducted for international scholars	51
10	Total number of paper presented in the national / international seminar during the year	05
11	Total number of paper published by the Department during the year	09
12	Total number of reorientation programmes conducted (RoTP)	02
13	Total number of workshop / seminar / symposia / CME conducted	02

**Pharmacy Training :**

The M.D (Ayu.) scholars of 2<sup>nd</sup> & 3<sup>rd</sup> year and M. Pharma (Ayu.) scholars are engaged in daily duties at Pharmacy in different batches to provide an exposure to large scale manufacturing of different kalpanas like Kharaliya rasayana, Kupipakwa Rasayana, Parpati, Bhasma, Sneha kalpana etc. at commercial scale.

**Academic Tour :**

Following the syllabus norms of CCIM, an academic tour was conducted for final year MD students during 19/10/2007 to 03/11/2007. The main objective of this tour was to provide an exposure to large scale manufacturing of Ayurvedic formulations, to observe current trends and practices, utilization of instruments in the industry etc. The industries visited during the tour are Bafco Pharmacy Ltd., Delhi, Multani Pharmacy, Delhi, Emami Pharmaceutical Ltd, Guwahati, Ozan Pharmaceutical Ltd., Guwahati and Emami Pharmaceutical Ltd, Kolkata.

**RESEARCH ACTIVITIES :****Ph. D. Research Projects (Completed) :**

1. Physico-chemical effect of Bhavana on Gandhaka Rasayana prepared with two different medias and its therapeutic effect on Ekakushta (Psoriasis).

Scholar : Dr. Suchi Mitra,

Guide : Dr. P.K. Prajapati,

Co-Guide : Dr. B. Ravishankar.

Gandhaka Rasayana was prepared by following the references from Yoga Ratnakara Rasayanadhikara and A.F.I. Further; two more samples by using arka and kwatha were also prepared for evaluating the actual efficacy. AFI method may be considered as easy, convenient and standard. On Analytical study, more reduced particle size was found in the samples prepared by giving 88 Bhavana in comparison to the sample prepared by mixing Ghana of Bhavana dravya. On the basis of Pharmacological & Clinical study, it was concluded that Gandhaka Rasayana prepared by Arka is therapeutically more beneficial than Gandhaka Rasayana prepared by Kwatha.

**Ph. D. Research Projects (Continued) :**

1. A comparative Pharmaceutico-Pharmaco-Clinical Study of Herbo-Mineral Compounds (Gandhakadi yoga A and Gandhakadi yoga B) and its effect on Iron over loading w.s.r. to Thallassaemia.

Scholar : Dr. Joban K. Modha,

Guide : Dr. P.K. Prajapati,

Co-Guides : Dr. Atul Pandya, Dr. B Ravishankar.

2. The pharmaceutical study of different Kalpana of Guduchi w.s.r. to Ekakushtha (Psoriasis).

Scholar : Dr. Rajesh Barvaliya,

Guide : Dr. P.K. Prajapati,

Co-Guides : Dr. Subrata De; Dr. B. Ravishankar.

3. Evaluation of Shodhana (Detoxification) process and antidotal study on Vatsanabha.

Scholar : Dr. Prasanta kumar Sarkar,

Guide : Dr.P.K.Prajapati,

Co-Guide : Dr.B. Ravishankar.

4. Pharmaceutical standardization of Tamra Bhasma and to evaluate its Anti-hyperlipidaemic and Cardioprotective activity in experimental model.

Scholar : Dr. Suhas Nayak,

Guide : Dr. P.K. Prajapati,

Co-Guide : Dr. B. Ravishankar.

5. A Pharmaceutical Standardization of Narikela Khanda and Narikela Khanda Granule, its efficacy on Amlapitta.

Scholar : Dr. Pramod C. Baragi, Guide : Dr. B. J. Patgiri,  
Co-Guides : Dr. P.K. Prajapati, Dr. B. Ravishankar.

6. A pharmaceutical standardization of Syrup & Ghanavati (Tablet) of Jwarahara Dashemani and to evaluate its analgesic, anti-inflammatory and antipyretic activity.

Scholar : Dr. Bharat Kalsariya, Guide : Dr. B.J. Patgiri  
Co-Guides : Dr. P.K. Prajapati, Dr. B. Ravishankar.

7. A study on "Shirisharishta" w.s.r. to Shelf life & it's efficacy in Tamaka Shwasa.

Scholar : Dr. Mundeep Jaiswal, Guide : Dr. P.K. Prajapati  
Co-Guide : Dr. B. Ravishankar.

#### **M. D. (Ayu.) Research Projects (Completed) :**

##### **RASASHASTRA SPECIALITY :**

1. The role of media in the preparation of Vanga Bhasma and evaluation for its hypoglycemic and anti hyperglycemic effect.

Scholar : Dr. Jalpa H. Jani, Guide : Dr. P. K. Prajapati,  
Co-Guides : Dr. B.J. Patgiri, Dr. B. Ravishankar.

Vanga Bhasma, the renowned Ayurvedic metallic preparations used in Prameha Roga, was prepared by two different methods. One according to Rasamritam (3/88-94½) & second according to Rasa Ratna Sammucchaya (5/162). Though the second method provides convenience in pharmaceutical aspects, is not useful in large scale manufacture. Vanga Bhasma prepared by Rasamritam shows better Anti Hyperglycemic effect in experimental and clinical study.

2. A pharmaceutical standardization and toxicity study of Naga Bhasma prepared by 2 different methods w.s.r. to Madhumeha (Diabetes Mellitus).

Scholar : Dr. Pravin Tate, Guide : Dr. B.J. Patgiri,  
Co-Guides : Dr. P.K. Prajapati, Dr. B. Ravishankar.

Naga Bhasma was prepared by two different methods. In the first method, Parada (mercury) and Gandhaka (sulphur) were used while the second method consists of Ashwattha (*Ficus religiosa*) and Manahshila (realgar). Both the Bhasmas were in PbS form chemically. No adverse effects were seen in acute toxicity. Naga Bhasma prepared by 2<sup>nd</sup> method produces higher degree of undesirable effects in comparison to Naga Bhasma prepared by 1<sup>st</sup> method in chronic toxicity study. Clinically, both the samples of Naga Bhasma were found to be equally effective antihyperglycemic drugs.

##### **BHAISHAJYA KALPANA SPECIALITY :**

1. A comparative pharmaceutico clinical study of Karpanpatru oil prepared with different medias and its effect on Switra (Vitiligo).

Scholar : Dr. Manisha Goyal, Guide : Dr. P.K. Prajapati,  
Co-Guides : Dr. B.J. Patgiri, Dr. B. Ravishankar.

Karpanpatru Taila, a siddha medicine was prepared in three different medias i.e. Gomutra, Takra and Kanji. The pharmaceutical analysis revealed that the Murchchhita Karpanpatru Taila prepared with Kanji shows minimum loss i.e. 4.66%. Analytical study reveals that Acid value was increased to negligible

levels after 6 months in the Samples of Murchchhita Karpanpatru Taila, while significantly increased in the samples of Amurchchhita Karpanpatru Taila. Karpanpatru Taila prepared with Takra (Group B) showed better result in clinical study in comparison to group A and group C.

2. A comparative pharmaceutical study of Guduchi Ghana prepared for Kwatha and aqueous extract in the management of Eka-Kushtha (psoriasis).

Scholar : Dr. Bharati Umretia,

Guide : Dr. B.J. Patgiri,

Co-Guides : Dr. P.K. Prajapati, Dr. B. Ravishankar.

Guduchi Ghana was prepared by following classical guidelines mentioned at Siddha Yoga Sangraha and by using Soxhlet extraction method. Third sample was procured from the market for comparing the data. The classical method yielded much amount of Ghana i.e. 2.56% and showed significant effects experimentally and clinically in comparison to the market sample.

#### **M. D. (Ayu.) Research Projects (Continued) :**

##### **RASASHASTRA SPECIALITY :**

1. A pharmaceutico-pharmaco-clinical study of Makaradhwaja prepared by Swarna Varka and Swarna Bhasma on Madhumeha (Diabetes Mellitus).

Scholar : Dr. Sanjay Khedekar,

Guide : Dr. P.K. Prajapati ,

Co-Guides : Dr. B.J. Patgiri, Dr. B. Ravishankar.

2. An effect of Puta in the preparation of Vanga Bhasma w.s.r. to Madhumeha (Diabetes Mellitus).

Scholar : Dr. Darshan K. Parmar,

Guide : Dr. B.J. Patgiri ,

Co-Guides : Dr. P.K. Prajapati, Dr. B. Ravishankar.

3. A comparative Pharmaceutical and Clinical study of Jala Shukti Bhasma and Mukta Shukti Bhasma w.s.r. its effect on Amlapitta.

Scholar : Dr. Kirti Parmar,

Guide : Dr. B.J. Patgiri,

Co-Guide : Dr. Galib.

4. A pharmaceutical standardization of Gandhakadi Yoga and its effect on Thalamic iron over load w.s.r to Kadali as Pathya (Dietary intervention).

Scholar : Dr. Pramod Yadav,

Guide : Dr. P.K. Prajapati,

Co-Guides : Dr. Galib, Dr. B. Ravishankar.

##### **BHAISHAJYA KALPANA SPECIALITY :**

1. A comparative study of Dhatriarishta prepared by Dhatri Swarasa and Dhatri Kwatha w.s.r. to its effect on Pandu (Iron deficiency Anaemia).

Scholar : Dr. Subhashchandra S. Madavi,

Guide : Dr. B.J. Patgiri,

Co-Guide : Dr. P. K. Prajapati.

2. The study of shelf life of Kumkumadi Ghritta prepared by Kumkum and Nagakeshar and its effect on Mukhadushika.

Scholar : Dr. Ameer Amrutia,

Guide : Dr. P.K. Prajapati,

Co-Guides : Dr. B.J. Patgiri, Dr. B. Ravishankar.

3. Pharmaceutical Standardization of Mamajak GhanaVati prepared by two different methods (Kwatha and aqueous extract) w.s.r to its anti-hyperglycemic effect.

Scholar : Dr. Samir Tanna, Guide : Dr. P.K. Prajapati,  
Co-Guides : Dr. B.J. Patgiri, Dr. B.Ravishankar.

4. A comparative study of Shirishavaleha prepared by Kwatha of Twak and Sara of Shirisha and its Shwasahara Effect.

Scholar : Dr. Shyamlal Yadav, Guide : Dr. Galib,  
Co-Guides : Dr.P.K.Prajapati, Dr. B. Ravishankar.

#### **M. Pharma (Ayu.) Research Projects (Completed) :**

1. A comparative pharmaceutical and analytical study of Apamarga Kshara prepared by different methods.

Scholar : Dr. Vijay Hinsu, Guide : Dr. B.J. Patgiri,  
Co-Guide : Dr. V. J. Shukla.

Different samples of Apamarga Kshara were prepared by following references mentioned at Sharangadhara Samhita, Rasa Tarangini, Ayurveda Sara Sangraha and Dravyaguna Vignanam of Yadavaji Trikamji in the laboratory. On the basis of yield, 8 times of water showed maximum extraction of Kshara than other percentages of water i.e. 4 and 6 times. Analytical study found Potassium and Carbonates as the main constituents along with of Sodium, Chloride, Sulphate, Bicarbonate while, Calcium and Magnesium are in traces. Prolonged time duration and increased water ratio is required to increase solubility of some Sulphate and Bicarbonate compounds.

2. A comparative pharmaceutical and analytical study of Vanga Bhasma prepared by two different methods.

Scholar : Dr. Panchal Aravind B, Guide : Dr. B.J. Patgiri.

Vanga Bhasma was prepared by two different methods mentioned at Rasa Tarangini. The X-ray diffraction studies showed the presence of SnO<sub>2</sub> as a major phase and SnO as a minor phase in the Bhasma.

3. A comparative pharmaceutico - analytical study of Kwatha prepared by different methods w.s.r. to Rasnasaptaka Kwatha.

Scholar : Dr. Mr. Pankaj Shukla, Guide : Dr. P.K. Prajapati.

Rasnasaptaka kwatha is a quality remedy to treat different kinds of Amavata. The main aim of the present study was to compare the Kwatha prepared by the drugs taken volumetrically and gravimetrically. Approximately 5.2% of ghana was obtained from the gravimetric kwatha while 4.6% of the ghana was obtained from volumetric kwatha. Thus, gravimetric ghana consists of more extracted active constituents than volumetric one. Volumetric kwatha took less time to prepare as compared to the Gravimetric kwatha.

#### **M. Pharma (Ayu.) Research Projects (Continued) :**

1. A Pharmaceutical & Analytical study of Vishwamitra Kapal Sneha.

Scholar : Dr. Kunal Maniar, Guide : Dr. P. K. Prajapati,  
Co-Guides : Dr. B.J. Patgiri, Dr. V.J. Shukla.

2. A comparative Pharmaceutical and Analytical Study of Strychnos nuxvomica (Kupeelu) w.s.r to Shodhana by different medias.

Scholar : Dr. Rajbir Saini, Guide : Dr. B.J. Patgiri,  
Co-Guide : Dr. V.J. Shukla.

#### **EXTRA CURRICULAR ACTIVITY :**

Apart from routine curriculum, department is actively involved in APC research project and development of SOP for the preparation of Ayurvedic, Siddha and Unani formulations. SOPs of the following **nine** formulations have been submitted for further evaluation to the Dept. of AYUSH, Ministry of Health & FW, New Delhi.

→ Makaradhwaja, Malla Sindura, Rasa Manikya, Rasa Sindura, Rasa Karpura, Swarna Vanga, Kasisa

## DEPARTMENT OF KAYACHIKITSA

The objectives of the department is to impart teaching to the M.D. (Ayu.) scholars in the subject of Kayachikitsa, Roga Nidana & Vikruti Vigyana, undertake intensive research in the above specialities, provide treatment facilities and consultancy services to the patients attending OPD and IPD of the Kayachikitsa, Roga Nidana and Vikruti Vigyana and Vajikarana section, organize training programme for the students of other countries who visit the institute under the MOU signed between Gujarat Ayurved University, other institutes under WHO collaboration and for three month introductory course of Ayurveda. In addition, teachers of the department served as expert member to different bodies in Government of India like Golden Triangle Partnership (GTP), scheme working group of 11<sup>th</sup> five year plan (2007-12) on access to Public Health including AYUSH, as a member to the Board of Studies.

### ACADEMIC ACTIVITIES :

Summary of the Academic activities of the department for 2007- 08

No. Activity	Total No.
1 No. of M.D.(Ayu) students in the Department	18
2 No. of Ph.D.(Ayu) students in the Department	11
3 Total number of Ph.D. awarded during the year	02
4 Total number of theory classes conducted(MD Ayu & I. S.) during the year	327
5 Total number of clinical classes conducted during the year	76
6 Total no. of paper presented in the national / international seminar during the year	10
7 Total number of paper published by the Department during the year	14
8 Total number of reorientation programmes conducted (RoTP)	01

### Vajikarana Laboratory :

The 121 patients suffering from male infertility and sexual dysfunctions were treated in the Vajikarana section of experimental laboratory from December'07 onwards. Semen analysis of 4 patients was also done during this period.

### Extracurricular activities :

Teachers of the department served as expert member to different bodies in Government of India like Golden Triangle Partnership (GTP), scheme working group of 11<sup>th</sup> five year plan (2007-12) on access to Public Health including AYUSH, as a member to the Board of Studies.

### RESEARCH ACTIVITIES :

#### Ph.D. (Ayu.) Research Projects (Continued):

1. A clinical study on the management of Amavata (Rheumatoid Arthritis) with Simhanada Guggulu and Alambusadi Churna Tablet.  
Scholar : Dr. Saroj Kumar Debnath, Guide : Prof. S.N.Vyas.
2. A comparative clinical study of Agnimantha Bhavita Shilajita and Trivrita Yukta Navaka Guggulu in the management of Sthaulaya (Obesity).  
Scholar : Dr. Ranjan Kumar Pattonder, Guide : Prof. S.N.Vyas.
3. A clinical study on Pandu Roga w.s.r. to iron deficiency anaemia and its management with Phalatrikadi Kwatha (Ghanavati) and Trikatryadi Lauha.



- Scholar : Dr. Subir Kumar Khan, Guide : Prof. S.N.Vyas.
4. A clinical study on the management of Chronic Renal Failure with Punarnavadi compound.  
Scholar : Prashanth G.S., Guide : Prof. M.S.Baghel,  
Co-Guides : Dr. Miten Mehta, Dr. Manish Mehta, Dr. B. Ravishankar.
5. Aetiopathological study of Khalitya and its management with Neelibhringaraja Taila and Keshya Rasayana.  
Scholar : Dr. Sarika Mehta, Guide : Prof. V. D. Shukla,  
Co-Guide : Prof. M.S.Baghel.
6. A clinical study of Nirgundi Ghanavati and Matra Basti in the Management of Gridhrasi w.s.r. to Sciatica.  
Scholar : Dr Mumtaz Ali, Guide : Prof. V.D.Shukla,  
Co-Guide : Dr. A.R. Dave, Dr. Nilesh Bhatt.
7. A clinical study on the role of Rasayana as an adjuvant in the Management of pulmonary tuberculosis with Anti Koch's Treatment.  
Scholar : Dr. Purvi Vyas, Guide : Prof. H.M.Chandola,  
Co-Guide : Prof. Firoz Ghanchi.
8. A clinical study on Asthi Kshaya vis-a-vis osteopenia/osteoporosis and its management with Ayurvedic herbo-mineral Rasayana compound.  
Scholar : Dr. Sanjay M. Kadlimatti, Guide : Prof. H.M.Chandola,  
Co-Guide : Dr K.S. Maheshwari.
9. A comparative study on the management of Senile dementia with poly herbal Medhya Rasayana Ghrita and Amalakyadi Ghrita.  
Scholar : Dr. Kundan Chaudari, Guide : Prof. H.M.Chandola,  
Co-Guide : Dr. B. Ravishankar.
10. A comparative clinical study on the role of Navayasa Rasayana Leha and Medhya Rasayana Tablet along with Dhatryadhyo Lepa in the management of Ek Kushtha (Psoriasis).  
Scholar : Dr. Charmi S. Mehta, Guide : Dr. A.R. Dave,  
Co-Guide : Prof. V.D.Shukla.
11. A comparative study on Rasona- Rasanadi Ghanavati and Simhanada Guggulu on Amavata w.s.r. to Rheumatoid Arthritis.  
Scholar : Dr. Rajaram Mahto, Guide : Dr. A.R. Dave,  
Co-Guide : Prof. V.D. Shukla.

#### **M.D. (Ayu.) Research Projects (Completed) :**

##### **SPECIALITY : KAYACHIKITSA :**

1. Effect of Shirishadi Ghanavati in the management of Tamaka Shvasa w.s.r. to Bronchial Asthma.  
Scholar : Dr. Shweta Agrawal, Guide : Prof. M.S. Baghel.

Total 29 patients of Tamaka Shvasa were randomly distributed into two treatment group's viz. Group A and Group B. In group A, 15 patients were treated with Shirishadi Ghanavati 1 gm. four times a day for the duration of 30 days. In group B, 14 patients were given Shvasakuthara Rasa 250mg. three times a day for 30 days. In Gr-A, statistically highly significant reduction was found in frequency of attacks (50%), duration of attacks (68.8%), and coryza (48%). Whereas statistically significant reduction was



found in frequency of attacks (30%), cough (55.6%) and coryza(50%) in Group B. It was concluded that both the groups provided approximately equal effect on Roga Bala.

2. A comparative study of Hansa Mandoora and Phalatrikadi Kwatha in the management of Pandu w.s.r to Iron deficiency anaemia.

Scholar : Dr. Madhuri G. Vyas,  
Co-Guide : Prof. V.D.Shukla.

Guide : Dr A.R. Dave,

Out of 40 patients registered, 29 had completed the course of treatment. Group A (15 patients) - were administered 2 tablet of Hansa Mandoora (500mg each) with Anupana of Takra for 6 weeks and Group B patients (14 patients) - were given 40 ml. of Phalatrikadi Kwatha twice a day for 6 weeks. Both the therapies provided statistically highly significant effect on the symptoms of Panduta (Gr-A 55.8%, Gr-B 40.4%), Daurbalyata (Gr-A 65.7%, Gr -B 58.5%) and Hrida Spandanam (Gr-A 82%, Gr-B 45%). Bio chemical study showed that statistically significant increase was found in Serum iron (Gr-A 12.55%, Gr-B 14.32%) and TIBC (Gr-A 4.29%, Gr-B 5.30%) in both the groups. Over all effect of therapies revealed that Hansa Mandoora has better effect than Phalatrikadi Kwatha.

3. A study on the role of Parijata Vati in the management of Gridhrasi w.s.r. to Sciatica.

Scholar : Dr. Bharat A. Mungara,  
Co-Guide : Dr A.R.Dave, Dr. Nilesh Bhatt.

Guide : Prof. V.D. Shukla,

Out of 45 patients of Gridhrasi registered, 36 patients had completed the course of treatment into two groups of treatment. In Group A, 2 gm of Svarasa Bhavita Parijata Vati was given in divided dose for 30 days. In Group B, above drug in same dose and duration was administered along with local Abhyanga and Nadi Sveda in three sittings (each sitting of 7 days, at a gap of three days between each sitting). In both groups, highly significant relief was observed in the symptoms like Ruka(Gr-A:40%,Gr-B:54%), Toda (Gr-A :38.5%,Gr-B:59%), Stambha(Gr-A:63%,Gr-B:70%), and Guarava(Gr-A:52%,Gr-B:61%). A similarly highly significant positive change in the S.L.R. test was also observed. Over all effect of therapies showed that Svarasa Bhavita Parijata Vati along with local Abhyanga and Nadi Sveda provided better effect to the patients of Gridhrasi.

4. A comparative study of Nirgundi Ghanavati and Tindukamrita capsule with Nirgundi Patra Pinda Sveda in the management of Amavata.

Scholar : Dr.Shakuntala Sundi,  
Co-Guide : Dr A.R.Dave.

Guide : Prof. V. D. Shukla,

Out of 43 patients of Amavata registered, 14 had completed the course of treatment in Group A and 16 patients in Group B. In Group A Nirgundi Ghanavati 1 gm three times a day for one month was given and Tindukamrita capsules having a dose of 1 gm twice a day were given in Group B. Along with the oral medicine in both the groups Nirgundi Patra Pinda Sweda was given for 21 days in three sittings (each sitting of 7 days, at a gap of three days between each sitting). Statistically significant reduction was found in both the groups in the symptom of Sandhishula (Gr-A: 61.5%, Gr-B: 67.7%) and Sandhigraha (Gr-A:78.3%, Gr- B:76.7%). Overall effect showed that better relief was found in Group B in all the cardinal symptoms as compared to Group A.

### **SPECIALITY : ROGA NIDANA AND VIKRITI VIGYANA :**

1. A clinical study of Udavarta w.s.r. to Udara Vata.

Scholar : Dr. Taruna Modhera,

Guide : Prof. M.S. Baghel.

Udara vata term was taken as flatulence predominant condition and studied under the broad term of Udavarta. Total 74 patients were registered under two groups. In Group A (treated group) 37 patients were registered, out of which 31 completed the course of treatment. They were given Yavanikadi Vati 1g

twice a day (2 tabs B.D. each of 500 mg) in Adhobhaktakala with water for 28 days. In Group B (control group) 37 patients were registered, out of which 30 completed the course of treatment. These patients were given Shankha Vati. The dose, duration and Kala were the same as in Group A. Highly significant relief was observed in Udgara Bahulya (73.86%), Adhmana (74.32%), Shirashoola(79.69%), Adhovata sanga(62.26%) in Group A. Also in Group B Udgara Bahulya (55.56%), Adhmana (69.84%), Shirashoola(62.26%) and Adhovata sanga(52.27%) was highly significantly relieved. Comparison of therapies showed percentage improvement in Group A was better than in Group B.

2. Etiological study of Amlapitta and its management with Chinnodbhavadi Yoga Ghanavati.

Scholar : Dr. Ch. Srikrishna,  
Co-Guide : Dr. A. B. Thakar.

Guide : Prof. S. N. Vyas,

Total 42 patients suffering from Amlapitta were registered, out of which 36 patients completed the full course of the treatment. i.e.; Group A - 19 and Group B-17. In Group A, patients were treated with Chinnodbhavadi Yoga Ghanavati 1gm (500 mg tablets 2 T.I.D.) for 30 days. In Group B Medhya Rasayana compound was given to the patients in the same dose and for the same duration as in Group A. Patients of both the groups A and B showed highly significant improvement in the symptoms like Daha (Gr-A: 82.3%, Gr-B : 82%), Amlodgara (Gr-A: 86.7%, Gr-B:86.7%), Shula (Gr-A: 86%, Gr-B:78.4%), Chhardi (Gr-A: 90%, Gr-B-80%), Adhmana (Gr-A: 71%, Gr-B:73%) and Gaurava(Gr-A:66%, Gr-B:73%). The results showed that Medhya Rasayana compound provided very good results in Roga Bala, Agni Bala and Chetas Bala.

**M.D. (Ayu.) Research Projects (Continued):**

**SPECIALITY : KAYACHIKITSA :**

1. Clinical study on the etiopathogenesis of Indralupta and its management with Kesha Pooraka Yoga, Shiro Abhyanga and Nasya Karma.

Scholar : Dr. Rakesh Kumar,  
Co-Guide : Dr. J. R. Joshi.

Guide : Prof. S. N. Vyas,

2. A clinical study on the role of 'Ama' in relation with Grahani Roga and its management by Tryushnadi Ghrita and Kallingadi Ghanavati.

Scholar : Dr. Alpesh Sorathiya,  
Co-Guide : Dr. P.S. N. Bhatt.

Guide : Prof. S. N. Vyas,

3. Evaluation of immuno- modulatory effect of Ranahansa Rasayana (A Sri Lankan classical Rasayana Drug) on HIV positive patients.

Scholar : Dr. K.I.W.K Somarathane,  
Co-Guides : Dr. K.N. Pandya, Dr. B. Ravishankar.

Guide : Prof. H. M. Chandola,

4. A comparative clinical study on Amlapitta and its management with Shatpatryadi Churna Tablet and Patoladi Yoga Tablet.

Scholar : Dr. Jitendra Kumar,

Guide : Dr. A. R. Dave.

**SPECIALITY : ROGA NIDANA AND VIKRITI VIGYANA :**

1. Clinico-experimental study of Hyperlipidaemia and its management by Mustadi Ghanavati.

Scholar : Dr. Manjiri Arun Nadkarni,  
Co-Guides : Prof. M.S. Baghel, Dr. B. Ravishankar.

Guide: Prof. S. N. Vyas,

2. A clinical study of etio-pathogenesis of erectile dysfunction (Klaibya) in the Diabetic and Non-Diabetic subjects and its management with Ashwattha.

Scholar : Dr. Nilesh Virani, Guide : Prof. H. M. Chandola,  
Co-Guides : Prof. S.N. Vyas, Dr. D.B. Jadeja.

**M.D. (Ayu.) Research Projects (Synopsis submitted) :**

**SPECIALITY: KAYACHIKITSA :**

1. A survey of Hypertension in Geriatric Population and its management with Makandii (Coleus forskohlii Briq.).

Scholar : Dr. Madhavi Jagtap, Guide : Prof. H. M. Chandola,  
Co-Guide : Dr. B. Ravishankar.

2. A clinical trial on protective role of Yashtimadhu (Glycyrrhiza glabra) against side effects of radiation/ chemotherapy in case of head and neck malignancies.

Scholar : Dr. Debabrata Das, Guide : Prof. H. M. Chandola,  
Co-Guide : Dr. S. K. Agarwal.

3. Efficacy of Pushpadhanva Rasa on Kshina- Shukra (Oligozoospermia).

Scholar : Dr. Jitesh Padaria, Guide : Prof. S.N. Vyas,  
Co-Guide : Dr. D. B. Jadeja.

4. Comparative study of Shwasahara Leha and Vasa Haritaki Avaleha in the management of Tamaka Shwasa w.s.r to Bronchial Asthma.

Scholar : Dr. Manisha Sharma, Guide : Dr. A. R. Dave,  
Co-Guide : Prof. V. D. Shukla.

**SPECIALITY : ROGA NIDANA AND VIKRITI VIGYANA :**

1. Role of Udara Krimi w.s.r to intestinal helminthes on the etio-pathogenesis of Pandu.

Scholar : Dr. Vaishnavi Tengse, Guide : Prof. S. N. Vyas,  
Co-Guides : Prof. M.S. Baghel, Dr. J. R. Joshi.

2. A clinical study on dietetics and lifestyle in etio-pathogenesis of type II Diabetes (Apathya Nimittajja Prameha) and evaluation of 'Meha Mudgaravati' in Samprapti Vighatana.

Scholar : Dr. Ila Tanna, Guide : Prof. H. M. Chandola,  
Co-Guide : Dr. J. R. Joshi.



## DEPARTMENT OF PANCHAKARMA

Department of Panchakarma is imparting teaching and extensive practical training to the MD (Ayu) scholars in the subject of Panchakarma and Manasa Roga including collaborative intensive research and also provides various Panchakarma and allied Panchakarma therapies to the OPD and IPD patients of the institute apart from the MD & Ph D research work. Department also provides teaching and practical Panchakarma training to the foreign students of the various institutes having MOU with Gujarat Ayurved University, foreign scholars who visit the institute under WHO collaboration, foreign students under three months introductory course of Ayurveda, International scholars coming for Panchakarma certificate course, internees of BAMS foreigners course. The faculty members are also extending their clinical services in the remote rural areas as per the instruction and guidelines of the authority and delivering the lectures in the society for the awareness of Panchakarma and to extend the benefit of Panchakarma to the mass.

### ACADEMIC ACTIVITIES :

Summary of the Academic activities of the department for 2007- 08

No.	Activity	Total No.
1	No. of M.D.(Ayu) students in the Department	018
2	No. of Ph.D.(Ayu) students in the Department	003
3	Total number of Ph.D. awarded during the year	002
4	Total number of theory / clinical classes conducted during the year	306
5	Total no. of paper presented in the national / international seminar during the year	016
6	Total number of paper published by the Department during the year	011

**Hospital Activities :** During the year total 477 patients were treated in IPD of Panchakarma.

**Trigarbha Kuti :** Three patients were admitted and treated in Trigarbha Kuti of the department for different time duration as per requirement.

**Panchakarma :** In the year 2007-08 following procedures were carried out in the Panchakarma department.

Karma	Name	Male	Female	Total
Snehana	Sarvang Abhyanga	11051	9840	20891
	Mridu Abhyanga	495	624	1119
	Shiroabhyanga	11	22	33

<b>Swedana</b>	Nadi Sweda	6600	5593	12193
	Bashpa Sweda	3151	2892	6043
	Mridu Sweda	495	624	1119
	Nirgundi Patra Pinda Sweda	1207	1285	2492
	Valukasweda	33	08	41
	Shashti Shali Pinda Sweda	74	61	135
<b>Vamana</b>	Vamana	24	15	39
<b>Virechana</b>	Virechana	81	49	130
<b>Basti</b>	Matra Basti	1218	1375	2593
	Anuvasana Basti	549	202	751
	Niruha Basti	186	78	264
	Lekhana Basti	00	05	5
	Pancha Tikta Kshira Basti	134	198	332
	Raj yapan Basti	79	32	111
	Lavan Jal Basti	01	00	1
	Picchha Basti	00	10	10
	Kshara Basti	15	80	95
	<b>Basti Sthanik</b>	Shiro Basti	12	00
	Manya Basti	00	10	10
	Kati Basti	48	176	224
	Janu Basti	31	66	97
<b>Nasya</b>	Nasya	495	624	1119

<b>Raktamokshana</b>	Jalaukavacharana	12	03	15
<b>Shirodhara</b>	Shirodhara (jala)	79	168	247
	Shirodhara (taila)	281	226	507
<b>Kshiradhooma</b>		00	11	11
<b>Total</b>		<b>26362</b>	<b>24276</b>	<b>50638</b>

**RESEARCH ACTIVITIES :****Ph.D. Research Projects (Completed) :****PANCHAKARMA SPECIALITY :**

1. A Clinical effect of Nirgundi Patra Pinda Sveda and Ashwagandhadi Guggulu Yoga in the management of Sandhivata.

Scholar : Dr. Alpesh Joshi,

Guide : Prof. V.D. Shukla.

**Ph.D. Research Projects (Continued) :****PANCHAKARMA SPECIALITY :**

1. A Clinical effect on Matrabasti and Vatari guggulu in the management of Amavata.

Scholar : Dr. Rita Khagram,

Guide : Prof. V.D. Shukla.

**MANASA ROGA SPECIALITY :**

2. Evaluation of the role of Manasika Bhavas in the aetiopathogenesis of Madhumeha and its management by poly herbal anti diabetic formulation with and without Medhya Rasayana.

Scholar : Dr. Dhananjay Patel,

Guide : Prof. H.M. Chandola.

3. The Role of Manasa Bhava in etiopathogenesis of Essential Hypertension and its management by Sarpagandha Vati and Medhya Rasayanaa.

Scholar : Dr. Nishant Shukla,

Guide : Prof V. D. Shukla,

Co-Guide : Dr. A. R. Dave.

**M.D. (Ayu) Research Projects (Completed) :**

1. Effect of Tikta Kshira Basti and Patrapinda Sweda in the Management of Cervical Spondylosis (Asthigata Vata).

Scholar : Dr. Jayadip kumar P. Shah,

Guide : Anup B. Thakar.

In this study, total 38 patients of cervical spondylosis (Asthigata vata) were studied. In Group A (Nirgundi Patrapinda Sweda for 20 minutes along with Asthishrinkhala vati 4 pills thrice a day) 14 patients were registered. In Group B (Panchatikta Kshira Basti (Kala Basti) along with Asthishrinkhala Vati 4 pills thrice a day) 10 patients were registered. In Group C (Asthishrinkhala Vati 4 pills thrice a day) 14 patients were registered. Duration of the treatment was 16 days.

**Effect of therapies** : In group A: Tenderness, pain and vertigo was reduced by 87.50%, 71.79% and 83.33% respectively which were statistically highly significant. In this group 7.14% patients had complete remission. 28.57% patients were markedly improved and same percentage of patients was improved. In group B: Pain stiffness and tingling sensation were improved by (66.67%), (62.50%) and

(77.14%) respectively which was statistically highly significant. In this group complete remission was found in 10% patients. 20.00% patients were markedly improved while 30.00% patients remained unchanged. In group C: 61.54% reduction was observed in pain. Stiffness and headache were also decreased by 53.85% and 82.61% respectively. In this group 7.14% patients had complete remission, 28.57% patients were markedly improved.

2. A comparative study of Virechana Karma and Kala Basti in the management of Pakshaghata.

Scholar : Dr. Vimal Vekaria,  
Co-Guide : Dr. N. N. Bhatt.

Guide : Prof. V. D. Shukla,

Total 25 patients were selected for the study, among them 20 patients had completed the course of the treatment. 10 patients were completed in group A (Virechana Karma) & 10 patients were completed in group B (Kala Basti -Dashamula Kwatha & Bala taila) followed by Vatari Rasa 2 tab. TDS for 30 days was given in both the group.

Statistical analysis showed that 57.14%, 46.15% improvement was found in speech, 62.5% and 55.55% relief was gained in pain, 36.95% and 54.34% relief on arm proximal, 41.3%, 25.58% on arm distal, 40 and 54% on leg proximal and 22.22 and 44.68% relief was found leg distal, 43.75 and 57.14% improvement was obtained on drooping wrist or foot. On sitting from lying down, 47 and 46.66% improvement was gained while on standing from lying down 33.33 and 43.75% improvement was observed. 34.48 and 51.72% improvement was found in increased walking capacity while 42.1 and 54.54 % relief was found in handgrip, 46.15 and 42.85% relief in lifting arm\shoulder\leg and 53.57 and 56.66 % relief were obtained in finger movement, 61.53 and 46.66 % improvement was observed on walking down stair while 43.47 and 42.5 % improvement was obtained on modified ranking scale in group A and B respectively.

**Overall effect of therapy :** In group A: Moderate improvement & poor improvement was found in 5% of patients each, 40% patients were found mild improvement. In group B: Moderate improvement in 20 % patients and mild improvement in 30% of patients. In this study better results were found in Basti group in comparison to Virechana group.

3. A comparative Study of Vamana & Virechana Karma in Ekakushtha w.s.r to Psoriasis.

Scholar : Dr. Akhil Parida,  
Co-Guide : Dr. N.N.Bhatt, Dr. A. R. Dave.

Guide : Prof. V. D. Shukla,

The study was done on 35 patients of Ekakushtha (Psoriasis) in which 30 patients were completed the treatment. Patients were divided into two groups viz: Group-A (Vamana Karma), in this group, 15 patients completed the course of treatment, In Group-B (Virechana Karma), 15 patients completed the course of treatment. Shamana yoga & Jivantyadi Yamaka was given for 28 days in both the group aftere sansarjan krama.

Statistical analysis showed that much better results were found in Group-B than in Group A. Comparative Analysis of percentage of relief on all Signs and Symptoms is as follows.

60 % and 84.09 % in Mandala, 88.88 % and 65 % in Matsya Shakalopamam, 76.66 % and 83.33% in Rukshata, 76.92 % and 65.11% in Aswedanam, 80% and 87.5% in Daha, 71.42% and 86.66 % Bahalatva, 75 % and 100% Sraava, 60 % and 86 % in Unnati, 89.47%, and 70.27 % in Kandru, 66.66% and 90.90 % in Auspitz sign, 81.48% and 77.27% in Candle grease sign, 70% and 66.66 % in Koebner Phenomenon in Group A and Group B respectively.

Further the statistical analysis showed that complete remission was found in 53.33 % in group A while 66.66% was found in group B, Marked improvement was found in 46.67 % patients in group A, in 33.33% patients in group B. Thus, it can be concluded that Virechana Karma provided better results



than Vamana Karma.

4. Clinico- Experimental study on Effect of Brahmi Ghrita on Depressive Illness.

Scholar : Dr. Yogesh S. Deole,

Guide : Prof. H. M. Chandola,

Co-Guide : Dr. B. Ravishankar, Dr. B. L. Suvalka.

Total 42 patients fulfilling the DSM-IV criteria for major depressive episode were registered for study. Out of 42 patients, 35 patients completed the treatment. Patients were divided into two groups namely Brahmi Ghrita group (BG) and Placebo group (PG). Total 20 patients were completed in Brahmi Ghrita group and 15 completed in placebo group. Special Ayurvedic rating scales like Manasa Pariksha Bhava, Manasa Vibhrama Pariksha as well as Hamilton Depression Rating Scale (H.D.R.S.), Hamilton Anxiety Rating Scale (H.A.R.S.) and Brief Psychiatry Rating Scale (B.P.R.S.) were adopted to assess the effect of therapy. Brahmi Ghrita showed moderate improvement in 50% patients and mild improvement in 35% patients on H.D.R.S. Its total effect was statistically highly significant ( $p < 0.005$ ) as compared to placebo. Also, in overall effect, Brahmi Ghrita showed moderate improvement in 40% patients and mild improvement in 55% patients, which is statistically significant at 1% level as compared to placebo. In experimental study, Brahmi Ghrita showed mild anxiolytic and very mild antidepressant effects on Swiss albino mice at single and double dose levels.

5. A clinical study on Anidra w.s.r. to stress induced insomnia and its management with Tagaradi Kwatha and Mahishi Dugdha Shirodhara.

Scholar : Dr. Vansh Bina,

Guide : Prof. H. M. Chandola,

Co-Guide : Dr. B. L. Suvalka.

In this study, total 33 patients were studied and 27 completed the treatment. In group - A (Tagaradi Kwatha 40ml BD for 45 days), 17 patients completed the treatment, while in group B (Mahishi Dugdha Shirodhara for 30 min for 21 days), 10 patients completed the treatment.

Statistical analysis showed that highly significant relief ( $p < 0.001$ ) was found in group A in the symptoms like: Sleeplessness (44.06%), Freshness after awakening (42.42), Sleep Time (40.81%), Bhaya(62.5%), Depressed mood(34.21%), Somatic sensory symptoms (36.36%), Somatic muscular symptoms (35.71%), insight (54.54%) and Emotional withdrawal (45.94). Highly significant relief ( $p < 0.001$ ) was found in group B in the symptoms like: Sleeplessness (58.33%), Disorder of s-w schedule (61.29%), Shiro Gaurav (68.43%), Akshi Gaurav (60%), Netradaha (71%), Shoka(61.11%), Smriti(52.63%), Depressed mood (60.86%), Insomnia initial (64.28%), Agitation(78.57%), Genital symptom (72.72%), Anxiety (44.44%) and Tension (44.82%).

**Over all effect of therapy :**

In Group A, Moderate improvement was found in 23.53% patients and mild improvement was observed in 76.47% patients. In Group B, marked improvement & mild improvement was found in 20% patients each, moderate improvement in 60% of patients. The statistical comparison of both groups showed that better results were found in Shirodhara (group A) than Tagaradi Kwatha (group B).

**M.D. (Ayu) Research Projects (Continued) :**

**PANCHAKARMA SPECIALITY :**

1. A Clinical Study of Matrabasti and Patrapinda Sweda in the treatment of Sandhigata Vata (Osteo arthritis).

Scholar : Dr. Bisvanath Mishra,

Guide : Prof. V. D. Shukla.

2. A Comparative clinical study on Virechana Karma and Kala Basti in the management of Amavata.

Scholar : Dr. Jalpa Gohil,

Guide : Prof. V. D. Shukla,

Co-Guide : Dr. A. R. Dave, Dr. N. N. Bhatt.

3. A comparative study on Vamanakarma by using Shuddha Ghrita and Samskarita Ghrita as Abhyantara Snehapana in Ekakushtha w.s.r. to Psoriasis.

Scholar : Dr. Satish Pathsala,

Guide : Prof. V. D. Shukla,

Co-Guide : Dr. N. N. Bhatt.

4. An observer and clinical study on standardization of Shodhanartha Snehapana w.s.r. to Sneha Pravicharana.

Scholar : Dr. Gauri Vaidya,

Guide : Dr. A. B. Thakar.

5. Standardization of process of administration of Basti w.s.r. to Oligozoospermia.

Scholar : Dr. Yashwant Juneja,

Guide : Dr. A. B. Thakar.

6. A comparative study on Vamanakarma with Madanaphala & Krutavedhana w.s.r. to Ekakushtha (Psoriasis).

Scholar : Dr. Patel Jaimin R.,

Guide : Dr. Bhatted Santoshkumar.

7. Effect of Majja Basti and Asthishrinkala in the management of Osteoporosis.

Scholar : Dr. Ajaykumar Gupta,

Guide : Dr. A.B. Thakar,

Co-Guide : Dr. Nehal Shah.

8. Comparative study of Raktamokshana by Jalaukavacharana, Pracchana and Shiravedana in the management of Vicharchika (Eczema).

Scholar : Dr. Hiren N. Raval,

Guide : Dr. A. B. Thakar.

9. A comparative study of Vamana and Virechana karma in the management of Sthaulya w.s.r. to Obesity.

Scholar : Dr. Rajan Nelson Munzni,

Guide : Prof. V. D. Shukla,

Co-Guide : Dr. A. B. Thakar, Dr. N. N. Bhatt.

10. A comparative study of Virechana and Basti karma with Shamana therapy in the management of Essential Hypertension.

Scholar : Dr. Gyanendra Datta Shukla,

Guide : Prof. V. D. Shukla,

Co-Guide : Dr. Bhatted Santoshkumar, Dr. A. R. Dave.

11. A comparative study of Vamana and Virechana karma in the management of Sthula Pramehi w.s.r. to Type 2 Diabetes Mellitus.

Scholar : Dr. Rajeev Pandey,

Guide : Prof. V. D. Shukla,

Co-Guide : Dr. N. N. Bhatt, Dr. Tushar M. Shingala.

#### **MANASA ROGA SPECIALITY :**

1. An Assessment of Manasika Bhava in Menopausal Syndrome and it's management.

Scholar : Dr. Khyati Santvani,

Guide : Prof. V. D. Shukla,

Co-Guide : Dr. Gayatri Thakar.

2. A Clinical study of Shirodhara and Sarpagandhadivati in the management of Essential H. T.

Scholar : Dr. C. Kundu,

Guide : Prof. V. D. Shukla,

Co-Guide : Dr. N. N. Bhatt.



## DEPARTMENT OF KAUMARBHRITYA

The department of Kaumarabhritya was established in the year 1978 - '79, comprising of two sub specialities viz. Balaroga and Striroga & Prasuti Tantra. In the year 2006, dated 15<sup>th</sup> June, the Striroga & Prasuti Tantra and Kaumarabhritya were established as two separate departments, thus giving individual speciality identity to Kaumarabhritya. This department deals with preventive, curative and promotive aspects of child health care. The department also work towards better community health especially in the preventive and promotive aspect of children in accordance with National Health Programs.

### ACADEMIC ACTIVITIES :

Summary of the Academic activities of the department for 2007- 08

No.	Activity	Total No.
1	No. of M.D.(Ayu) students in the Department	07
2	No. of Ph.D.(Ayu) students in the Department	2
3	Total number of Ph.D. awarded during the year	2
4	Total number of theory classes conducted(MD Ayu & I.S.) during the year	143
5	Total number of clinical classes conducted (MD Ayu & I.S.) during the year	208
6	Total no. of paper presented in the national / international seminar during the year	08

### Immunization :

At OPD level during duty hour's immunization is also done. The details are given below :

No.	Vaccine	No. of Patients	No.	Vaccine	No. of Patients
1	T T	23	4	Measles	04
2	O P V	55	5	BCG	15
3	DPT	47	6	Hepatitis B	08

### Panchakarma procedures :

In children for some specific diseases like Shwasa, Cerebral Palsy, Mental Retardation, DMD etc. Panchakarma procedures are carried out in the IPD of Kaumarabhritya department, the details are as follows:

No.	Procedure	No. of Patients	Diseases
1	Abhyanga	21	Sandhishoola, Vatavyadhi
2	Shashtika Shali Pinda Sweda	12	Balapakshaghata, DMD
3	Nadi Sweda	13	BalapakshaghataVatavyadhi

4	Patra pinda Sweda	03	Pakshaghata, Sandhishoola, Samvardhana Vikriti Buddhimandhya
5	Nasya	01	Apabahuka Mental retardation Vyadhija Phakka
6	Basti	02	Vatavyadhi, Sandhishoola, Samvardhana Vikriti Vyadhija Phakka
7	Virechana	02	Ekakushtha Switra, Padadari

## RESEARCH ACTIVITIES :

### M. D. (Ayu.) Research Project (Completed) :

1. A comparative study on the efficacy of Mustakadi Avaleha and Gojihwadi Avaleha in the management of Pratishtyaya w.s.r. to Recurrent Upper Respiratory Tract Infections in Children.

Scholar : Dr. Lokesh,  
Co-Guide : Dr. I. P. Anand.

Guide : Dr. K.S. Patel,

Pratishtyaya is a disease entity affecting any age group of both sex. Recurrence of the disease occurs because the Doshas reside in their latent stage (predisposing stage) & give rise to the same disease when factors (aggravating factors) are favourable. The specific features of a child like Dosha Dushya Malalpata, Soukumaryata, Aparipakwa Dhatu, Asampurna Bala etc shows lowered immune status of the child & makes him/her more susceptible for repeated infections like Pratishtyaya. In the present study, total 40 patients were registered and were randomly divided into two groups. In group A, Mustakadi Avaleha & in group B, Gojihwadi Avaleha was given for 6 weeks in the dose of 9 - 24 grams in three divided doses according to age (Young's formula). The effects of therapy in both groups were assessed by a specially prepared proforma. The result obtained shows striking similarity. In Mustakadi Avaleha group (15 patients), marked improvement in 53.33%, moderate improvement in 26.67%, mild improvement 13.33% were found. No improvement was found in 6.67% patients. While in Gojihwadi Avaleha group, (15 patients), marked improvement in 46.67%, moderate improvement in 26.67%, mild improvement 13.33% whereas 13.33% were remained unchanged.

2. A clinical study of Rajanyadi Vati in the management of Grahani Dosha in Annadavastha.

Scholar : Dr. Kinjal Panchal,  
Co-Guide : Dr. I. P. Anand.

Guide : Dr. K.S. Patel,

Childhood is a very tender but superb stage of human life. The effect on physical development and mental status of this has its effect over rest of life period. In day to day paediatric practice, paediatricians come across a good number of patients suffering from diseases related to gastrointestinal tract. Grahani Dosha is a disease entity goes hand in hand with gastrointestinal disorders. It is a common problem for all age groups, but children are more vulnerable, hence has high incidence and recurrence. In the present study 52 patients were registered and were randomly divided into two groups. In Group A - Rajanyadi Vati (treated group), and Group B - Bhunimbadi Vati (standard control group) was given for 4 weeks in the dose of 3-6 gm in three divided doses according to age. The effect of the therapy in both the group was assessed by a specially prepared proforma. In Group A (Rajanyadi Vati), marked improvement was found in 9.09%, moderate improvement in 68.18%, mild improvement in 22.72%, while no one patient was observed as unchanged. In Group B (Bhunimbadi Vati) marked improvement in 5% of patients, moderate improvement in 15% of patients, mild improvement in 75% of patients while 5% of patients were remained unchanged.

3. A comparative study on the effect of Vidarikandadi vati and Kshirabala Taila Basti in the management of Karshya in children.

Scholar : Dr. Geeta,

Guide : Dr. K. S. Patel,

Co-Guide : Dr. I. P. Anand.

Karshya is a most wide spreading health and nutrition problem in developing countries. Protein energy malnutrition is a possible condition may be correlated with Karshya. Present study was undertaken to find out the effect of Vidarikandadi Vati and Kshirabala Taila Basti in the management of Karshya in children. Thirty patients were studied and randomly divided into two groups namely Group-A and Group-B. Group-A received Vidarikandadi Vati and Group-B received Kshirabala Taila Basti. Effect of drugs was observed at the end of Thirty days. In group-A, 13.33% patients showed moderate improvement and 86.67% patients showed mild improvement, marked improvement was not found in this group. In group-B marked, moderate and mild improvement was observed in 13.33% 73.33% and 13.33% patients respectively. It was concluded that Kshirabala Taila Basti is useful for the management of Karshya in children in compare to Vidarikandadi Vati.

#### **M. D. (Ayu.) Research Project (Continued) :**

1. A comparative study on efficacy of Bharangyadi Avaleha and Vasa Avaleha in the management of Tamaka Shwasa w.s.r. to child asthma.

Scholar : Dr. Saleem D Gohel,

Guide : Dr. K.S. Patel,

Co-Guide : Dr. I. P. Anand.

Drug : Group - A (Bharangyadi Avaleha), Group - B (Vasa Avaleha).

Dose : 6 to 18 gm / day (Acc. to Age), Anupana: Luke warm water, Duration: 6 Weeks.

<b>Status of Patients</b>	<b>Group-A</b>	<b>Group-B</b>	<b>Total</b>
Registered	03	03	06
Continued	0	01	01
Discontinued	02	0	02

2. A study of disease thalassemia (Anukta Vyadhi in Ayurveda) and its management with Trifaladi Avaleha as an adjuvant therapy.

Scholar : Dr. Jadhav Sahebrao B.,

Guide : Dr. K.S. Patel,

Co-Guide : Dr. I. P. Anand.

Drug : Group - A : Trifaladi Avaleha with regular modern medical management.

Group - B : Control group with only regular modern medical management.

Dose : 3 to 22 gram according to age, Anupana: Godugdha, Duration: 2 months.

3. A clinical study of Brahmi Vati on Shyyamutra.

Scholar : Dr. Pragya Pushpanjali,

Guide : Dr. K. S. Patel,

Co-Guide : Dr. V. K. Kori.

4. A clinical study of Devdarvyadi Vati on Grahani Roga.

Scholar : Dr. Rutu Patel,

Guide : Dr. K.S. Patel,

Co-Guide : Dr. V. K. Kori.



## DEPARTMENT OF STREEROGA AND PRASUTI TANTRA

### INTRODUCTION :

Streeroga and Prasuti Tantra department separated from Kaumarbhritya on 17<sup>th</sup> June. In year 2006 and are working independently. Now the dept. deals with important clinical specialities i.e. Prasutitantra and Stree roga with equal emphasis to both, OPD & IPD was designed for better development in concerned subject. Prasutitantra unit mainly deals with Ayurvediya Garbhini Paricharya (Antenatal care), Prasav Paricharya (Labour care) and Sutika Paricharya (Puerperal care). Stree roga unit deals with management of Artav Vyapad (Menstrual disorders), Yoni Vyapad (Reproductive tract disorders), Stana roga (Breast disorders) and Vandhyatwa.

Department also runs following special clinics like Menopause and Family planning, actively participate in health camps especially in the preventive and promotive aspects of Mother and Child Health care, National Health Programmes especially those selected by R.C.H. & Geriatric health care etc. Department also organizes training programmes to the students of other countries who visit the institute under WHO collaboration and for three months introductory course in Ayurveda.

### ACADEMIC ACTIVITIES :

Summary of the Academic activities of the department for 2007- 08

No.	Activity	Total No.
1	No. of M.D.(Ayu) students in the Department	07
2	No. of Ph.D.(Ayu) students in the Department	02
3	Total number of Ph.D. awarded during the year	01
4	Total number of theory classes conducted during the year	250
5	Total number of clinical classes conducted during the year	458
6	Total no. of paper presented in the national / Inter. seminar during the year	08
7	Total number of paper published by the Department during the year	03

The department provides the knowledge of teaching, research and practical training in the subjects of "Streeroga and Prasutitantra" in a specified syllabus as framed by the I.P.G. & R.A for I, II and III year M.S. (Ayu.). Modern contemporary knowledge and minor surgical training is also provided to the students by our faculty as well as by the visiting faculty members of Modern field.

Teachers of the department delivered theory and practical training to the scholars and the other short term courses conducted by the Institute.

### LIBRARY FACILITIES :

The department has a well equipped library exclusively for the benefit of the scholars and the staff. A new audiovisual library has also started which has video CDs and cassette collections pertaining to various topics of Stree roga & Prasutitantra.

### HOSPITAL ACTIVITIES :

In the hospital total 14 beds are allotted to the department. During the year 2007-2008, 9447 and 401 patients have taken treatment in the OPD and IPD respectively.



<b>Specialized procedures/treatments</b>	<b>No. of patients</b>
Yoga basti	376
Yoni Prakshalana/Parisheka	546
Yoni Pottali	064
Yoni Pichu	199
Yoni Avachurnan	048
Sukrabasti	012
Anuvasana Basti (Antenatal)	123
Asthapana Basti	038
Uttara Basti	252
Nasya	104
Agnikarma	012
D & C	008
Prasava	028
Minor surgical procedure	005
<b>Family Planning Unit :</b>	
Cu-T	030
Oral Contraceptive Pill	Free supply
Condom	Free supply
Inj. TT	150 Pt.
<b>Menopause Clinic :</b>	
Rasayanakalpa Vati	150 Pt.

#### **EXPERIMENTAL LABORATORY :**

The department has an experimental laboratory for the purpose of research works of departmental scholars. The different tests like cervical mucus test, vaginal smear, post coital test etc. are being done.

#### **RESEARCH ACTIVITIES :**

##### **Ph.D. (Ayu.) Research Projects (Completed) :**

1. A clinical study on the effect of Brumhana in Pediatric practice.

Scholar : Dr. Rakesh Kumar Mishra, Guide : Dr. (Mrs.) M. A. Pandya,  
Co-Guides : Dr. P.K. Prajapati, Dr. I. P. Anand. Speciality : Balaroga.

For the purpose of "Brumhana", the selected drug Ashwagandha was prepared into two forms Granules and Ghrita (Group -A and B) compared with placebo (Group-C).

Groups : On the basis of experiment and compare to each other the drugs was divided into four groups such as :

Group-I : Water, Group-II : Ashwagandha granules, Group-III : Go-ghrita (Ghrita control),  
Group-IV : Ashwagandha ghrita.

Route of administration: The drugs were administered orally with the help of gastric catheter.

##### **Ph.D. (Ayu.) Research Projects (Continued) :**

1. A Clinico-Experimental study of Shatavaryadi Vati on Menopausal syndrome. (Rajonivrittijanya Lakshana)

Scholar : Dr. Rujuta N. Trivedi, Guide : Dr. (Mrs.) M. A. Pandya,  
Co-Guides : Dr. B. Ravishankar, Dr. J. R. Joshi.



Group A :- Drug : Rasayankalpa Vati, Dose-6 gm/day in three divided doses, Route- Oral, Duration-2 months, Follow up-1 month and Anupana- Milk.

Group B :- Drug : Shatavaryadi Vati, Dose-6gm/day in three divided doses, Route - Oral, Duration-2 months, Follow up- 1 month and Anupana- Milk.

Experimental study:Gross behaviour, Anti -depressant activity, Hypnotic potentiation, Anti-anxiety activity, Adaptogenic activity, Oestrogenic activity, Triglyceride level, Cholesterol level, HDL cholesterol level and isolated uterus.

### **M.S. (Ayu) Research Projects (Completed) :**

1. A comparative study of Shatavari Ghrita in the Management of Vandhyatva w.s.r. to cervical factor

Scholar : Dr. Chetna Kodinariya,

Guide : Dr. (Mrs.) M. A. Pandya.

A clinical study had conducted on registered 17 no. of vandhyatva patients due to cervical factor. Out of them 14 patients completed the therapy.

In Group A, 7 patients were administered 5ml Shatavari ghrita Uttarbasti and in Group B, 7 patients were administered 5 ml Goghrita Uttarbasti for 2 consecutive cycles with follow up 2 months. Effect of therapy: In Group A- Markedly improved was found in 57.14% of patients, moderately improved were found in 42.86% of patients, in Group B conception was found in 7.14% pts, markedly improved was found in 35.71% patients, where as 50% patients found in moderate improvement. Satavari ghrita Uttarbasti is more effective than Goghrita Uttarbasti which may be due to its phyto estrogen property post on coital test.

### **M.S. (Ayu.) Research Project (continued) :**

1. A comparative study of Shamim Ashvattha ghrita and Goghrita in the management of Vandhyatva w.s.r. to Anovulatory factor.

Scholar : Dr. Kajal Khadadiya,

Guide : Dr. (Mrs.) M. A. Pandya,

Co-Guide : Dr. Kalpana Khandheria.

2. A comparative study of Shatavaryadi Ghanavati and Bruhat Dhatryadi Ghanavati in the management of Garbhini Mutra kricchra w.s.r. to lower UTI.

Scholar : Dr. Sushma Rathod,

Guide : Dr. (Mrs.) M. A. Pandya,

Co-Guide: Dr. Kalpana Khandheria.

3. A clinical study of Gokshuradi vati in the management of Gestational Hypertension.

Scholar : Dr. Shalini Gupta,

Guide : Dr. (Mrs.) M. A. Pandya,

Co-Guide : Dr. Kalpana Khandheria.

4. A comparative study of Uttarbasti of Yava kshara taila and Kumari taila in tubal blockage.

Scholar : Dr.Kamayani Shukla,

Guide: Dr. (Mrs.) M. A. Pandya,

Co-Guide : Dr. N Sata.

5. A comparative study of Nasya and Matra basti with Narayan Tail on Anovulatory factor.

Scholar : Dr. Krupa R. Donga,

Guide : Dr. Shilpa B. Donga,

Co-Guide : Dr. L P Dei.

6. A comparative study of Dashamoola taila Matrabasti and Tila taila Matra basti in management of Kashtartava(Dysmenorrhoea)

Scholar: Dr . Kaumadi Karunagoda,

Guide : Dr. Laxmi Priya Dei,

Co-Guide : Dr. Shilpa B. Donga, Dr. Chandrika H.Tanna.



## DEPARTMENT OF SHALYA TANTRA

### INTRODUCTION :

Shalya Tantra department is the vital clinical branch of Ayurveda, functioning at first floor of Ashvini Bhavan, IPGT&RA Hospital, Jamnagar, Gujarat. In this department, surgical & para - surgical procedures are continuously carried out. Maximum number of ano rectal cases attend this department, out of which piles, fistula, fissure, abscess, pruritis ani and prolapse of rectum are more prevalent than others. All those patients are being treated with Ksharkarma / Ksharsutra therapy. This Ksharsutra therapy is world wide expanded procedure which is a routine procedure of this department, another para-surgical procedures i.e. Agnikarma, Raktamokshana (Jalaukavacharana) are being conducted. Orthopedic unit also is working particularly for lumbar spondylitis, joint pains and musculo-skeletal disorders. possible general surgeries are also being undertaken with the help of anesthetist finding the suitability of Operation Theater.

Brief descriptions of departmental activities are as follows :

### ACADEMIC ACTIVITIES :

Summary of the Academic activities of the department for 2007- 08

No.	Activity	Total No.
1	No. of M.D. (Ayu) students in the Department	06
2	No. of Ph.D. (Ayu) students in the Department	02
3	Total number of theory classes conducted during the year	142
4	Total number of clinical classes conducted during the year	120
5	Total number of paper communicated by the Department during the year	01

### HOSPITAL ACTIVITIES :

#### Parasurgical Clinics :

◆ Ksharkarma	-	PCA Therapy unit
◆ Agnikarma	-	DCA Therapy unit
◆ Raktamokshana	-	Blood letting Therapy

#### General OPD Data :

◆ Total Patients	-	4344
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#### ARC Data :

◆ New Patients	-	1135
◆ Old Patients	-	5172
◆ Piles	-	445
◆ Fistula in ano	-	107
◆ Fissure in ano	-	435
◆ Others	-	150
◆ Total Patients	-	6307

**IPD Data :**

♦ Bed occupancy	-	82.75%
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**Total No. of Surgery conducted :**

♦ Piles	-	30
♦ Fistula in ano	-	18
♦ Fissure in ano	-	15
♦ Others (Haemangioma, Inguinal Hernia, Phimosi, etc.)	-	19
♦ Total	-	82

**Parasurgical Procedures :**

♦ Raktamokshana	-	53
♦ Agnikarma	-	15
♦ Biopsy advised	-	08
♦ T.B. patients referred	-	19
♦ AIDS patients referred	-	01
♦ Ca. Rectum referred	-	02
♦ Total fistulogram	-	15
♦ Total Special Camp	-	06

**RESEARCH ACTIVITIES :****Ph.D. Research Projects (continued) :**

1. A Clinical & Experimental Study of Pashanbhedadi Ghrita in the management of Vataj Ashmari w.s.r. to Urolithiasis.

Scholar : Dr. Sanjay K. Gupta, Guide : Dr. Chaturbhuj Bhuyan,  
Co-Guide : Dr. B. Ravishankar.

2. The role of Kshar-sutra in Parikartika with reference to different treatment modalities.

Scholar : Dr. Tukaram S. Dudhamal, Guide : Dr. Chaturbhuj Bhuyan,  
Co-Guide : Dr. Sanjay Kumar Gupta.

**M.S. (Ayu.) Research Projects (completed) :**

1. A Comparative Study on Vrikka Samrakshanatmaka and Ashmarighna Effect of Tiladi Kshara and Varunadi Ghrita (Nephroprotective and Lithotriptic effect)

Scholar : Dr. Asim Kumar Mandal, Guide : Prof. R. R. Dwivedi,  
Co-Guide : Dr. Manjusha R., Dr. B. Ravishankar.

Total 29 patients of Ashmari were treated in three divided groups for 60 days. 1<sup>st</sup> group 10 patients were treated with Tiladi Kshara, 500mg, 1 capsule twice a day, orally. 2<sup>nd</sup> group 10 patients were treated with Varunadi Ghrita, 10gm twice a day, orally and 9 patients of 3<sup>rd</sup> group were treated with Swarjika Kshara (as a control group), 500mg, 1 capsule twice a day, orally. After completion of trial for 60 days, it was observed that Varunadi Ghrita has proved highly significant to relief in pain, burning micturition, dysuria, and haematuria whereas Tiladi Kshara has shown less significant to relief in pain, burning micturition and dysuria and Swarjika Kshara used as control group has already proved highly significant to relief in burning micturition only. After careful observation it can be concluded that

*Varunadi Ghrita* possesses the properties regarding to disintegration and expulsion of stone and shown better relief in signs and symptoms of Ashmari in comparison to *Tiladi Kshara*.

2. A comparative study of Durvadi Taila and Povidone Iodine in the management of Vrana.

Scholar : Dr. Lalit J. Pankhaniya,

Guide : Prof. P. P. Sharma,

Co-Guide : Dr. Manjusha R.

In this study, total 34 patients were registered and treated in two groups, among them 18 patients in Durvadi Taila group and 16 patients in Povidone iodine group and treated with local application for 4 weeks. It was noticed that, maximum 31.25% were cured in Durvadi Taila group while 26.67% were in Povidone Iodine group. Marked improvement were observed i.e. 31.25% in treated group where as 20% were observed in Povidone Iodine group. In 18.75% were moderately improved in Durvadi Taila group while 26.67% were observed in Povidone Iodine group. 12.50% of patients were shown mild improvement whereas 6.25% remained unchanged in Durvadi Taila group and in Povidone Iodine group they were 13.33%. On the basis of clinical observations it can be concluded that the trial of Durvadi Taila possess analgesic, anti inflammatory and anti bacterial properties. There were no unwanted effects found during the course of treatment. It is found better in the management of wounds due to its effectiveness and low cost.

### **M.S. (Ayu.) Research Projects (Continued) :**

1. A comparative Clinical study on efficacy of Mahayavanala Roma kshara and Dhanyaka Gokshura ghruta in the management of Vatastheela w.s.r. to BPH.

Scholar : Dr. Yogesh R. Vasava,

Guide : Dr. Chaturbhuj Bhuyan,

Co-Guide : Dr. Manjusha.

2. A comparative study of Agnikarma with Lauha, Tamra & Panchadhatu Shalaka in Gridhrasi w.s.r.. Sciatica.

Scholar : Dr. Babita Bakshi,

Guide : Dr. Sanjay Kumar Gupta,

Co-Guide : Dr. Manjusha R.

3. A Clinical & experimental study of Manjishthadi Ghrita on vрана-ropana.

Scholar : Dr. Jyoti D. Baria,

Guide : Dr. Sanjay Kumar Gupta,

Co-Guides : Dr. Chaturbhuj Bhuyan, Dr. B. Ravishankar.

4. A Clinical study to evaluate the efficacy of Ksharsutra ligation in management of haemorrhoids (piles) as compared to haemorrhoidectomy.

Scholar : Dr. Meva Lal Gupta,

Guide : Dr. Chaturbhuj Bhuyan,

Co-Guide : Dr. Sanjay Kumar Gupta.



## DEPARTMENT OF SHALAKYA TANTRA

### INTRODUCTION :

Department of Shalakyas, one of the eight specialities of Ayurveda deals with the important 3 clinical specialities of Shalakyas i.e. Ophthalmology, E. N. T. and Dentistry, with equal emphasis to theoretical as well as practical training particularly to various Ayurvedic therapeutic procedures.

### ACADEMIC ACTIVITIES :

Summary of the Academic activities of the department for 2007- 08

No.	Activity	Total No.
1	No. of M.D.(Ayu) students in the Department	08
2	No. of Ph.D.(Ayu) students in the Department	03
3	Total number of theory classes conducted during the year	26
4	Total number of clinical classes conducted during the year	461
5	Total no. of paper presented in the national / international seminar during the year	10
6	Total number of paper published by the Department during the year	02
7	Total number of reorientation programmes conducted (RoTP)	01

In addition to regular theory and practical programme, the department conducts weekly seminars on various topics of clinical importance of both the specialities. The department scholars present their research works in the regular weekly seminars of the Institute also. The scholars also present their work and research papers in various National and International Seminars also.

The Shalakyas speciality deals with the disorders of the ear, nose, throat, eye and teeth. Research works are being carried out mainly on myopia, cataract, conjunctivitis and lid infections, ocular palsy, myasthenia gravis, optic atrophy, trigeminal neuralgia, rhinitis, sinusitis, pyorrhoea, tonsillitis, otomycosis, otitis media, etc.

In Kriya kalpa various treatment procedures are done regularly. The para-surgical procedures e.g. Agni karma, Jalaukavacharana are being regularly done in the department. All these procedures are being performed by P.G. scholars, under the guidance of faculty members.

### CLINICAL ACTIVITIES :

In the year 2007-08, in the Shalakyas O.P.D., in Eye Section 5341 patients were examined whereas in Dental & ENT O. P. D. 5299 patients were examined. Fundus examination, ophthalmoscopic examination, tonometry, refraction, perimetry, audiometry and otoscopic examination are being done regularly in the patients. In the current year, more than 200 fundus examination and 1871 refractions were done.

### O. T. ACTIVITIES :

Shalakyas O.T. Procedures	-	04
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Ear Repair procedure	-	67
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#### PARA SURGICAL PROCEDURES & KRIYA KALPA :

1.	Tarpana	-	579
2.	Nasya	-	948
3.	Karna Purana	-	108
4.	Tooth Extraction	-	100
5.	Audiometry	-	20
6.	Shirodhara	-	01
7.	Netra dhara	-	43
8.	Bidalaka	-	04
9.	Anna Lepana	-	02
10.	Aschyotana	-	58
	<b>Total...</b>	-	<b>1863</b>

#### RESEARCH ACTIVITIES :

##### Ph.D. (Ayu.) Research Projects (Continued) :

1. A clinical study on computer vision syndrome and its management with Trifala Aschyotana and Saptamrita Loha.  
Scholar : Dr. Gangama M. P., Guide : Dr. Manjusha Rajagopala.
2. A clinical study on Pothaki -Trachoma and its management with Haritakyadi eye drops.  
Scholar : Dr. Narayan B., Guide : Dr. Manjusha Rajagopala.
3. An advance comparative study of Lodhradi Churna Pratisaran and Lodhradi paste application in the management of Dantaveshta w.s.r. to Peridontitis.  
Scholar : Dr. Rajshree U., Guide : Dr. Manjusha Rajagopala.

##### M.S. (Ayu.) Research Projects (Completed) :

1. A clinical study on the role of Brihat Dashamoola Taila Nasya and Laghu Sutashekhara Rasa in the management of Ardhavabhedaka w.s.r. to Migraine.  
Scholar : Dr. Parekh Hemal, Guide : Dr. Manjusha Rajagopala.

Migraine is one of the common causes of recurrent headache. According to IHS, Migraine constitutes 16% of the primary headache and affects 10-20% of the general population. The diagnosis is mainly based on clinical history. Moreover, "unilateral headache" with paroxysmal nature is the only symptom mentioned for the disease Ardhavabhedaka by our Acharyas. Our Acharyas have mentioned Nasya Therapy as the master key for all urdhvajatrugata vikaras. Considering all such things the present study was selected, in which total 44 patients were registered and were randomly divided into two groups. In group A, Laghu Sutashekhara Rasa & in group B Brihat Dashamoola Taila Nasya along with Laghu Sutashekhara Rasa was given for 6 weeks. In group A & in group B maximum number of patients i.e., 35% & 52.94% respectively showed marked improvement.

2. A clinical study on the efficacy of Phalatrikadi Ghrita (Tarpana and orally) on Timira - Presbyopia  
Scholar : Dr. Dinesh Singh Gaur, Guide : Dr. Manjusha Rajagopala,  
Co-Guide : Dr. Piyush Matalia.

The study was done on 37 patients of Timira - Presbyopia. Phalatrikadi Ghrita was given in Group

A Orally and Phalatrikadi Ghrita was used in Group B as Tarpana & Orally. After enrollment of the patients in the study, cardinal symptoms of Timira - Presbyopia such as Samipastha Avyakta Darshana (Indistinct near vision), Vihwala Darshana (Blurred vision), Netrayasa (Eye strain) and Shirobhitapa (Headache) etc. were studied before and after the treatment.

Amongst the registered patients, 30 patients completed the course of the treatment. None of the patients were cured or showed marked improvement in both groups, moderate improvement was observed in 02 eyes (6.67 %) in group A and in 04 eyes (13.33 %) in group B, mild improvement was observed in 16 eyes (53.33 %) in group A and in 20 eyes (66.67 %) in group B and unchanged was observed in 12 eyes (40.00 %) in group A and in 06 eyes (20.00 %) in group B. Comparatively more relief in signs and symptoms were found in combined group.

3. A Clinical evaluation of Haridra Khanda & Pippalyadi Taila Nasya on Pratishyaya - Allergic Rhinitis  
Scholar : Dr. Chhaya Bhakti, Guide : Dr. Manjusha Rajagopala,  
Co-Guide : Dr. A. K. Shah.

Allergic rhinitis is one of the most common and most prevalent ailment, familiar to all with an equal distribution more or less through out the world. Bronchial asthma is the main complication of allergic rhinitis. So it is need of hour to develop a treatment protocol, which helps the patients to overcome this pathetic condition hence this problem was selected for the study taking all these points into consideration. Total 32 patients were registered (15 in Group A and 17 in Group B), 26 completed (11 in Group A and 15 in Group B) and 6 discontinued and were randomly divided into two groups. In group A Haridra Khanda and in group B Pippalyadi Taila Nasya along with Haridra Khanda were given for 2 months. Marked and moderate improvement was observed in 50% and 38.46% of patients respectively.

#### **M.S. (Ayu.) Research Projects (Continued) :**

1. A clinical study on Tarpana with and without Nasya w.s.r.to Myopia.  
Scholar : Dr. Durgesh Prasad Gupta, Guide : Dr. Manjusha Rajagopala.
2. Role of Tryodashanga Kwatha and Pradhamana Nasya in the management of Dushta Pratishyaya w.s.r. to chronic sinusitis.  
Scholar : Dr. Varsha Chaudhary, Guide : Dr. Manjusha Rajagopala,  
Co-Guide : Dr. Sejal Mistry.
3. Standardization of "Tarpana" and role of Jeevantyadi Ghrita in the management of Timira w.s.r. to Myopia.  
Scholar : Dr. Poonam Sindher, Guide : Dr. Manjusha Rajagopala,  
Co-Guides : Dr. V. J. Shukla, Dr. Dharmendra Sinh Vaghela.
4. Further Study on the role of Arka Taila in the Management of Karnasrava w.s.r. to Otomycosis.  
Scholar : Dr. Komal Palmer, Guide : Dr. Dharmendra Sinh Vaghela,  
Co-Guide : Dr. Manjusha Rajagopala.
5. A Comparative Study between traditional method of Aschyotana in Vataja Abhishyanda w.s.r. to Allergic Conjunctivitis.  
Scholar: Jayshree Udani, Guide : Dr. Manjusha Rajgopala,  
Co-Guides : Dr. Dharmendra Sinh Vaghela, Dr. Piyush Mataliya





## PHARMACOLOGY LABORATORY

### Aims and objectives of the Laboratory :

- To undertake detailed research on all aspects of drug activity pertaining to drugs used in Ayurvedic therapeutics including folklore drugs.
- To impart knowledge of basic pharmacology to M.D. (Ayu) scholars.
- To teach pharmacology related subjects to M.Sc (Med plants) and M.Pharm (Ayu) scholars.
- To undertake sponsored research projects.
- To offer technical consultancy in the areas related to drug activity and pharmacology of natural products.
- Pre Preparation of project reports, technical reports and other related scientific literature including editing of Books and reports.

### ACADEMIC ACTIVITY :

Summary of the Academic activities of the laboratory for 2007- 08

No.	Activity	Total No.
1	No. of M.D.(Ayu) students utilized Lab. facilities	07
2	No. of Ph.D.(Ayu) students utilized the Lab. facilities	17
3	No. of M.Sc (MP) & M. Pharm (Ayu) students utilized Lab. facilities	05
4	Total number of Ph.D. scholars in the department	01
5	Total number of theory classes conducted during the year	109
6	Total number of clinical classes conducted during the year	90
8	Total number of paper published by the Department during the year	12

### RESEARCH ACTIVITY :

The following were the category of research projects undertaken in the Laboratory:

- A - Research projects related to M.D.(Ayu) Scholars
- B - Research projects related to Ph.D (Ayu)Scholars
- C - Research projects of the external sponsor
- D - Research projects related to the PG and Ph.D scholars under PGT SFC-cell
- E - Research projects under PHRU- CCRAS functioning in the Laboratory

### Research projects related to the M. D. (Ayu) Scholars:

1. **Evaluation of kwatha and market sample of Guduchi Ghana for different types of pharmacological activities.**

**Aims and objective, method of study :** This was a comparative study on two samples of Guduchi Ghana, one prepared by kwatha and other was procured from the market to evaluate them for anti-inflammatory (carrageenin paw oedema test), immunomodulatory (anti-body titre modulation and immunological paw oedema) and anti-histaminic (isolated guinea pig ileum) activity to ascertain which of them has better therapeutic potential in the treatment of psoriasis.

**Conclusions :** Guduchi Ghana prepared with kwatha base produced significant anti-inflammatory, anti-body formation stimulation and CMI suppression effect. The observed clinical efficacy may be attributed to the presence of anti-inflammatory and immunomodulation especially CMI suppression effect of the preparation. The market Guduchi Ghana though exhibited similar tendency, the magnitude of the effect was much less. Thus on this count the kwatha based Guduchi Ghanavati was found to be much better in comparison to the market procured Guduchi Ghanavati.

## **2. Comparative pharmacological studies on Shinshapa (*Dalbergia sissoo* Roxb.) and Parijata (*Nyctanthes arbortristis* Linn.) to provide experimental basis for their use in Sciatica.**

**Aims and objective, method of study :** The main objective of the present study was to provide pharmacological basis to the efficacy of Shinshapa (*Dalbergia sissoo* Roxb.) and Parijata (*Nyctanthes arbortristis* Linn.) in the treatment of Sciatica. Hence analgesic (tail flick and formaldehyde paw licking test) and anti-inflammatory activities in the test plants were studied in laboratory animals.

**Conclusion :** Evaluation of test drugs for anti-inflammatory activity and analgesic activity indicated presence of only the moderate effect in reference standard- parijata and weak to moderate anti-inflammatory and moderate analgesic activity in the test drug- Shinshapa. Thus it can be suggested that this study failed to provide an un-equivocal experimental evidence as basis for their clinical efficacy in the treatment of Gridhrasi. The reasons for this were analyzed to arrive at an inference that it may be due to use of lower dose level, not using appropriate adjuvant or vehicle or limitation of the experimental model to take in to consideration other different ayurvedic factors related to rasapanchaka of the test drugs in relation of pathogenesis as per ayurvedic concepts.

## **3. Evaluation of Tiladi Kshara, Sarjika Kshara and Varunadi Ghrita for nephroprotective activity against gentamycin induced nephrotoxicity in rats.**

**Aims and objective, method of study :** To evaluate the test drugs for nephroprotective activity to ascertain whether they can be used as general non-specific nephroprotectives. Gentamycin (60mg/kg ip for fifteen days) was used to induce nephrotoxicity. Gentamycin induced changes in biochemical parameters in serum and kidney homogenate and cytoarchitecture of kidney and there reversal by co-administration with test drug was considered to determine the presence of nephroprotective activity.

**Conclusions :** Analysis of the biochemical and histopathological parameters suggest that plain ghrita (vehicle) and Varuna ghrita possess moderate nephroprotective activity. Other formulations failed to provide protection to kidney against gentamycin injury.

## **4. Psychopharmacological evaluation of Brahmi ghrita for anti-depressant and anxiolytic activity in experimental animals.**

**Aim and objective :** The study was carried out to find out whether Brahmi ghrita posses anti-depressant and anxiolytic activities.

**Studies carried out :** The test formulation was studied in the following tests-gross behaviour test, open field behaviour test, elevated plus maze test, behavioural 'despair' and L-Dopa potentiation tests employing standard procedures. Dose-2.6g/ kg given orally.

**Conclusions :** The data generated during the study indicated presence of mild anxiolytic and

anti-depressant effect in Brahmi ghrita. The most important finding of this study is that the test formulation contrary to the expectation did not show the activity profile of a classical anti-depressant, nevertheless it potentiated the L-DOPA activity- indicating a complex nature of its activity. As mentioned earlier there may be many other factors most likely pharmacokinetic ones which influence the final activity profile of the product.

#### **5. Acute and chronic toxicity studies on Vanga Bhasma prepared by Puta method (VB) and Vanga Bhasma prepared by Vastraputa method (VSVB).**

**Aims and objective :** Vanga Bhasma occupies important place in Ayurvedic therapeutics. It is prepared employing different protocols. There is no experimental evidence to show that changes in manufacturing protocol influence the therapeutic activity and safety of the Bhasma. Hence in the present study a comparative evaluation was undertaken on two different samples of Vanga Bhasma viz. Vanga Bhasma prepared by Puta method (VB) and Vanga Bhasma prepared by Vastraputa method (VSVB) for assessing their safety profile and efficacy as hypoglycemic and anti-hyperglycemic drugs.

**Studies carried out :** detailed acute and chronic toxicity studies were carried out. In addition the preparations were evaluated for hypoglycemic, anti-hyperglycemic and anti-diabetic (streptozotocin diabetes in rats) activities employing standard procedures.

**Results and conclusions :** In acute toxicity study, the animals in both the test drug groups did not manifest any signs of toxicity up to 40 times (2000 mg/ kg) human therapeutic equivalent dose. In chronic toxicity study out of the thirteen biochemical parameters recorded- significant changes were observed in the following parameters: decrease in the level of blood urea and alkaline phosphatase activity in both the samples and decrease in serum triglyceride and AG ratio of VSVB administered group. Ten hematological parameters were studied. Of the six RBC related parameters, changes were observed in three parameters in both the test drug administered groups. The changes were : significant decrease in Hb% and MCH and significant increase in HCT percentage. In WBC related parameters significant decrease in lymphocytes and significant increase in Granulocytes were observed in VSVB treated group. No changes were observed in the other group. Eighteen organ parts were subjected to histological examination. Out of which in VB treated group changes were observed in 4 organs. In case of Vastraputa VB changes were observed in three organs. The observed changes were increased proliferation in seminal vesicle and changes in kidney and jejunum in both the groups. The observed changes were not severe.

Both drugs did not produce hypoglycemia in fasted animals. VB produced good anti-hyperglycemic effect against sucrose feeding induced hyperglycemia in rats. VB produced moderate anti-diabetic activity. The study showed that no serious toxic effects are likely to be observed at therapeutic equivalent dose with both the samples. VB has better efficacy in the treatment of hyperglycemic conditions.

#### **6. Comparative evaluation two test Naga bhasmas NB-I and NB-II for safety and efficacy aspects in rats.**

**Aim and objective :** The study was carried out on NB-I: Naga Bhasma prepared by using Parada and Gandhaka as a media, NB-II: Naga Bhasma prepared by using Ashwattha and Manahshila as a media to ascertain which of the two has better safety and efficacy profiles.

**Studies carried out :** detailed acute and chronic toxicity studies were carried out. In addition the preparations were evaluated for hypoglycemic, anti-hyperglycemic and anti-diabetic (streptozotocin diabetes in rats) activities employing standard procedures.

**Results and conclusions :** If a comparative analysis of the activity profile of the test preparations in chronic toxicity study is undertaken the following picture emerges. More number of biochemical

parameters were found to be affected by NB-I in comparison to NB-II; with regards to ponderal and histopathological changes slightly higher magnitude changes were observed in NB-II treated group in comparison to NB-I treated group and with regards to hematological changes both the groups exhibited similar changes. Thus taking in to consideration the number of parameters and the magnitude of changes it can be suggested that NB-II produces higher degree of undesirable effects in comparison to NB-I. However the inference is only relative, observed at TED x 5 dose. It is possible that at TED dose level there may not be much difference between the two- however, it is required to be ascertained through actual studies at this dose level.

Both the preparations produced anti-hyperglycemic effect against sucrose loading induced hyperglycemia. NB-II produced slightly better effect in this regard. NB-I produced remarkable hypoglycemic effect in streptozotocin diabetic rats. NB-II was not evaluated for anti-diabetic activity due to technical reasons.

## **7. Evaluation of Kushmanda beeja for aphrodisiac and spermatogenesis enhancing effect in male rats.**

**Aims and objectives :** Kushmanda Beeja is used in folklore practice ( Udupi District of Karnataka) as an aphrodisiac. Hence, in the present study experiment protocol was designed to assess this claim and also to ascertain the possible spermatogenic and aphrodisiac effect of drug with suitable animal models. Drug administration for 65 days in young adult male rats. Dose-550/1100 and 2200 mg/kg-oral.

**Results and conclusions :** The data generated during the study showed presence of mild to moderate androgenic activity in the test preparation especially at therapeutically equivalent dose in rats. This may be the reason for the observed moderate increase in the libido observed in the second part of the study. To obtain better effect and unequivocal inference it would be prudent to evaluate the drug in other drug formulation form like for example ghrita and testing may be conducted in rats showing decreased libido. As a whole the study indicates that there is some basis for the usage of this drug for enhancing male sexuality in the folklore medicine.

### **Research projects related to the Ph.D. (Ayu) Scholars :**

Total 12 candidates are working in the laboratory. The studies are under different stages of progression. Information on only the completed studies is furnished below:

#### **1. Pharmacological studies on *Hippophae salacia*, a source plant for classical Amlavetasa.**

**Aims and objects :** *Hippophae salacia*, is considered to have the most of the attributes described for Amlavetasa. Among the main properties of Amlavetasa are - deepana, pachana, bhedana and hridya etc. Taking this factor in to consideration the present experimental study was designed to test the effect of *H. salacia* fruit churna on gastric secretion and the activity on gastric juice components. Further the fruit powder of this plant was also studied for adaptogenic property against forced swimming stress induced hypothermia and gastric ulceration.

**Results and conclusions :** Analysis of the data generated during the study taking into consideration all the factors leads to the following conclusion: The test drug by increasing acid secretion and peptic activity may produce enhanced deepana and pachana effects. This provides an additional evidence for the *H. salacia* to be considered as the Amlavetasa. It is to be noted that this increase in deepana and pachana activity does not lead to gastric ulceration as to be expected in a drug causing increased acid-pepsin activity. This protection is through increased secretion of mucus. The test drug by attenuating stress-hypothermia and gastric ulceration shows that it has adaptogenic activity also. This indicates that it can be used as health promotive agent.

#### **2. A comparative study on Ashwagandha granules and Ashwagandha ghrita for possible Bruhmana effect in experimental animals.**

**Aims and objectives :** In the present study Ashwagandha Granules and Ashwagandha Ghrita were assessed to ascertain whether they possess Bruhmana property and to provide experimental basis to the clinical claims through recording the effect of test formulation on 1- metabolism related

parameters: like food intake, food conversion ratio and faecal output and 2- anthropometric parameters involving measurement of body weight, body length, circumference of head, chest and both fore and hind limbs, and also tail length.

**Conclusions :** Analyses of the results obtained indicate presence of significant Brumhana effect in Ashwagandha. The form in which it is administered does not influence the observed effect. Thus for Brumhana effect either granule or ghritha form of the drug can be employed. Administration of Ashwagandha in ghritha form lead to only one difference in the lipid profile. Ashwagandha *per se* tends to have serum triglycerides level lowering effect. This effect is not seen when it is administered in the form of ghritha. Thus in underweight children it may be useful to use the drug in the ghritha form, while in others it may be given in the form of granules.

### 3. Evaluation of *Lepidium Sativum* Linn seed powder for analgesic, anti inflammatory and anti-arthritis activities in rats.

**Aims and objectives :** *Lepidium sativum*, Linn, which is known as 'Aselio' locally and Chandrasura in Sanskrit is frequently used by the villages for the treatment of Sandhivata often with good therapeutic relief. This promoted us to undertake the present research work.

**Studies carried out :** Seed powder was evaluated for analgesic (tail-flick, acetic acid writhing and formaldehyde paw licking tests), anti-inflammatory (carrageenin, formaldehyde paw oedema and cotton pellet granuloma tests) and anti-arthritis activity (FA arthritis) involving pharmacological, biochemical and radiological parameters.

**Results and conclusions :** the seed powder at the dose level studied 550 and 1100 mg/kg produced moderate analgesic effect in acetic acid writhing and formaldehyde paw licking tests. It produced moderate anti-inflammatory activity in experimental models for both acute and chronic inflammation at lower dose level. Further at lower dose level it produced moderate anti-arthritis activity in FA arthritic rats at higher dose level the effect was inconsistent. The study provides evidence for the presence of analgesic, anti-inflammatory and anti-arthritis activity in the test drug. However, further studies are required to be carried out to ascertain whether this activity resides in other parts of the plant and which would be the ideal formulation form for therapeutic utility.

### 4 Evaluation of Gandhakadi Yoga A and B for possible cytoprotective effect against iron sorbitol over load induced cytotoxicity.

**Aims and objectives and testing procedure :** Iron over load induced multiple organ injuries is one of the common occurrences in the treatment of thalassemia major patients who require frequent blood transfusion. As part of study to investigate important ayurvedic formulations for cytoprotective effect two Gandhaka based preparations were evaluated against the toxic effects induced by iron sorbitol overloading employing biochemical, hematological and histopathological parameters.

**Conclusions :** Both the preparations produced good protective effect against iron sorbitol overloading induced toxicity in different organs.

### 5. Comparative evaluation of Gandhaka arka and Gandhaka kwatha for immunomodulation and adaptogenic activities.

**Aims and objective :** The present study was undertaken to compare the effects of two different Gandhaka rasayana samples prepared by two different medias of Chaturjata as arka in one & kwatha in another for possible immunomodulation and adaptogenic properties. The evaluation was carried employing standard procedures.

**Results and conclusions :** Both the test preparations - Gandhaka arka and Gandhaka kwatha are lacking in anti-body formation modulation and anti-inflammatory activities. However, significant suppression of cell mediated immunity (CMI) was observed. The Gandhaka arka showed better effect in comparison to Gandhaka kwatha. Both the preparations showed only a weak anti-stress effect. T-lymphocyte driven inflammation is the main etiological reason offered for the observation of psoriatic lesions by suppressing CMI, which is mediated through active involvement of T-lymphocytes, the test drugs by suppressing this reaction show that they have the potential to suppress the heightened T-lymphocyte activity observed in psoriatic conditions. For this purpose Gandhaka arka would be better in comparison to Gandhaka kwatha. In situations where Gandhaka arka is not available Gandhaka kwatha can also be used since it also possess moderate CMI suppression effect. Anti-stress activity does not seem to contribute to the clinical efficacy of these preparations.



## PHARMACEUTICAL CHEMISTRY LABORATORY

### INTRODUCTION:

The laboratory is mainly engaged in research activity related to quality control and standardization aspects of Ayurvedic drugs and phytochemical studies of important medicinal plants. It is also actively associated with various Academic, Research, Technical and Administrative activities of the Institute and University. It extended its supportive role to various departments of the Institute and also to the University Pharmacy in the drug analysis.

### Activities :

To undertake detailed research on all aspects pertaining to standardization and quality control of Ayurvedic drugs and phytochemical studies on important medicinal plants used in Ayurveda. Technical guidance and imparting knowledge of basic pharmaceutical chemistry and quality control to M.D. (Ayu.), Ph.D. (Ayu.), M.Pharm. (Ayu.) and M.Sc. (Medicinal Plants) scholars.

### ACADEMIC ACTIVITIES :

Summary of the Academic activities of the laboratory for 2007- 08

No.	Activity	Total No.
1	No. of M.D.(Ayu) students utilized Lab. facilities	16
2	No. of Ph.D.(Ayu) students utilized lab. Facilities	08
3	No. of M.Pharm (Ayu) & M.Sc (MP) students utilized lab. Facilities	05
4	Total number of theory classes conducted during the year	43
5	Total number of practical classes conducted during the year	40
6	Total number of paper presented in the national / international seminar during the year	01
7	Total no. of paper published/ communicate by the Lab. during the year	06

During the period of report the laboratory was engaged in teaching various aspects of Pharmaceutical Chemistry to M.D. (Ayu),; Ph.D. (Ayu), M..Pharm ( Ayu) and M.Sc (Medicinal Plants) scholars through theory classes and practical demonstration . In addition guidance was also offered for carrying out research studies related to dissertation and thesis work.

All the students were exposed to Instrumental methods of analysis with sufficient grounding in theoretical aspect. Demonstration of working of sophisticated instruments like HPTLC was also undertaken.

### Technical Activities :

Sixty two samples received from University Pharmacy were chemically analyzed as per the standard protocol. Special demonstration like ark preparation was demonstrated to students of Gulabkunverba Ayurvedic Mahavidyalaya.

### RESEARCH ACTIVITY :

The following were the category of research projects undertaken in the Laboratory:

- A - Research projects related to M.D. (Ayu) Scholars
- B - Research projects related to Ph.D. (Ayu) Scholars
- C - Research projects related to the PG scholars under PGT SFC-cell

**A - Research projects related to M.D. (Ayu) Scholars :**

Quality control and standardization studies of the following drugs were carried as part of research work of M.D. scholars.

- 1 Kanaka tailam and Kanaka tailam cream QC parameters.
- 2 *Celosia aegentia* and *Celosia orgenta* standardization and qualitative tests of extracts for major functional groups.
- 3 Comparative chemical profiling of *Terminnalia arjuna* wild/ cultivated; *Terminnalia tomentosa* wild/ cultivated and *Sterculia urens* wild/cultivated varieties.
- 4 Quality control parameters of *Heliotropium indicum*.
- 5 Quality control and Thin Layer Chromatography of Panchatikta Ghana.
- 6 QC parameters for Gomutra bhavit Chakramarda.
- 7 Quality Control and QA of Katuki / Ativisha churna.
- 8 Go-Ghrita and Shatavari Ghrita Standardization.
- 9 Comparative evaluation of impact of sodhana on Vangabhasma- after /before through Takra, Gomutra, Kanji, Kulatha and Nirgundi swarasa.
- 10 Saptaparna Twaka yavkoot and Sarpghandha ghanvati QC and comparison of alkaloid extraction methods.
- 11 Karpanpatru oil (0-6 month) in (Gomutra/kanji/takra) without murchan and Karpanpatru oil fresh (0-6month) (with murchan) comparison of formulation with murchan and without murchan including the media used.
- 12 Physico chemical evaluation of the opium based Shri Lankan formulation including TLC profiling of the drug with a view to trace variation in Opium Alkaloid Pattern.
- 13 QC works on Kushmand beej and beej churna granules.
- 14 QC work related to Guduchi Ghana.
- 15 QC batch variation studies on Vanga Bhasma.
- 16 Shimshapa ghanvati and parijata ghanvati QC parameters.

**B - Research projects related to Ph.D. (Ayu) Scholars :**

- 1 Punarnavadi compound: HPTLC fingerprinting of original and degradation components after three months.
- 2 Standardization and HPTLC profiling and comparison with quercetin a potent anti oxidant compound.
- 3 Shimhanad Guggulu and Alambusadi Churna tab standardization and TLC fingerprinting.
- 4 Triphala Ark standardization and HPTLC fingerprinting.
- 5 Standardization of and TLC solvent system designing for the separation of chemical components in Arrow-root and turmeric starch.
- 6 Standardization of Jwaraghna dashemani syrup and ghanvati.
- 7 Standardization of Narikela khand and Narikela granules.



8 Standardization of Jivanti churna and HPTLC fingerprinting - presence of quercetin was detected.

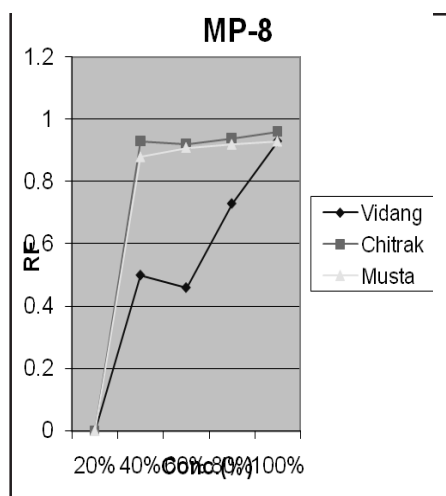
### C - Research projects of the external sponsor / at level of M.Pharm (Ayu) / M.Sc. (Medicinal Plants) Dissertations :

1. Qualitative control and standardization of Stimulact Granules- An Ayurvedic proprietary Medicine.

Scholar : Dr. Hetal Gupta,

Guide : Dr. V. J. Shukla.

Routine quality control parameters for 'stimulact' granules were determined. The parameters studied were: heavy metals load for arsenic, lead, and cadmium; microbial load and anti-biogram with different antibiotics. The nutritional values for the formulation were estimated by measuring total protein, carbohydrates, amino acids, vitamin- C, minerals and trace elements. TLC for flavanoids and vitamin- C were developed. Paper chromatography for amino acids and sugars were carried out. *In vitro* antioxidants activity of formulation was carried out. In UV-Vis spectral study percentage of individual components were obtained using Multi Component Analysis (MCA) mode of Double beam spectrophotometer.



sugars were carried out. *In vitro* antioxidants activity of formulation was carried out. In UV-Vis spectral study percentage of individual components were obtained using Multi Component Analysis (MCA) mode of Double beam spectrophotometer.

2. Standardization of quality control aspects of Trimada Churna- An Ayurvedic formulation.

J. Shukla.

Scholar : Dr. Digisha R. Kakani,

Guide : Dr. V.

Trimada churna was subjected to routine Pharmacognostic, Physicochemical, UV-Vis spectral and Chromatographic including HPTLC analysis. Components identification is generally attempted at the level of substances in routine TLC system. If the TLC system can generate discrimination at the level of ingredients then the technique can become ideal for

identification of presence and absence of any ingredient. Rf mapping is quite useful for this purpose. Rf mapping was attempted with MeOH-Water; Propanol-Water systems. MeOH-Phosphate buffer (pH 5.8 and 8.0) and Propanol-Phosphate buffer (pH 5.8 and 8.0). Rf maps were generated (Rf vs % concentration) for different concentration of organic modifier. The MeOH-Phosphate buffer system at pH 8 was found to be most suitable and can generate discrimination. The correlation co-efficient (r) was found to be: 0.89, 0.89 and 0.93 for Vidanga, Chitraka and Musta respectively [Figure 1].

3. Quality control and standardization of Panchasakar churna.

Scholar : Dr. Neha Vankani,

Guide : Dr. V. J. Shukla.

Raw materials and finished product of Panchasakar churna (PSC) were subjected to comparative chemical profiling. The parameters studied were : Ash value, Acid insoluble Ash etc. and UV-Vis spectroscopy at extract level. Heavy metals load for arsenic, lead, and cadmium. Microbial load and Anti-biogram with different antibiotics was also carried out. The PSC volatile oil content was determined and was analyzed by using GC - MS. Results showed 5 major peaks revealing Limonene, Zingiberene,  $\beta$ -sesquiphellandrene that have been reported in Shunthi, while L- Fenchone and E- Anethole have been reported in Saupha. Each constituent was identified in the sample through their mass spectrum and its content in the volatile oil was determined from the % area in the Gas Chromatogram. During analysis of finished product- presence and absence of salt (Saindhava) in the form of ionicity of salt was found to affect the chromatographic pattern.

4. Phytochemical investigations of wild Banana seed (*Ensete superba* Roxb.)

Scholar : Dr. Chirag Gol,

Guide : Dr. V. J. Shukla.

Quality control parameters for *Ensete superba* Roxb were estimated as per WHO guideline as no reports are available for physico-chemical range for wild banana variety. On the basis of Qualitative test Tannin content and starch content were estimated quantitatively, 14% w/w tannin and 0.45 % w/w starch was observed. *In vitro* antioxidants activity of *Ensete superba* Roxb. MeOH extract was carried out. Presence of reducing power was observed. Qualitatively cardiac glycosides were found present hence, cardiac glycosides were isolated and compared with oleander cardiac glycoside fraction and Digoxin reference fraction. Presence of oleandrin type cardiac glycoside was confirmed by HPTLC separation of extract followed by *in situ* UV-Vis spectral pattern of separated spot.

5. A Pharmaceutical and Analytical studies of Vishwamitra Kapal Sneha.

Scholar : Dr. Kunal Maniar,

Guide : Dr. P. K. Prajapati,

Co-Guide : Dr. V. J. Shukla

Vishwamitra kapal sneha is physically not suitable for analytical work as the oil contain suspended fine particles of unburned carbon. The technique was developed especially for smaller sample size using inherent gumming tendency of VKS oil. The study was carried out by using few raw material parameters: like organoleptic tests, LOD, Ash value and Total lipid according Bloor's lipid extraction method. Comparison of VKS and VKSCF (Vishwamitra Kapal Sneha) was done using parameters like specific gravity, density, spreading coefficient and interfacial tension. Other parameters studied were : rancidity study, saponification value, acid value and moisture content. Unsaponifiable matter was isolated and chromatographic pattern was developed employing HPTLC fingerprinting. Methylation of saponifiable matter was carried out to prepare fatty acid methyl ester and subjected to GC-MS to detect composition of fatty acid in VKSCF, out of five fatty acids three as identified oleic acid, pelargenic acid and myristic acid was found present in VKSCF oil.



## PHARMACOGNOSY LABORATORY

### INTRODUCTION :

The Pharmacognosy laboratory is mainly involved in standardization of Ayurvedic crude drugs by morphological and microscopical methods. The quality of the drugs is also assessed by their chemical tests. It maintains a museum and herbarium samples of many authenticated Ayurvedic medicinal herbs, their substitutes and adulterants also.

### ACADEMIC ACTIVITIES :

Summary of the Academic activities of the laboratory for 2007- 08

No.	Activity	Total No.
1	No. of M.D.(Ayu) students utilized Lab. facilities	05
2	No. of Ph.D.(Ayu) students utilized Lab. facilities	03
3	Total number of theory classes conducted during the year	54
4	Total number of clinical classes conducted during the year	26

**Pharmacognosy laboratory is research oriented unit of I PG T & R A with multifarious activities as listed below : -**

1. Teaching and guidance: M. D. (Ayu) & Ph. D Scholar's research work.
2. Research on Ayurvedic Herbs: Pharmacognosy laboratory work.
3. Photography and Photomicrography.
4. Maintenance of Herbarium and museum of authentic crude drugs.
5. Identification of crude drugs to be purchased for the department of Pharmacy.
6. Identification of the crude drugs selected for dissertation work by M. D (Ayu) students.
7. Participation in seminars, workshops, symposia and presentation of research papers etc.
8. Teaching and Guidance: M. Pharm. and Medicinal plants science scholar's research work.

#### **(A) Academic Activities: -**

During the period of report the laboratory was engaged in teaching various aspects of Pharmacognosy to first year, second and third years M.D. (Ayu.) scholars through theoretical and practical demonstration as per syllabus and schedule of time table. In addition to the above guiding and helping M.D. & Ph. D scholars for their thesis work.

#### **(B) Research Activities: -**

The laboratory continued its broad-based research activity related to quality control and standardization aspects of Ayurvedic drugs and studies of important medicinal plants. It is also associated with various academic, researches, technical and administrative activities of the University. The laboratory extended its supportive role to various departments of the institute for identification of crude drugs and also to the pharmacy department of the university.

Established a well equipped laboratory for all pharmacognostic investigations. Plants were studied by Morphological and Microscopical characters.

During the period of report, following pharmacognostical studies have been conducted in this laboratory with the support of the staff of this laboratory.

- 1) A Pharmacological therapeutic study of kushmand beej w.s.r. to its vrishya karma.  
Scholar : Dr. Shiromani Mishra
- 2) Evaluation of anti-ulcerogenic & anti-oxidant activity of Jiyanti (*Leptadenia neticulata* Retz. wt. et. Ann.  
Scholar : Dr. Atanu Pal
- 3) Applied and Fundamental study of Snigdha & Ruksha Guna W.S.R. to Rasa -Raktagata Sneha (Hyperlipidemia)  
Scholar : Dr. Sangram Mishra
- 4) An evaluation of ethnomedicinal property of Saptapana W.S.R. to Essential Hypertension.  
Scholar : Dr. Kamlesh Bhogayata
- 5) A comparative Pharmaceutical study of Guduchi Ghana prepared from Kwatha and aqueous extract in the management of ekakushtha (proriasis).  
Scholar : Dr. Bharti Umrethia
- 6) Evaluation of Floklore plant *Linaria Ramosissima* in the management of Ashmari.  
Scholar : Dr. Vithal Khunt
- 7) Evaluation of Shodhana (Detoxification) process and Antidotal study on Vatsanabha.  
Scholar : Dr. Prashant Sarkar
- 8) Critical study of Vividhasitapitiya Adhayaya W.S.R. of Principle of Management in Rasapradoshaja Vikara.  
Scholar : Dr. Ami Rajani

#### **Photographic Work :**

This laboratory has carried out photographic work including exhaustive photography of all drugs of plants, animal or mineral origin. The photographs of the research work carried out by the various students and staff of the University like M. D., Ph. D. (Ayu), B. Pharm., M. Pharm, M. Sc. belonging to various department like Pharmacognosy, Pharmacology, Pharmaceutical chemistry, Dravyaguna, Rasashastra, Basic Principle, Pharmacy etc. have been carried out by him. Following type of photographic work has been conducted by this department photography technician.

1. Taking the photography of the entire live plants growing in the natural habitat.
2. Close up photography for visualizing the microscopical characters of the various fresh parts of plants like flowers, root, fruit, leaf, rhizomes, seed etc.
3. Photographs of dried medicinal plants, crude drugs of parts used and its powder (Churna), gum, exudates etc. showing its different colours, textures etc.
4. Photomicrographs of the various sections of the plant drugs like transverse and longitudinal sections, powder, isolated, elements etc. and histopathological photomicrographs of the various tissues.

A total of 1153 coloured photographs and photomicrographs of the medicinal plant species have been exposed in the research microscope of the laboratory during the period of report.



## PATHOLOGY LABORATORY

### INTRODUCTION :

During the year 2007-08 pathology department was actively associated with many fold activities like research training, technical and academic as well as administrative activity of I. P.G.T. & R.A. The brief report of the activities are as follows :-

**Teaching :** The pathology department imparts practical training in respect of various pathological investigations of blood, stool, sputum and semen etc. of the IPD and OPD patients of I. P.G.T. & R. A. The theoretical portion of the subject of pathology were also dealt with due attention for M.D. (Ayu.) scholars.

**Research :** The department is associated with all routine as well as special investigations required for research, being carried out by the students of M. D. and Ph. D. (Ayu.) Hematological profile of animals particularly for drug toxicity was also carried out by this department.

**Technical activity :** Pathology department also run D. M.C. centre under RNTCP programme which is run by Govt. of India. In this programme examination of sputum is done for A.F. B. at our centre. During the year 2007-2008 total 55,506 various investigations were carried out from 14,244 different pathological samples of blood, urine, stool, sputum semen etc.

Sr. No.	Total sample	Total investigation
OPD Blood	4,754	28,575
IPD blood	797	5,465
R. A. test	530	530
CRP	220	220
Animal(CBC)	170	891
OPD Urine, stool	6,343	16,303
IPD Urine, stool	1,357	3,443
Sputum	59	59
<b>Total</b>	<b>14,244</b>	<b>55,506</b>



## MODERN MEDICINE TEAM

- (1) Medical Examination, diagnosis and following check up of O. P. D. I. P. D. as well as research patients with advice about their relevant clinical investigations and their interpretation.
- (2) Electro - Cardio- Gram - ECG diagnosis of various heart patients.
- (3) **Teaching and Education:**  
Clinical - bed - side education and clinical discussion with M. D. Ayu students.
- (4) **Research & Thesis Work:**  
M. D. Ayu and Ph. D Students assisted for their thesis and research works.



## BIOCHEMISTRY DEPARTMENT

### ACTIVITIES :

#### (A) Teaching :

Theory and Practical classes of the subject of Biochemistry were conducted during the year for the 1<sup>st</sup> M.D. (Ayu.) scholar.

#### (B) Association with clinical research :

Total 26687 special as well as routine various Biochemical investigations from 5247 samples like blood, urine, etc. of OPD and IPD patients and 5144 different biochemical investigations from 542 of animal samples from Pharmacology laboratory were also carried out.

Sr. No.	Name of Investigation	Total Investigation
1	Blood Sugar	4628
2	Serum Cholesterol	3348
3	Serum Triglyceride	2611
4	Serum HDL	2211
5	Serum Urea	2394
6	Serum Creatinine	2805
7	Serum G.O.T.	1219
8	Serum G.P.T.	1286
9	Serum (Total) Protein	2724
10	Serum Albumin	2490
11	Serum Alkaline Phosphatase	1873
12	Serum Bilirubin-Total	1014
13	Serum Bilirubin-Direct	80
14	Serum Calcium	517
15	Serum Iron	236
16	Serum TIBC	236
17	Serum Uric Acid	1361
18	Urine Calcium	119
19	Urine Creatinine	119
20	Serum Acid Phosphatase	135
21	Serum Sodium	118
22	Serum Potassium	118
23	Serum Chloride	118
24	Serum Ferritin	34
25	Serum C.R.P. Quantative	37
	<b>Total</b>	<b>31831</b>

The research scholars of MD / MS (Ayu), Ph.D., M. Pharm. and M.Sc. (Med. Plant) utilized the laboratory facilities for their thesis / research works.



## I.P.G.T. & R.A. HOSPITAL

### ACTIVITY :

The Institute of Post Graduate Teaching and Research has a hospital viz. P. G. Hospital as an integral part to facilitate teaching and training facility to the Post Graduate and Post Doctoral and other scholars. The yields of this high level research is benefited the public. The scholars of different courses of Ayurved get a top level platform of study and training in this hospital supported by all the modern medical backups, comprising of modern scientific laboratories viz. Pathology, Biochemistry, Pharmacognosy, Pharmaceutical Chemistry and Sonography, Roentgenology, ECG, Dentistry, Optometry etc. The research scholars doing their MD/MS and Ph.D. are provided with modern medical doctors, expertise Surgeon, Gynaecologist, Sonologist, Radiologist, Paediatrician, Otorhinolaryngologist, and other such modern team help them, With an average 400 patient per day OPD and a 150 bedded full fledged IPD and well known pure and high standard Ayurvedic Medicines (given free) along with research drugs is a strong instrument (Hospital) of clinical research and health delivery.

### STATISTICS :

#### (i) The O.P.D. statistics are as under :

	Male	Female	Children	Total
<b>New Cases</b>	23626	24440	3645	51711
<b>Old Cases</b>	32630	36694	3816	73140
<b>Total</b>	56256	61134	7461	124851

The O.P.D. average is 450 patients (approx.) day.

#### (ii) The I.P.D. statistics are as under :

Sr. No.	Department	Bed Allotted	No. of pts. Admitted	No. of pts. Expired	No. of pts. Discharged
1.	Kayachikitsa	28	282	-	286
2.	Panchakarma	34	433	1	420
3.	Shalya	18	231	-	226
4.	Shalakya	12	015	-	013
5.	Maulik Siddhanta	10	108	-	106
6.	Rasa Shastra & B.K.	10	044	-	051
7.	Drvyaguna	10	050	-	049



8.	S.R.P.T.	14	359	-	357
9.	Kaumarabhritya	08	090	-	087
10.	Special Cabin	04	049	-	047
11.	Reserve Bed	06	-	-	-
	<b>Total</b>	<b>150</b>	<b>1661</b>	<b>---</b>	<b>1642</b>

**(iii) The X-Ray statistics are as under:**

Total no. of case	Film size 12" x 15"	Film size 10" x 15"	Film size 8" x 15"	Total number of films
1286	1013	796	140	1949

**(iv) Sonography statistic : Patients 240**

**(v) Rural Health Services Program : (SASOI - Village OPD statistics)**

Old Case	New Case	Male	Female	Child	Total
941	310	731	474	49	1254

**(vi) School health Service - Survey Report of Health Examination of the School Children - Deptt. of K. B.**

Sr. No.	Date	School	No.of Student/Children
1.	27/02/2008	Parvati Devi School	47
2.	03/03/2008	Parvati Devi School	64
3.	04/03/2008	Parvati Devi School	54
4.	05/03/2008	Parvati Devi School	84
	<b>Total...</b>		<b>249</b>



## LIBRARY

Library of the University made steady progress during the year under report.

Books issued 11120, books and journals issued 44060, to students and teachers.

Total No. of books 31121 books; purchased 363 [at the cost of Rs.1, 72, 932/-]

Journal subscribed - 36 [at the cost of Rs.2, 29, 471/-] National - 26 International - 06

Daily News papers subscribed - 06

### LIBRARY USERS :

1. U.G., P.G., I.A.P.S., I.M.P.S. MPIYNER & Ph.D. Students.
2. U.G., P.G., SFI Teachers.
3. Administrative Staff.

## INTERNATIONAL ACTIVITIES

Considering the global awareness and demand of Ayurveda, Institute of Post Graduate Teaching & Research in Ayurveda is conducting various programmes for the foreign nationals along with training for WHO fellows. During the reporting year following short term training programmes were carried out at I.P.G.T. & R.A for International Scholars in coordination with International Centre for Ayurvedic studies (ICAS), Gujarat Ayurved University, Jamnagar.

### **M D course in Ayurveda :**

One student from Sri Lanka has completed second year of his M.D.(Ayu) course in Kayachikitsa and one student from Sri Lanka has been admitted in M.D. (Ayu) course in Stiroga & Prasutitantra department under ICCR scholarship programme of Government of India during the year 2007 - 08. One student from Sri Lanka is doing Ph.D. in M.Sc. Medicinal Plant in Ayurveda.

### **Introductory course in Ayurveda :**

To create awareness regarding Ayurveda amongst common people globally I.P.G.T. & R.A. is conducting three month introductory courses for Foreigners since last sixteen years. Till date more than 100 international scholars have participated in such courses. Three students from France, one student from each of Greece, Portugal, Brazil, Ecuador, Mexico, Serbia & Belgium have joined the course conducted during November 1<sup>st</sup> 2007 to January 31<sup>st</sup> 2008. Nearly 300 theory and practical classes were arranged during the training programme along with field visits.

### **Panchakarma Certificate Course for WHO fellows from Myanmar :**

A One year Panchakarma certificate course for doctors from Myanmar has been commenced at I.P.G.T & R.A from 1<sup>st</sup> November 2007. Two WHO fellows have participated in the training programme. Dr. A B Thakar, Sr. Lecturer, Dept of Panchakarma, I.P.G.T & R.A. is working as coordinator for this programme.

### **Training on TSM for WHO fellows from Myanmar :**

A training programme for WHO fellows on Traditional system of Medicine (Ayurveda) was conducted from 21<sup>st</sup> May 2007 to 25<sup>th</sup> May 2007 at I.P.G.T & R.A. in which five fellows from Myanmar participated.

### **Training Programme for Students from Argentina :**

Gujarat Ayurved University is having MOU with the institute- Fundacion De Salud Ayurveda Prema, Argentina. A clinical training programme for 13 Argentinian students from this institute was organized from 9<sup>th</sup> July 2007 to 19<sup>th</sup> July 2007 at I.P.G.T. & R.A.

### **Optional Placement Programme :**

Under the Optional Placement Programme of Nottingham University, U.K, one student joined for orientation programme in Ayurveda at I.P.G.T.& R.A. from 17<sup>th</sup> March 2008 for the period of one month.

### **Panchakarma Training Programme for Traditional Doctors from Bhutan :**

A four months Panchakarma training programme for traditional doctors from Bhutan is foing on and will be completed at I.P.G.T & R.A on 14<sup>th</sup> May 2008. Five students are participating in the training programme. Dr. A B Thakar, Sr. Lecturer, Dept of Panchakarma, I.P.G.T & R.A. is coordinating the programme.

### **Visit of Foreign Delegation :**

Dr. (Mrs) Michele Barzach, Ex Minister of Health, France, Prof.(Dr.) Jacques Lebas, Chief Medical Doctor, St. Antonie hospital, Paris and Kiran Vyas, Director, Tapovan centre, Normandy, France Visited I.P.G.T.& R.A. on 27<sup>th</sup> October, 2007 to discuss regarding development of bilateral relation between France and India for Research, Education and development of Ayurveda in France.



## INSTITUTIONAL ACTIVITIES

The academic year, 2007-2008 was completed successfully, with the following activities carried out by the I.P.G.T and R.A., Jamnagar, during this period.

### Foundation Day :

52<sup>nd</sup> foundation day of institute for Post Graduate Teaching and Research in Ayurveda was celebrated on 20<sup>th</sup> to 21<sup>st</sup> July, 2007 by organizing **National workshop on Research Methodology**.

### Weekly Seminars :

Total 33 weekly seminars of M.D. /M.S. (Ayu) scholars were conducted from different specialities in the academic year 2007-2008.

### Akhanda Samhita Pathana :

As per every year this year also IPGT & RA has conducted the continuous and complete Samhita pathana of the 'Madhava Nidana' on 22<sup>nd</sup> September 2007, organized by department of Basic principles.

### Workshops :

To improve the skill and competence of the P.G. and Ph.D. students of the institute in the field of research three workshops were held:

1. Workshop on Research Methodology on 20<sup>th</sup> to 21<sup>st</sup> July, 2007, was organized on the foundation day of the Gujarat Ayurveda University, Jamnagar.
2. Workshop - Pharmacovigilance organized by Rasashastra and Bhaishajya Kalpana Department on 3<sup>rd</sup> to 4<sup>th</sup> December, 2007.
3. National Workshop on Ayurvedic Terminology on 3<sup>rd</sup> to 5<sup>th</sup> January, 2008, on the eve of the foundation day of the I.P.G.T. & R. A..

### Guest Lecturers: -

In all ten guest lectures were held during the academic year, wherein speakers were invited from all over the country and abroad for these sessions.

1. "Research Planning and Protocol" by Dr. S. S. Savrikar, Vice Chancellor, Gujarat Ayurved University, Jamnagar - 20<sup>th</sup> March, 2007.
2. "Status of Ayurved in Foreign Countries" by Prof. Manfred Krames from Thailand - 5<sup>th</sup> April 2007.
3. Guest lecture on Recent Trends in Ayurveda was delivered by Dr. H.S. Pales, Head of the Integrative Research Dept, K.J. Somaiya Medical College & Hospital, Mumbai on 4<sup>th</sup> July, 2007.
4. Ms. Vidula Nene from NINT Jamnagar delivered lecture on I.T. awareness on 13<sup>th</sup> September 2007.
5. "Shirodhara treatment in a Rural French Psychiatric hospital" by Dr. Patel Baksh Pascale on 14<sup>th</sup> December 2007.
6. Dr. U. K. Krishna Director Institute of Traditional Oriental Medicine Japan Lecture on 7<sup>th</sup> January 2008.
7. Dr. Mukund Sabnis, Director A.P Aurangabad delivered lecture on "Planning and Evaluation of Ayurvedic Researches" on 18<sup>th</sup> January 2008.
8. Dr. Hari Sharma from U.S.A delivered lecture on "Globalization of Ayurveda" on 4<sup>th</sup> February 2008.
9. "Cardiac Practices in Ayurveda W.S.R. to management of IHD and COPD" on 5<sup>th</sup> February 2008

by Dr. Sunil Vasishth from Jammu.

10. "Certain innovative Yogic Practices" on 6<sup>th</sup> February 2008 by Dr. Sunil Vasishth from Jammu.

#### **RoTP :**

**Six** Reorientation programmes, sponsored by the Dept. of Ayush, Government of India, were organized successfully by various departments of the institute, which was attended by U.G. and P.G. teachers from different institutes of the country.

<b>SI No</b>	<b>Name of the RoTP</b>	<b>Organised by the Department</b>	<b>Duration</b>	<b>No of participants</b>
1	Basic Principles	Basic principles	6 <sup>th</sup> July to 12 August, 2007.	08
2	Rasashastra and Bhaishajya Kalpana	RS&BK	17 <sup>th</sup> September to 14 <sup>th</sup> Oct. 07	09
3	Roga Nidana	Kayachikitsa	26 <sup>th</sup> November to 11 <sup>th</sup> Dec 07.	30
4	Shalaky Tantra	Shalaky	28 <sup>th</sup> January to 2 <sup>nd</sup> Feb, 08	27
5	Samhita	Basic principles	18 <sup>th</sup> to 20 February, 2008,	28
6	Rasashastra and Bhaishajya Kalpana	RS&BK	10 <sup>th</sup> to 15 <sup>th</sup> March, 2008.	30

#### **Other programmes :**

1. Computer Training Programme on 25<sup>th</sup> March, 2008.
2. Pharmacovigilance cell (PV cell) of I.P.G.T. & R.A. has been constituted on 29<sup>th</sup> February, 2008.

#### **Discussion for further research programmes :**

1. A discussion session for individual research projects was arranged on 19<sup>th</sup> January, 2008. Dr. Mukund Sabnis from Aurangabad was invited to deliver a lecture and to speak to the students regarding their thesis projects.

#### **Worlds Elderly Day Celebrations on 1<sup>st</sup> October, 2007 :**

Celebrating the World Elderly Day, deliberations by seven of the faculty members were given regarding the maintaining of health of old aged persons. Six ex- members of the staff were also honored on the occasion.

#### **C.M.E.**

One C.M.E. programme was organized by the Dept of R. S & B.K. on 16<sup>th</sup> October to 17<sup>th</sup> October, 2007 on how to read and write good scientific research paper.



## PGT-SELF FINANCE COURSE CELL, I.P.G.T. & R.A.

### ACADEMIC ACTIVITIES :

During the year 2007-2008 both theory and practical classes were conducted regularly according to the timetable. Examinations were conducted by Gujarat Ayurved University as per the schedule. Six students in second M. Sc (Medicinal plants), eight students in final year M. Pharm (Ayu) & fifteen students in first year M. Pharm (Ayu.) are taking examination during the year.

### Student admission :

Due to technical reasons admission to First year M.Sc. (Medicinal Plants) course was kept in abeyance for the year 2007-2008. Fifteen candidates were however, admitted to M.Pharm (Ayu) course. Of the fifteen candidates two were from modern B.Pharm (Ayu) stream and the remaining were from B.Pharm (Ayu) stream.

### RESEARCH ACTIVITIES :

#### As part of M.Sc (Medicinal plants) course :

#### Pharmaceutical sciences- Division : Department of Phytochemistry

1. Phytochemical investigation on Wild Banana *Ensete superbum* (Roxb.).

Scholar : Dr. Gol Chiragkumar R., Guide : Dr. V. J. Shukla.

The seeds of *Ensete superbum* (Roxb.) were subjected to detailed phytochemical investigation. The presence of oleandrin in *E.superbum* (Roxb.) was confirmed by HPTLC fingerprinting. Chemically Starch was found to be one of the major Component. Besides the above physicochemical parameters were also estimated as per API .

2. Standardization of Quality control aspects of Trimada Churna - An Ayurvedic Formulation.

Scholar : Dr. Kakani Digisha R., Guide : Dr. V. J. Shukla.

As part of standardization the investigators made an attempt to evolve suitable T.L.C. finger printing for Trimada Churna and also to identify the presence of different substances in it through T.L.C. and H.P.T.L.C. chromatograms. Additionally attempt was made to employ Retention Mapping System at various concentrations of organic modifiers for developing better, rapid and in-expensive technique for discrimination of compounds from the mixture. Solvent system: Methanol: Phosphate buffer (pH-8) give better result for discrimination of compounds from the mixture.

#### Department of Pharmacognosy :

3. Pharmaco-botanical evaluation of the seeds of *Ctenolepis* Hook. F. species (Sankhini) and *Diplocyclos palmatus* (L.) C. Jeffrey (Shivalingi).

Scholar : Dr. D. Aravind, Guide : Dr. M. G. Chauhan,  
Co-Guide : Shri. APG Pillai.

A thorough review of literature, morphological and pharmacognostical studies were carried out to establish the botanical identity of the source plants of Sankhini and Shivalingi. The plants studied were seeds of *Ctenolepis cerasiformis* (Stocks) Hook.f. *Ctenolepis garcini*, C.B.Clarke. and *Diplocyclos palmatus* (L.) C.Jeffrey of Cucurbitaceae family. Morphologically all the three plants resemble closely to each other. However, important differences were noticed in microscopic profile. These differences can be used for plant identification. The authors have suggested that further clinical studies to establish the claims of folklore vaidyas and Ayurvedic texts.

4. Quality Standards of Three Reputed Papilionaceous Ayurvedic Seed Drugs (Karanja, Palasha and Kulattha).

Scholar : Dr. Munish Kaundal,  
Co-Guide : Dr. APG Pillai.

Guide : Dr. M. G. Chauhan,

*Pongamia pinnata*, *Butea monosperma* and *Dolichos biflorus* belongs to same family leguminosae under sub family papilionaceae. Macro-microscopic, physiochemical and preliminary phytochemical studies have been carried out to define their profile which would be useful for standardization purpose.

#### Department of Pharmacology :

5. Pharmacological Evaluation of Wild Banana Seed. *Ensete superbum* (Roxb.) with special reference to anti-hyperglycaemic & anti-diabetic activity.

Scholar : Dr. Chavan Sulakshan S.,  
Co-Guides : Dr. V. J. Shukla, Dr. Sarojkumar V.

Guide : Dr. B. Ravishankar,

The test drug at the dose level studied- 270 and 540 mg/kg possesses significant anti-hyperglycemic and anti-diabetic effects. In normoglycemic rats it produces only mild hypoglycemia that too at higher dose level. The test drug produced reversal of most of the serum biochemical parameters that were found to be altered due to streptozotocin diabetes. Histopathological examination also indicate presence of pancreatoprotective effect. The test drug produced anti-diuretic activity at lower dose level and mild diuretic activity at higher dose level. Based on the data it is suggested that seeds of *Ensete superbum* Roxb. merit serious attention as an anti-diabetic drug of very high potential.

6. Evaluation of specially prepared Guduchi Taila for Gastroprotective activity.

Scholar : Dr. Gupta Varun B.,  
Co-Guide : Dr. V. J. Shukla.

Guide : Dr. B. Ravishankar,

The data generated during the study indicated that ghritha *per se* has weak anti-stress activity while the test drug Guduchi Taila at lower doses produces moderate anti-stress effect and significant anti-stress effect at higher dose level. The main mechanism seems to involve enhancing the body's antioxidant system - particularly increasing the level of glutathione and the activity of the catalase. The other contributing factor could be decrease in the lipid peroxidation. The study provided experimental support to the pre-study supposition that the fortified Guduchi oil would have good adaptogenic activity.

#### Research studies carried out as part of M. Pharm (Ayu.) dissertation assignment :

##### Ayurvedic Pharmaceutics (Rasashastra and Bhaishajya Kalpana).

1. A Pharmaceutical & Analytical Study of Vishwamitra Kapal Sneha (VKS).

Scholar : Dr. Maniar Kunal,  
Co-Guides : Dr. V. J. Shukla, Dr. B. J. Patgiri.

Guide : Dr. P. K. Prajapati,

V.K.S. is indicated for the treatment of skin diseases in Siddha system of medicine. It has been mentioned that earthen pot should be preferred over the stainless steel vessel for its preparation. The study showed that increase in the surface area of the coconut shell showed increase in the yield of the V.K.S. Oleic acid, pelargenic acid, and myristic acid are the major constituents in it. Due to the presence of myristic acid the oil is very irritative to the skin. Ayurvedic method of preparation is quite similar and non time consuming as compared to the Siddha method of preparation. V.K.S. ointment is more convenient for the patients on the basis of its wide applicability, but the formulation prepared with the cold cream method is best due to its non staining property.

##### Ayurvedic Plant Sciences (Dravyaguna Vigyan).

2. A Comparative Pharmacognostical & Phytochemical Study on Roots of Two Varieties of "Sariva.

Scholar : Dr. Sapna Mistry,  
Co-Guide : Dr. V. J. Shukla

Guide : Dr. P. P. Sharma,



Both the plants were subjected to physicochemical parameters estimation for the powdered material. They were also subjected to phytochemical examination. For the chromatography, TLC methods were established based on the chemical constituents present in the Shveta Sariva and compared with the Krishna Sariva. HPTLC profiling was also carried out. Data obtained from the analysis showed some difference between Shveta and Krishna Sariva.

### Pharmacognosy & Phytochemistry of Ayurvedic Drugs :

3. A Comparative pharmacognostical and phytochemical studies of seeds of *Holarrhena antidysentrica* Wall and *Wrightia tinctoria* R. Br.

Scholar : Dr. Patel Raj P.,

Guide : Dr. M. G. Chauhan,

Co-Guide : Shri. APG Pillai.

The following are the major differentiating characters of the seeds : *Holarrhena antidysentrica* - seeds highly bitter, cotyledon folded inwardly and contain rosette crystals, papillose outgrowth are not lignified and devoid of stone cells. T.L.C. study shows resolved spots of alkaloids. *Wrightia tinctoria* - seeds not bitter or slightly bitter, cotyledon rolled one over the other and contain prismatic crystals. Stone cells embedded in papillose reticulate outgrowth which are lignified. T.L.C. separation did not show any spots of alkaloid. T.L.C. study of fixed oil shown more spots.

4. Quality standards of Four Ayurvedic Seeds of "Sida" Species.

Scholar : Dr. Kshitij Chauhan,

Guide : Dr. M. G. Chauhan,

Co-Guide : Shri APG Pillai, Dr. Prashant K. Jha.

A comparative investigation on four Ayurvedic seeds of Sida species was undertaken with a view towards establishment of quality standards for them.

### Pharmaceutical Analysis & Standardization of Ayurvedic Drugs :

5. Standardization & Quality control Aspects of Pancha Sakar Churna - An Ayurvedic Formulation.

Scholar : Dr. Vankani Neha,

Guide : Dr. V. J. Shukla.

The following parameters were studied in the test preparation as part of standardization- macroscopic characters, physicochemical analysis, estimation of tannin, qualitative and quantitative tests, UV-spectroscopy, HPTLC and GC-MS profile, ICP study, estimation of electrolytes and ICP. Further microorganism load in the preparation was also estimated.

6. Standardization & Quality control of Stimulact granules- An Ayurvedic Proprietary medicine.

Scholar : Dr. Hetal Gupta,

Guide: Dr. V. J. Shukla.

The moisture content in the Stimulact granules is much less as compared to individual extracts, thereby increasing the stability, reducing degradation and avoiding contamination.

The pH of the formulation doesn't vary much as compared to the individual extracts thereby not affecting much, the bioavailability of the formulation. The formulation is completely soluble in water ensuring complete solubility in milk with which it is intended to be taken. The formulation and each individual extracts passed the heavy metal and microbial load, ensuring safety and efficacy as per WHO guidelines. As the Stimulact granules are having nutritionally important substance like carbohydrates, proteins, fats, lipids, vitamins & minerals they can be given to lactating mother. The formulation has presence of phenols, flavanoids & vitamin C which are established antioxidant action thus; the formulation is tested for total reducing power & found potent. Thus, it has antioxidant activity which is useful for the mother in post-partum period.



**Pharmacology & Toxicology of Ayurvedic Drugs :**

7. Evaluation of Guduchi Ghrita for cytoprotective activity against experimental intestinal and colon injury Albino rats.

Scholar : Dr. Patel Hemal,  
Co-Guide : Dr. V. J. Shukla.

Guide : Dr. B. Ravishankar,

Based on the data obtained it can be suggested that ghrita *per se* and higher dose GG produce only weak cytoprotective effect against acetic acid induced colitis. The reference standard also produced weak to moderate cytoprotection. Similar type of results were observed in methotrexate induced intestinal injury.

8. Hepatoprotective Evaluation of Guduchi Ghrita.

Scholar : Dr. Amrutiya Vijay,  
Co-Guide : Dr. V. J. Shukla.

Guide : Dr. B. Ravishankar,

The data obtained show that ghrita *per se* produces good hepatoprotective effect against paracetamol and IRP induced hepatotoxicity which is comparable to the protective effect observed with reference standard silymarin. Guduchi ghrita at higher dose level provided good hepatoprotection against paracetamol induced liver injury and moderate effect was observed at lower dose levels. Against IRP induced hepatic injury significant protection was observed with lower dose of GG and was slightly better than the effect observed with GG x 2 dose which also produced good hepatoprotection.

**Ph. D. Students :**

The three Ph.D., scholars- Dr.B.K.Ashok, Ms. Hitaba Gohel and Sri. Hemang Joshi- continued their study. The progress report related to the work was reviewed by the research committee.

**Medico Botanical Study Tour :** An educational tour, for the students of the Final year M. Sc. (Ayu. Medicinal Plants), was undertaken to Southern Gujarat during 17<sup>th</sup> Dec, 2007 to 19<sup>th</sup> Dec. 2007 under the leadership of Shri. Sarojkumar V. The group also visited JAU, Junagadh Herbal garden and Research fields of Medicinal and Aromatic plants.

**STAFF** (on contract basis)

**Teaching staff** - Prof. M. G. Chauhan - Visiting Professor, Shri. A.P.G. Pillai (Pharmacognosy and Medical Botany). Shri. Saroj Kumar V. M. Sc. (Agriculture),

**Accounts Section :**

Shri. V. D. Dudhela (Part time) ; **Administration :** Shri Zaveri Sagar C.

**Supportive staff :** 1. Shri. Mugat Dandiya 2. Shri. Digvijay Sinh Zala

**Faculty Members (Co-opted and Honorary) :**

Dr. B. Ravishankar , Prof. P. P. Sharma, Dr. P. K. Prajapati, Dr. B. J. Patgiri, Prof. R. R. Dwivedi, Dr. S. C. Das, Dr. T.N. Pandya, Dr. V. J. Shukla, Dr. Rajagopal, Mr. Richard Fernandes, Dr. Santosh Bhatted, Dr. Galib, Dr. Mandeep Kaur, Dr. R. N. Acharya

**BUDGET DETAILS** (See Appendix-I)

# Gujarat Ayurved University, Jamnagar

## P.G.T. SELF FINANCE COURSE CELL (Course : M.Sc. & M.Pharm.)

### Budget Estimates for 2007 - 2008 and (First year) Estimates for 2006 - 2007

Sr. No.	Major / Minor Head	Actual Apr - 06 to Jul - 06	Budget estimates (First year) 2006 - 07	Budget estimate 2007 - 08
1	Opening Balance	---	---	9,71,700
2	Tuition Fees for M.Sc & M.Pharma	---	1,123,000	1,150,000
3	Tuition Fees for Ph.D.	---	7,000	9,600
4	Other Income Incl. bank interest	---	2,000	2,000
5	Application Fees	200	1,200	4,000
6	Registration Fee income	---	---	---
7	Thesis Submission Income	---	---	---
8	Receipt of Deposits from Students	---	16,000	40,000
9	Exam Fee	---	3,000	35,000
10	Dissertation submission fee income	---	---	---
11	Revenue Adv.	---	---	---
12	Fund transferred from IMPS	---	1,33,100	---
13	Fee of board of Sports etc. to GAU A/c	---	2,400	---
14	Sale of Microscopic Profile.....book	---	---	---
	Guj State Midicinal Plant Seminar Fund	---	---	---
	Received from IAPS for M.Pharm course	3,75,000	3,75,000	---
	Sub Total	3,75,200	16,62,700	22,12,300
Less	Tuition Fees / int. included in above but not received till dt.31st March	---	---	---
Add	Tution fees / int. received for last year	---	---	---
Less	FDR int. accrued but not encash	---	---	---
	<b>Total</b>	<b>3,75,200</b>	<b>16,62,700</b>	<b>22,12,300</b>

Sd/-

Jamnagar

Date :

For Doshi Maru &amp; Associates

Chartered Accountants

Sd/-

Accounts Officer,

I. P. G. T. &amp; R. A.

Gujarat Ayurved University, Jamnagar.

Sd/-

Director,

I. P. G. T. &amp; R. A.

Gujarat Ayurved University, Jamnagar.

# Gujarat Ayurved University, Jamnagar

## P.G.T. SELF FINANCE COURSE CELL (Course : M.Sc. & M.Pharm.)

### Budget Estimates for 2007 - 2008 and (First year) Estimates for 2006 - 2007

#### Expenditure

Sr. No.	Major / Minor Head	Actual Apr - 06 to Jul - 06	Budget estimates (First year) 2006 - 07	Budget estimate 2007 - 08
<b>Recurring Expenses :</b>				
A	Remuneration exp. (incl. classes)	66,638	4,35,000	4,80,000
B	Miscellaneous exp.	592	20,000	25,000
C	Advertisement	---	20,000	10,000
D	T.A.	---	3,000	2,000
E	Examination exp.	---	10,000	15,000
F	Dissertation exp.	---	8,000	10,000
G	Practical exp.	---	15,000	11,000
H	Refund of Deposits / EMD / SD	---	---	10,000
I	Revenue Adv	---	---	---
<b>Non Recurring Expenses :</b>				
J	Furniture / computer etc.	---	1,00,000	2,00,000
K	Books	---	30,000	30,000
L	Minor / Lab. ints.	---	50,000	75,000
M	Fixed Deposit	---	---	---
N	Payment from Bipin Patel Fund	---	---	---
	Total exp.	67,230	6,91,000	8,68,000
Less	Exp. Incurred but not paid	(20,778)	---	---
Add	Exp. Paid for last year	---	---	---
	Total cash exp	46,452	6,91,000	8,68,000
	Closing Balance	3,28,748	9,71,700	13,44,300
	<b>Total</b>	<b>3,75,200</b>	<b>16,62,700</b>	<b>22,12,300</b>

Sd/-

Jamnagar

Date :

For Doshi Maru &amp; Associates

Chartered Accountants

Sd/-

Accounts Officer,

I. P. G. T. &amp; R. A.

Gujarat Ayurved University, Jamnagar.

Sd/-

Director,

I. P. G. T. &amp; R. A.

Gujarat Ayurved University, Jamnagar.

# Gujarat Ayurved University, Jamnagar

INSTITUTE FOR POST GRADUATE TEACHING & RESEARCH IN AYURVEDA

## P.G.T. SELF FINANCE COURSE CELL

Income & Expenditure Statement

1 April-2006 to 31 July-2006

Particulars	Amount Rs.	Total Amount Rs.
<b>Indirect Expenses</b>	-----	<b>67,230.00</b>
Remuneration Exp.	66,638.00	
Telephone Exp. (Tel.No.2661315)	592.00	
	<b>Total...</b>	<b>67,230.00</b>
<b>Indirect Incomes</b>	-----	<b>200.00</b>
Application Fee income (M.Sc.)	200.00	
Excess of Expenditure over income	-----	<b>67,030.00</b>
	<b>Total...</b>	<b>67,230.00</b>

Jamnagar

Date :

Sd/-

**For Doshi Maru & Associates**

Chartered Accountants

Sd/-

**Accounts Officer,**

I. P. G. T. & R. A.

Gujarat Ayurved University,  
Jamnagar.

Sd/-

**Director,**

I. P. G. T. & R. A.

Gujarat Ayurved University,  
Jamnagar.

**Gujarat Ayurved University, Jamnagar**  
**INSTITUTE FOR POST GRADUATE TEACHING & RESEARCH IN AYURVEDA**  
**P.G.T. SELF FINANCE COURSE CELL**

Cash Flow Summary  
 1 April-2006 to 31 July-2006

Particulars	Amount Rs.	Total Amount Rs.
<b>Inflow :</b>		
<b>Capital Account</b>		<b>3,75,000.00</b>
Reserves & Surplus	3,75,000.00	
<b>Indirect Incomes</b>		<b>200.00</b>
Application Fee Income (M.Sc.)	200.00	
	<b>Total....</b>	<b>3,75,200.00</b>
<b>Outflow :</b>		
<b>Current Liabilites &amp; Provisions</b>		<b>45,860.00</b>
Profession Tex Payable	80.00	
Remuneration Payable A/c	45,780.00	
<b>Indirect Expenses</b>		<b>592.00</b>
Telephone Exp. (Tel.No.2661315)	592.00	<b>592.00</b>
	<b>Total....</b>	<b>46,452.00</b>

Jamnagar  
 Date :

Sd/-

**For Doshi Maru & Associates**  
 Chartered Accountants

Sd/-  
**Accounts Officer,**  
 I. P. G. T. & R. A.  
 Gujarat Ayurved University,  
 Jamnagar.

Sd/-  
**Director,**  
 I. P. G. T. & R. A.  
 Gujarat Ayurved University,  
 Jamnagar.

**Gujarat Ayurved University, Jamnagar**  
**INSTITUTE FOR POST GRADUATE TEACHING & RESEARCH IN AYURVEDA**  
**P.G.T. SELF FINANCE COURSE CELL**

Balance Sheet

1 April-2006 to 31 July-2006

Particulars	Amount Rs.	Total Amount Rs.
<b>Liabilities :</b>		
<b>Capital Account</b>		<b>3,75,000.00</b>
Reserves & Surplus	3,75,000.00	
<b>Loans (Liability)</b>		
<b>Current Liabilities &amp; Provisions</b>		<b>20,778.00</b>
Profession Tax Payable	20.00	
Remuneration Payable A/c	20,758.00	
	<b>Total....</b>	<b>3,95,788.00</b>
<b>Assets :</b>		
<b>Current Assets</b>		<b>3,28,748.00</b>
Bank Accounts	3,28,748.00	
<b>Profit &amp; Loss A/c</b>		<b>67,030.00</b>
Opening Balance Current Period	67,030.00	
	<b>Total....</b>	<b>3,95,788.00</b>

Sd/-

Jamnagar  
Date :

**For Doshi Maru & Associates**  
Chartered Accountants

Sd/-  
**Accounts Officer,**  
I. P. G. T. & R. A.  
Gujarat Ayurved University,  
Jamnagar.

Sd/-  
**Director,**  
I. P. G. T. & R. A.  
Gujarat Ayurved University,  
Jamnagar.



## AUDITOR'S REPORT

We have audited the attached Balance Sheet of Gujarat Ayurved University, Institute for Post Graduate Teaching & Research, (Plan & Non-Plan Expenditure) Jamnagar, as at 31<sup>st</sup> March, 2008 and also the annexed income & Expenditure Account for the year ended on that date, we report as under:

These financial statements are the responsibility of the Organization. Our responsibility is to express an opinion on these financial statements based on our audit.

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

- 1 We certify that the Balance Sheet and Income & Expenditure account are in agreement with the books of account maintained at Jamnagar.
- 2 We report the following observations/comments/discrepancies/ inconsistencies if any.

**Subject to above :**

- (a) We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit.
- (b) In our opinion proper books of accounts have been kept so far as it appears from our examinations of the books.
- (c) In our opinion and to the best of our information and according to the explanations given to us the said accounts read with the notes thereon give
  - (1) in the case of Balance Sheet of the state of affairs as on 31st March 2008 and
  - (2) in the case of Income & Expenditure account of the surplus of income over expenditure for the year ended on that date.

Jamnagar  
Date :

Sd/-  
**For Doshi Maru & Associates**  
Chartered Accountants  
Shashank P. Doshi  
Partner  
M. No: 108456

**GUJARAT AYURVED UNIVERSITY, JAMNAGAR**  
**INSTITUTE FOR POST GRADUATE TEACHING &**  
**RESEARCH IN AYURVEDA**  
**(Plan Accounts)**  
**UTILISATION CERTIFICATE**

This is to certify that on the basis of our necessary check and verification and on the basis of books of accounts and other necessary records produced before us for verification, for the financial year 2007-2008, by Gujarat Ayurved University, Institute of Post Graduate Teaching & Research, (Plan Accounts), Jamnagar. We hereby certify that the closing balance as on 31<sup>st</sup> March, 2008 for the above is as under:

<b>Un-utilised Opening Balance as on 01.04.2007</b>		<b>Rs. 297,889.00</b>
<b>Add :</b> Grant Received during the year 2007-08		Rs. 69,703,000.00
Bank Interest received during the year 2007-08		Rs. 774,403.00
Ayu Journal Income		Rs. 11,945.00
Miscellaneous Reciepts		Rs. 20,765.42
Salary recovery		Rs. 253.00
	<b>TOTAL</b>	<b>Rs. 70,808,255.42</b>
<b>Less : <u>Expenditure Incurred:</u></b>		
Direct expenses	Rs. 4,089,404.00	
Indirect expenses	Rs. 266,745.00	
Capital expenditure	Rs. 62,985,396.00	
Deposits (Net)	Rs. 14,503.00	
Advance to Staff	Rs. 16,000.00	
	<b>TOTAL</b>	<b>Rs. 67,372,048.00</b>
<b>Closing Balance as on 31.03.2008</b>		<b>Rs. 3,436,207.42</b>

For detail of above referred incomes and expenditures refer to the audit report of even dated together with Balance Sheet as at 31<sup>st</sup> March, 2008 and Income & Expenditure account for the year ended on that date.

Jamnagar  
Date :

Sd/-  
**For Doshi Maru & Associates**  
Chartered Accountants  
Shashank P. Doshi  
Partner  
M. No: 108456

**GUJARAT AYURVED UNIVERSITY, JAMNAGAR****INSTITUTE FOR POST GRADUATE TEACHING &  
RESEARCH IN AYURVEDA****(Non-Plan Accounts)****UTILISATION CERTIFICATE**

This is to certify that on the basis of our necessary check and verification and on the basis of books of accounts and other necessary records produced before us for verification, for the financial year 2007-2008, by Gujarat Ayurved University, Institute of Post Graduate Teaching & Research, (Non-Plan Accounts), Jamnagar. We hereby certify that the closing balance as on 31<sup>st</sup> March, 2008 for the above is as under:

Un-utilized Opening Balance as on 01.04.2007		Rs.	171,164.00
Add : Grant Received during the year 2007-08		Rs.	67,978,836.00
Direct Income		Rs.	2,080,675.00
Indirect Income		Rs.	289,638.56
University fee collection			18,500.00
	<b>TOTAL</b>	<b>Rs.</b>	<b>70,538,813.56</b>
Less : Expenditure Incurred:			
1. Direct Expenses	Rs.	63,831,154.00	
2. Indirect Expenses	Rs.	5,236,046.00	
3. Capital expenditure	Rs.	7,731.00	
4. Library deposits repaid	Rs.	3,200.00	
5. Hotel Deposit repaid	Rs.	6,600.00	
6. Advance to Staff		28,800.00	
	<b>TOTAL</b>	<b>Rs.</b>	<b>69,113,531.00</b>
<b>Closing Balance as on 31.03.2008</b>		<b>Rs.</b>	<b>1,423,130.56</b>

For detail of above referred incomes and expenditures refer to the audit report of even dated together with Balance Sheet as at 31<sup>st</sup> March, 2008 and Income & Expenditure account for the year ended on that date.

Jamnagar  
Date :

Sd/-

**For Doshi Maru & Associates**  
Chartered Accountants  
Shashank P. Doshi  
Partner  
M. No: 108456

**GUJARAT AYURVED UNIVERSITY, JAMNAGAR**  
**INSTITUTE FOR POST GRADUATE TEACHING & RESEARCH IN**  
**AYURVEDA**

**(Plan & Non-Plan Accounts)**

**SCHEDULE : 19**

**A. SIGNIFICANT ACCOUNTING POLICIES :-**

**1. METHOD OF ACCOUNTING :-**

The Accounts are prepared under the historical cost convention using generally cash system of accounting except administrative expenses which are accounted on accrual basis.

**2. FIXED ASSETS & DEPRECIATION :-**

- Fixed assets have been stated at cost.

- No Depreciation has been provided on the Block of Assets as required by the AS 6 of ICAI.

**B. NOTES ON ACCOUNTS :-**

1. The amount of imprest which they have given to their employees to meet the expenses of university had been debited as miscellaneous expenses instead of debiting them in their respective head which already exists.
2. Bank Reconciliation was done for the financial year 2007-2008, the unreconciled difference is of Rs. 2,15,878/-. The difference is due to uncleared cheques in the Bank and the validity period of those cheques has already been expired. The organization has not reversed those entries in their account yet and hence they have been stood as the difference with Bank Balance in the Books of Account and Bank Passbook. (I. P.G.T. & R. - NON PLAN).
3. Closing Bank balance difference as on 31.03.2007 between the bank account as per Books of Account and bank passbook amounting to Rs. 2,852/- remains un reconciled at the end of the year under audit. (I.P.G.T.& R. - PLAN)
4. As per the **Accounting Standard 15 - "Employees Benefits"** issued by The Institute of Chartered Accountants of India, Provision for Gratuity and Leave Encashment has to be made on actuarial valuation on the present value of future liability; the same is not complied with.
5. During the year the IPGT & RA received the grant & utilization there of is reported as under. The income part to the extent of unutilized grant portion for the year and the assets corresponding to the bank accounts, have been over stated.

6.	Plan Account	Non Plan Account
<b>Grant Income</b>	<b>6,97,03,000</b>	<b>6,79,78,836</b>
<b>Unutilised Portion</b>	<b>34,36,207.42</b>	<b>14,23,130.56</b>

As per our audit report of even date attached herewith

Jamnagar  
Date :

Sd/-  
**For Doshi Maru & Associates**  
Chartered Accountants  
Shashank P. Doshi  
Partner  
M. No : 108456

# GUJARAT AYURVED UNIVERSITY, JAMNAGAR

## INSTITUTE FOR POST GRADUATE TEACHING & RESEARCH IN AYURVEDA

### Name of the teaching staff

Sr. No.	Employee Name	Qualification	Designation	Subject of Specialisation
1	Prof. P.P.Sharma	M.S.A.M., Ph.D	Professor	Dravyaguna
2	Prof. R.R.Dwivedi	MD(Ayu.), Ph.D	Professor	Basic Principle
3	Prof. V.D.Shukla	MD(Ayu.), Ph.D	Professor	Panchakarma
4	Prof. (Kum.) S.N.Vyas	MD(Ayu.), Ph.D	Professor	Kayachiktsa
5	Prof. H.M.Chandola	MD(Ayu.), Ph.D	Professor	Kayachiktsa
6	Prof. Chaturbhuj Bhuyan	MD(Ayu.), Ph.D	Professor	Shalya
7	Dr.(Mrs.) M.A.Pandya	M.S.A.M., Ph.D.	Reader	Prasutitantra & Stree Roga
8	Dr.(Mrs) T.N.Pandya	M.S.A.M., Ph.D.	Reader	Dravyaguna
9	Dr. P. K. Prajapati	MD(Ayu.), Ph.D	Reader	Rasashastra
10	Dr.(Kum.) K.S.Patel	MD(Ayu.), Ph.D	Reader	Kaumarabhritya
11	Dr. (Mrs.) Manjusha R.	MD(Ayu.), Ph.D	Reader	Shalaky
12	Dr. (Mrs.) Laxmipriya Dei	MD(Ayu.)	Reader	Prasutitantra & Stree Roga
13	Dr. Sanjay Kumar Gupta	MD(Ayu.)	Reader	Shalya
14	Dr.. Rabinarayan Acharya	BSc., MD(Ayu.), Ph.D	Reader	Dravyaguna
15	Dr. Mahesh Kumar S Vyas	MD(Ayu.), Ph.D	Reader	Basic Principle
16	Dr. A.B.Thaker	MD(Ayu.), Ph.D	Sr. Lect.	Panchakarma
17	Dr. (Mrs.) Alankruta R. Dave	MD(Ayu.), Ph.D	Sr. Lect.	Kayachikitsa
18	Dr. Biswajyoti Patgiri	MD(Ayu.), Ph.D	Lecturer	Rasashastra
19	Dr.. Hitesh Kumar A. Vyas	MD(Ayu.),	Lecturer	Basic Principle
20	Dr. Bhupesh R. Patel	MD(Ayu.),	Lecturer	Dravyaguna
21	Dr. (Mrs.) Shilpa Donga	MD(Ayu.), Ph.D	Lecturer	Prasutitantra & Stree Roga
22	Dr. DharmendraSinh. B. Vaghela	MD(Ayu.), Ph.D	Lecturer	Shalaky
23	Dr. Galib	MD(Ayu.)	Lecturer	Rasashastra
24	Dr. Virendra Kumar Kori	MD(Ayu.)	Lecturer	kaumarabhritya
25	Dr. (Mrs.) Darshna Pandya	MD(Ayu.)	Lecturer	Kayachikitsa
26	Dr. Dudhamal Tukaram S.	MD(Ayu.)	Lecturer	Shalya
27	Dr. Santosh Kumar B Bhatted	MD(Ayu.)	Lecturer	Panchakarma
28	Dr. (Mrs.) Meera Bhojani	MD(Ayu.)	Lecturer	Basic principle
29	Dr. Devkunj Chauhan	MD(Ayu.), Ph.D	Lecturer	Shalaky