Project Report
for the Establishment of a
Medical University in Kerala

Thiruvananthapuram
7th April, 2007

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Report of the 6-member Committee appointed by the Government of Kerala, constituted vide G.O. (Rt) No. 3507/ 2006/H&FWD dated 02.12.2006 to prepare a Project Report for the setting up of a Medical University and to recommend various measures to improve the performance of the five Government Medical Colleges and allied institutions in the state.

Committee Members

Dr. B.Ekbal (Chairman)
Former Vice Chancellor, University of Kerala

Dr. K. Mohandas
Director, Sree Chitra Tirunal Institute for Medical Sciences and Technology

Dr. K. A. Kumar
Retired Director of Medical Education,

Dr. Meenu Hariharan
Director of Medical Education,

Dr. N. Sudhayakumar
Principal, Medical College, Kottayam

Dr. K. P. Aravindan
Professor of Pathology, Medical College, Kozhikode.

Introduction

The Kerala Government had constituted a six-member committee as per G.O. (Rt) No. 3507/2006/H&FWD dated TVM 02.12.2006 to prepare a Project Report for the setting up of a Medical University and to recommend various measures to improve the performance of the five Government Medical Colleges and allied institutions in the state.

The members of the committee are Dr. B.Ekbal, former Vice Chancellor, University of Kerala (Chairman), Dr. K. Mohandas, Director SCTIMST, Dr. K. A. Kumar, Retired Director of Medical Education, Dr. Meenu Hariharan, Director of Medical Education, Dr. N. Sudhayakumar, Principal, Medical College, Kottayam and Dr. K. P. Aravindan, Professor of Pathology, Medical College, Kozhikode.

The committee held discussion with medical experts, academicians, professional and service organisations, people's representatives, political leaders and the public to gather their views regarding both the terms of reference of the committee by organising public hearings in the five Government Medical Colleges and also through email and by postal communication.

We submit here the Project Report for establishing a Medical University in the state for the consideration of the Government. We hank P. K. Sreemathi Teacher, the Honorable Minister for Health and Social Welfare, Sri. M.A. Baby, Honorable Minister for Education and Culture and Dr. Viswas Mehta, Secretary to Government, Health and Family Welfare Department for their advice and cooperation for the functioning of the committee. We also thank all those who came forward enthusiastically to give valuable suggestions for the preparation of the Project Report.

We hope that the Government will take immediate steps so as to realise the long cherished aspirations of the people and the academia for the establishment of a Medial University in our state.

Dr.B.Ekbal
Chairman
Thiruvananthapuram
7th April, 2007

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1. WHY A MEDICAL UNIVERSITY

The proposal for starting a separate University for Medicine and allied subjects in Kerala is both a necessity in the current context, as well as an unprecedented opportunity.

1.1 New opportunities in the new millennium: It has been pointed out that Universities, as the etymology of the word itself implies, should combine all or many of, the fields of knowledge. They are centres of higher learning concerned with the creation of new knowledge. They will not serve this lofty purpose if they are to be mired in the routine business of conducting the examinations and publishing results. There are certainly problems with the conduct of examinations and the revision of syllabi etc in the existing Universities. But given the will, these can be solved within the larger perspective of the reform of higher education. The proposal of a new University should not be an escape route saying in effect *"Since we cannot save the mainstream, let us at least save the 'more important' professional education institutions!"*

Unfortunately, most Medical or Health Science Universities established in other states have been instituted more as management imperatives when faced with the proliferation of medical institutions than with a long- term development strategy or research agenda.

1.2 The Medical University to be established in Kerala has to be much more than this. New windows of opportunity beckon us in the new millennium if we are brave enough to utilize them. All over the world, higher education has come to be widely accepted as the most important requisite in the success of the new economy. In the emerging information and knowledge-based technologies, which

now include Bio-medicine, the human brain has become the most important raw material. Having been left behind in computer software development by other South Indian states, this is one area in which we can and should plan ahead and have a head start.

1.3 That Universities acting as knowledge center hubs can kick-start new generation industrial growth is not in doubt. The entire history of Biotechnology is ample testimony to this phenomenon. Research and innovation in biotechnology is increasingly shifting away from the corporate laboratories and back to where it began; the University campus. And as the global economy grows and increasingly becomes dependent on the generation and dissemination of knowledge, Universities are seen as the natural breeding grounds for basic and applied research that can have huge economic spin-offs.

For example, Silicon Valley provided a fertile ground for the formation of Biotechnology based new industries in the United States. The University of California, San Francisco, Stanford, and the University of California, Berkeley had strong Molecular Biology programs – which acted as stimulators for scientists as well as the source of key innovations. Stanley Cohen and Herbert Boyer (respectively at Stanford and University of California San Francisco) developed recombinant DNA techniques in the early 1970s. The Valley's venture capitalists heavily funded Biotechnology businesses and in some cases played a critical role in the formation of Biotech corporations. For example Boyer established Genentech in 1976. Many biologists at local Universities followed suit. Paul Berg and Arthur Kornberg, two Nobel laureates on the Stanford faculty, established DNAX a few years later. By 1984, 22 Biotech firms were operating in the San Francisco Bay Area. This made Silicon Valley one of the largest centers for Biotechnology in the United States and it has remained so to this day.

In the US, spin-offs, start-ups and collaborations between Biotechnology firms, Venture Capitalists and academia were fortified in the 1980s with the passage of the Bayh-Dole Act, which granted Universities the right to own, license and market the fruits of their faculty research. Other countries followed the same model worldwide.

Kerala, heavily dependent on its human resource and fortuitously blessed with great biodiversity is in an ideal position to be the launch pad of the Medical Biotechnology Revolution in India.

1.4 Fertile ground for Epidemiological Research: In the 21st century, Epidemiology is as important in understanding human health and disease as Molecular Medicine. Together they form the twin pillars of modern Bio-medical research. Kerala is a society undergoing a demographic and health epidemiological transition. On the one hand, infectious diseases have not vanished and new communicable diseases are emerging and on the other hand the prevalence of the 'costlier to treat' lifestyle diseases are going up. Kerala leads the country in the prevalence of heart disease, diabetes and hypertension as well as in accidents and suicides. At least in the field of health, Kerala is the forerunner of what India and much of the developing world will be tomorrow. It is thus the ideal place to investigate and start building models for future India and the developing world.

2.1 DETERIORATING QUALITY OF MEDICAL EDUCATION IN KERALA:

There is yet another major reason and logic for establishing a Medical University in Kerala. In 2001, the Government of Kerala took the policy decision to grant No Objection Certificate (NOC) to any agency that approached it for permission to start an unaided professional college in the self-financing sector, arguing that it was up to the central regulatory authorities to ensure quality. This led to an overnight explosion in the number of self-financing institutions. The number of institutions in the health education sector increased more than four-fold from 25 in year 2000 to 116 in 2007 (see table).

Course	2000			2007		
	Govt	Self Financing	Total	Govt	Self Financing	Total
Medicine	5	2	7	5	9	14
Dental	2	0	2	3	8	11
Nursing	3	0	3	5	48	53
Pharmacy	2	0	2	2	18	20
Laboratory Technology	1	0	1	1	1	3
Ayurveda	5	0	5	5	5	10
Homeopathy	5	0	5	5	0	5
Siddha	0	0	0	0	1	1
Total	23	2	25	26	90	116

2.2 There is widespread apprehension in academic circles that the uncontrolled proliferation of self-financing professional colleges will lead to lowering of standards in medical education and allied fields. This fear is based on several factors, which have already begun to manifest in all areas of higher education in Kerala, and most other

states that have chosen the ‘self-financing’ route.

Self-financing colleges by their very nature will be forced to levy heavy tuition fees, which will be beyond the means of most of the deserving students. This will result in merit becoming secondary to the financial capabilities of the students and their parents, thus adversely affecting not only merit but also access and equity to medical education for deserving students.

2.3 Three tendencies stand out.

Deficiency of Teachers

There are not enough trained teachers to cater to the huge number of seats created. Most private colleges rely heavily on retired teachers as the mainstay. Despite this, there is a big deficit in the number of teachers. This will widen further as more colleges are sanctioned. In case of, Nursing and Pharmacy the situation is far worse.

Quality of Evaluation

When merit is compromised and quality of instruction inadequate, the failure rates are bound to be high in any properly conducted examination. This creates tremendous pressure on managements that levy very high fees from students. Attempts
to undermine the quality of evaluation are very likely to follow. Any compromise in the system of evaluation would lead to further decline in standards.

Non-functioning Controls

Uncontrolled and rapid increase in quantity has been without concurrent checks to assure quality. The apex councils like the Medical Council of India, Dental Council of India, and Indian

Nursing Council and the Pharmacy Council of India have inherent limitations in this regard. Starting of new institutions and admission procedures are completely out of their hands. Head count of teachers done at the time of inspection is frequently a charade. Even state Governments are known to collude in misleading the apex councils.

2.4 Current system of Affiliation: The institutions catering to Medical and allied subjects currently are affiliated to four different Universities, which also cater to a huge number of general colleges, besides their campus departments. There have been no significant efforts by the Universities towards maintenance of standards in teaching or evaluation of the courses conducted by the affiliated colleges. The timing and conduct of examinations vary between different Universities. Due to lack of a unifying vision, the University administration frequently cave in to the demands made by private managements resulting in lowering of standards.

The campus departments of the different Universities have no interaction with the Medical or allied colleges. Likewise, the faculty training institutes of these Universities do not cater to these colleges. Nor do they come under the purview of the University Grants Commission. In effect, apart from conduct of examinations, the present Universities have very little to do with the medical and allied colleges at present.

3.1 ENSURING QUALITY OF 'BRAND KERALA'

Medical graduates from Kerala have always been considered to be among the best in India. Over the years, many have adorned illustrious careers in India and abroad. More objectively, students from Kerala have had a higher success rate in the All India Post graduate Entrance Examinations (AIPGEE) than most other states. More students from Kerala have regularly qualified in the first 1000 of AIPGEE than Karnataka, which accounted for many times the number of students passing out each year. This was most certainly because of the impeccable student selection procedures and general good performance of students from Government Medical Colleges. This enviable record is now in jeopardy with the advent of the self-financing colleges for the reasons cited above. Academic standards in the Government colleges will not also remain unaffected. There is pressure on the faculty to leave or take early retirement due to the lure of higher salaries in the private colleges. Any dilution of the examination system will lead to overall deterioration of quality, which will not spare the Government Colleges.

Employers and organizations have increasingly begun to look up to actual performance and quality of institutions where a potential employee has been trained, rather than mere possession of degrees. It is now comparatively easy to look up an institution and its output in databases like the Google Scholar and Pubmed for citations and research output. Much can and needs to be done to assure all concerned that a Medical or Nursing graduate from Kerala means a certain level of quality. Therein lies our future.

3.2 A separate Medical University for the entire state, working with the single minded purpose of improving and maintaining standards can achieve this in a much better way than the current system. The new Medical University should have the mandate to:

- Generate knowledge in medical sciences and allied fields by fostering and promoting medical research, with particular emphasis on the special health problems relevant to the State
- Ensure merit, equity and aptitude in student selection
- Maintain a database of qualified teachers and ensure their actual presence in the institutions.
- Train all medical teachers in teaching and evaluation methodology as well as update their knowledge and skills to make them capable of handling the modern curriculum.
- Develop and conduct evaluation that is capable of measuring theoretical knowledge as well as problem solving and clinical skills.
- Ensure that the evaluation system is unbiased, foolproof, transparent and totally honest.

4.1 MEDICAL UNIVERSITY AND DIFFERENT SYSTEMS OF MEDICINE

The Medical Universities (University of Health Sciences) established in other states affiliate the medical institutions of all systems of medicine. Most of such Universities only serve the objective of affiliation of the colleges and conduct examinations. The Tamil Nadu MGR University apart from affiliating the colleges also have established Departments like Department of Experimental Medicine, Department of Clinical Epidemiology, Department of Transfusion Medicine, Department of Medical Genetics etc. These departments basically cater to the research needs of the modern medical faculty.

The experience of the Medical Universities in other states reveal the fact that because of the mixing up of different systems focused approach to the research and educational needs of the different systems could not be realised.

4.2 Taking into consideration the experiences of the Universities of Health Sciences in other states, the committee feels that all the modern Medical Institutions under the Government, Cooperative and Private Sectors i.e. Medical, Dental, Nursing, Pharmacy Colleges and those Paramedical Institutions conducting degree level courses need be affiliated to the proposed Medical University.

4.3 The Government should consider the establishment of a University for other systems of medicine either jointly as AYUSH University (Ayurveda, Unani, Sidha and Homeopathy) or separately for each discipline (like Ayurveda University) after consultation with the experts and organisations of these disciplines.

4.4 There is tremendous possibility of mobilizing funds from central government departments and institutions and also international UN

agencies if a University representing traditional systems is established separately in Kerala. There is considerable interest in the international and national circles to study and do research specifically in medical systems like Ayurveda and we can capitalize on this given the strength of Kerala in traditional medical systems. If all the systems are mixed up, these possibilities will be lost as is happening in other states.

It should also be noted that in most other states the respective state Governments have withdrawn grants to the Universities of Health Sciences and these Universities are forced to depend entirely on fees collected from the students and the affiliating fees from the self-financing colleges for meeting administrative expenses. This has resulted in severe financial strains on the Universities. Since the Kerala Government is also facing grave financial problems it would be prudent to establish institutions that can get funds from other sources. Universities like Ayurveda can definitely bring a lot of funds from Central Governmental and UN agencies. Therefore there is a strong financial reason also for establishing Universities like Ayurveda separately.

4.5 Though the proposed University needs to affiliate only modern medical institutions there will be a centre under the University (The Centre for Integrated Medicine) for interaction and also for exploring the possibilities of integration, interdisciplinary studies and joint research programmes between different systems of medicine.

5.1 STRUCTURE AND OBJECTIVES OF THE UNIVERSITY

The proposed University has to be of the Affiliating type along with dynamic and strong Campus Research Centers. The University should affiliate all the Medical, Dental, Nursing, Pharmacy and Paramedical Institutes under Government, Cooperative and Private sector now affiliated to the different Universities in Kerala. The professional colleges established by the Universities directly, shall continue to have their present status.

5.2 The University may be named as: **Kerala University of Medical and Allied Sciences**

5.3 The broad objectives of the University shall be:

- Generation of knowledge in medical sciences and allied fields by fostering and promoting medical research
- Establish centres for research and for conducting integrated Postgraduate courses and PhD programmes.
- Affiliate and coordinate the functioning of all the medical and allied colleges
- Standardise update regularly the curricula and syllabi of courses conducted by the medical institutions
- Design new courses and curricula based on the advances in medical science
- Regulate the academic standards of the affiliated colleges
- Regulate and organise the examination and evaluation process in the affiliated colleges
- Decide upon the process and criteria for selection of the students admitted to the affiliated colleges
- Promote preventive and promotive aspects of health
- Organise faculty development programmes
- Organise extension works to tackle health problems of the society
- Give leadership to the medical human resource development planning for the state

- Give leadership to health planning and health policy formulation for the state
- Give thrust to epidemiological studies, monitoring and surveillance systems of the diseases prevalent in Kerala
- Act as the nodal agency for the linkages with other national and international institutions
- Develop a platform for the dialogue between different systems of medicine
- Explore the possibilities of joint research programmes and integration between different systems of medicine.

6.1 GOVERNMENT COLLEGES AS CONSTITUENT COLLEGES OF THE UNIVERSITY

The colleges to be affiliated to the Medical University fall mainly into three groups; Government Colleges, Private self-financing professional colleges and the self-financing colleges established by the Cooperative Sector. In the case of Government Colleges most of the colleges were established decades back. The Government Medical College, Thiruvananthapuram was established way back in 1952 and the Thiruvananthapuram Government Dental College in 1959. In many institutions even the first batch of degree graduates are yet to complete their courses. The government colleges by virtue of all these reasons act as torchbearers and role models for the private institutions. In the case of private self-financing professional colleges in the medical sector, many have been established only very recently. The first private self-financing medical college was established in 2002 and that in the cooperative sector was established in 1995 only.

6.2 The appointments to the various academic and non-academic posts in the Government Colleges are done through PSC appointment process and there is well-established Government Institution like the Directorate of Medical Education (DME) to monitor the functioning of different departments and the promotion to various higher posts. Also the various wings of the Central and State governments audit the financial accounts of the institutions. As a result regular academic, social, administrative and financial auditing is taking place with regards to the functioning of the Government Colleges. Moreover, having been established years back these institutions has academic and administrative traditions that have stood the test of time.

6.3 In the case of the private sector institutions though the National Councils like MCI and Nursing Council monitor the faculty positions and other infrastructure facilities in these colleges there is no system like the DME, Auditing Departments etc to monitor the over all

functioning of these institutions.

6.4 Considering all these factors the Government Colleges should play a leadership role in the Medical University so as to guide the private colleges to acquire the necessary capabilities to function with social commitment and administrative efficiency. The Government Colleges therefore deserve to be given special status in the Medical University. The Government Colleges can be treated as Constituent Colleges of the University with certain privileges and rights especially with regard to larger representations in the University Bodies like the Governing Council, Academic Council and Senate. The statute of the University can spell out the details of these rights and privileges.

6.5 University Professors

The Professors in the Government Colleges affiliated to the Medical University can be designated as University Professors after a due selection process based upon their academic contribution, teaching skills, experience etc. The University Professors should be given priority in nominations to the posts of Deans of Faculties and Chairpersons of Board of Studies.

7.1 CENTRES UNDER THE UNIVERSITY

The following centres for conducting Research, postgraduate courses and PhD programmes may be established under the university

- Centre for Genomics and Systems Biology
- Centre for Epidemiology and Public Health
- Centre for Continuing Education
- Centre for Behavioural Sciences and Medical Humanities
- Centre for Integrated Medicine
- University Library and Knowledge Centre
- University Centre for Distance Education
- University Computing Resource Centre

7.2 Center for Genomics and Systems Biology

Genomics is the study of an organism's entire genome. The goal of Genomics is to promote the understanding of the structure, function, and evolution of genomes in all kingdoms of life and the application of genome sciences and technologies to the challenging problems in biology and medicine. Genomics includes Comparative Genomics, Computational Biology, Functional Genomics and identification of genes involved in disease and complex traits.

Biologists, geneticists, and doctors have had limited success in curing complex diseases such as heart diseases, cancer, AIDS and diabetes because traditional biologists generally study organisms part by part and currently gene by gene. A traditional approach to studying biology and human health has left us with a limited understanding of how the human body operates, and how we can best predict, prevent, or remedy potential health problems. Conventional biology can yield relatively limited insights about the human body. It is in this context that the new discipline of Systems Biology has emerged thanks to the growing understanding of how genes and their resulting proteins give rise to biological form and function. Organisms function in an integrated manner; our heart, brain and metabolism work together as an interactive network.

Systems Biology aspires to understand the process of integration of the pieces to form biological systems. It seeks to understand the complex interactions, as these are keys to understanding the interplay of an organism's genome and environmental influences from outside the organism. This understanding would transform our view of life, human health and disease. For these reasons, Systems Biology is considered the 21st century science. Systems biology is still in its infancy. The Center for Genomics and Systems Biology (CGSB) would pioneer a rich new opportunity.

In today's medical practice we wait until someone is sick before administering treatment. Medicine of the future will be predictive and preventive, assessing an individual's probability of developing various diseases as indicated by his genetic makeup as well as blood-protein markers and then designing appropriate treatments, even before the onset of a disease. The goal of Systems Biology is to fundamentally transform the practice of medicine. The CGSB is expected to catalyze this transformation through development of tools and techniques, and pursuing research that will usher in a new era of predictive, preventive, and personalized health care program.

Systems Biology requires the integration of biology, technology, computation and medicine and, accordingly, a strong cross-disciplinary team of researchers. The CGSB would include scientists trained in such diverse fields as Biology, Physics, Chemistry, Engineering, Computing, Mathematics, Medicine, Immunology, Biochemistry, and Genetics, all acquiring a deep understanding of Biology, and grouped into multiple teams undertaking focused problems of Systems Biology. This collaborative and interdisciplinary environment would be the unique and crucial aspect of CGSB.

The CGSB is to be positioned in a way to leverage the strengths and advantages of both academia and industry and hence establish partnerships with industry, Universities and other institutions following

strict ethical guidelines. It should enable broad integration of cross-disciplinary research and training; team approaches; and be able to both discover new technologies and take on the challenging, long-term fundamental problems in Biology. Research would be closely linked with development of new technologies which can help spin off companies to commercialize the technologies invented at CGSB. The aims of the Center shall be to:

- Develop systems biology program (both research and training) aimed at the understanding of human diseases
- Develop innovative technologies to probe increasing numbers of biomolecules from cells to tissues and develop novel bioinformatics tools and mathematical modeling methods for systems biology
- Design novel pharmacological therapeutic strategies based on a System biology understanding
- Stimulate the creation of a Molecular Bio-medical industry in the state.
- Undertake research and development projects for start-ups and established industry players.
- Provide shared facilities, which can also be used by researchers from affiliated colleges and other institutions and disciplines. This should eventually include services like Cell and Molecular Imaging, Bioinformatics Facility, Electron Microscopy, Fluorescence Activated Cell Sorting, Magnetic Resonance, Mass Spectrometry, Micro Array Facility, Tissue Bank, Transgenic Animal Facility etc.

The medical faculty of the affiliated colleges will be offered the chance to initiate and participate in the research programs of the center.

Departments with proven track record in the affiliated colleges will be accorded Associate Center status.

The success of the new Center will greatly depend on the quality of faculty it is able to attract. Top quality researchers from India and abroad should be enlisted. Attractive compensation packages should be negotiated and instituted for deserving incumbents. The center should be able to meet its recurrent expenditure and generate a surplus by undertaking research projects, consultancy works, offering laboratory facilities at a pay per system, and by industry tie-ups.

7.3 Center for Epidemiology and Public health

In the next two decades there will be dramatic changes and transitions in the world's health needs, as a result of epidemiological transition. At present, lifestyle and behaviour are linked to 20-25% of the global burden of disease. This proportion is rapidly increasing in poorer countries. In the developing regions, where four-fifths of the planet's people live, non- communicable diseases such as depression and heart disease, as well as road traffic deaths, are fast replacing the traditional enemies such as infectious diseases and malnutrition, as the leading causes of disability and premature death.

Kerala can be said to be in the vanguard of developing societies undergoing 'Health transition'. The population growth is near replacement levels. Mortality rates are similar to that of the developed nations. The state has the highest prevalence of cardiovascular disease, diabetes, hypertension, accidents and suicides in the country. Unlike the developed countries, problems posed by the environment, like food, water and mosquito borne infections lead to endemic and epidemic diseases. The state is thus an ideal research area for epidemiological studies and for trying out public health solutions that will prove effective in much of the world tomorrow.

An Epidemiology Research Center located in Kerala would thus be of great interest to researchers from all over the world. It would further help develop optimum policy options for the state of Kerala.

The Center for Epidemiology and Public Health (CEPH) would:

- Conduct research and training in Epidemiology and Public Health with special emphasis on, Communicable Diseases, Lifestyle diseases, Environmental Health, Social Determinants
  of Health and Health Systems Research, Population, Health and Development, Molecular Epidemiology (in conjunction with CGSB)
- Design and conduct clinical trials with the clinical faculty of the affiliating colleges
- Institute and maintain life-events data of different population groups.
- Design and carry out health promotion activities as is appropriate for the state.
- Act as consultants for National, State and local Governments as well as others like the Pharmaceutical and insurance industries.

7.4 Center for Behavioural Sciences and Medical Humanities

No physician's education would be complete without an understanding of the role-played by behavioral and social factors in human health and disease. Psychology, Medical Sociology, Medical Anthropology are all part of Behavior Science and their application in Medicine is to be evolved and imparted to students through clinical training imparted by medical teachers. In an era when technology imposes a bewildering pace of change in Medical practice, there is great need for moral and ethical introspection and judgment.

The typical school and college curriculum does not provide young doctors with much exposure to the humanities. There is widespread agreement that this is a serious deficiency in the modern medical

curriculum. Medical Humanities broadly deals with the intersection of human experience, medical practice, and scientific technology. The field includes all aspects of human culture - science, history, ethics, philosophy, literature, religion and art. It is a discursive dialogue centered on what medicine means in relation to the individual and society.

The Center for Behavioral Sciences and Medical Humanities would have a multidisciplinary faculty and would be a meeting point for scholars from medical science /humanities and all other areas of human endeavor.

The center would be the first of its kind in India and would have the following aims

- Reinforce the role of Medical Humanities in the teaching and practice of medicine through formal instruction, research and scholarship.
- Offer courses (PG, PhD) in Behavioral Sciences and Medical Humanities to students from the medical and non-medical streams. The subjects would include
- Behavioral Sciences
- Psychology
- Psychobiology
- Management science
- Social neuroscience
- Communication sciences
- Anthropology
- Sociology
- History of Medicine
- Clinical and Research Ethics
- Law and Medicine
- Death and Dying

- Disability
- Ethnicity and Medicine
- Films and Medicine
- Gender and Medicine
- Literature and Medicine
- Medicine and the Arts
- Physician-Patient Relationship
- Medicine and Spirituality
- Social Issues in Medicine

7.5 Center for Continuing Education

The communication revolution as well as the explosion of knowledge in areas likes genomics and molecular biology has resulted in dramatic changes in the way medicine is taught and learned. Our medical colleges have to keep pace with these changes. The Center for Continuing Education (CCE) would be a permanent setup for faculty improvement and curriculum development meant for all the affiliating colleges. The center would have a small permanent faculty as well as guest faculty as per course requirements.

The objectives of the CCE would be:

- Course and Curriculum development appropriate for the state of Kerala and the modern scientific development in medical disciplines
- Training in teaching and evaluation methods
- Faculty development programmes
- Updating information and skills in all subjects, with special emphasis on molecular biology, genetics, and immunology, bioinformatics, epidemiology, research methodology etc. with help from the other University Centers like CGSB and CEPH.
- Developing, purchasing and storing online and offline teaching

material for teachers, undergraduate and postgraduate students.

- Development of Evidence Based Treatment Protocols
- Publication of books, periodicals and monograms for the academic community and the public.
- Development of Digital image libraries from local clinical material for use of teachers and students.

7.6 Center for Integrated Medicine

Kerala has a rich tradition of Ayurveda going back to many centuries. Homeopathy is another popular medical system in the state. Up to 15 % of the sick people in the state take recourse to these systems. Besides this, Siddha and Tribal Medicine are also practiced to a significant degree. The state is thus in a position to probe and evaluate integrated systems of patient management which are simultaneously Evidence Based and Holistic.

The aim of the Center for Integrated Medicine (CIM) would be to enrich current medical practice through:

- Evaluation of the scientific foundation of complementary medicine
- Integration of evidence-based complementary medical therapies and approaches into patient care
- Emphasise on a humanistic approach to healing that values mind, body and spirit and partners with patients in healing
- Institute joint research programmes by the modern and other systems to develop new chemical molecules for drug development

The faculty of the centre will be drawn from different systems of medicine as well visiting faculty from other medical institutions like the Ayurveda and Homeopathy Colleges. The faculty members of the medical colleges other than those in the modern medical colleges will also be given the opportunity to utilize the research facilities in CGSB.

7.7 University Library and Knowledge Centre

Apart from maintaining a modern reference library for all medical disciplines and specialties the centre would have the following objectives

- Maintaining a state of the art library networked to all affiliating colleges to form a 'Learning Resource Network'
- Establish an Internet based Kerala Open Access Publication (Kerala Medical Library of Science) to disseminate in a free global access mode the knowledge generated by the University, Affiliated Colleges and institutions.

7.8 University Centre for Distance Education

The centre shall conduct Distance Education Courses fully utilizing the possibilities offered by Information and Communication Technology, Telemedicine, Teleconferencing Etc. Courses for updating skill and knowledge of medical personnel of all categories and the public will be conducted by the centre. Apart from conventional mode of Distance Education Courses Online Web-based Interactive Courses would also be organised.

7.9 University Computing Resource Centre

The centre shall organise and maintain the modernisation projects and programmes of the University both in the academic, administrative and financial sections. The centre shall also develop various software necessary for the smooth and efficient conduct of examinations, for keeping student and faculty database and for the efficient functioning of the various wings of the University. The Centre shall also coordinate the modernisation projects in the affiliating colleges and shall develop appropriate soft ware for the colleges on request.

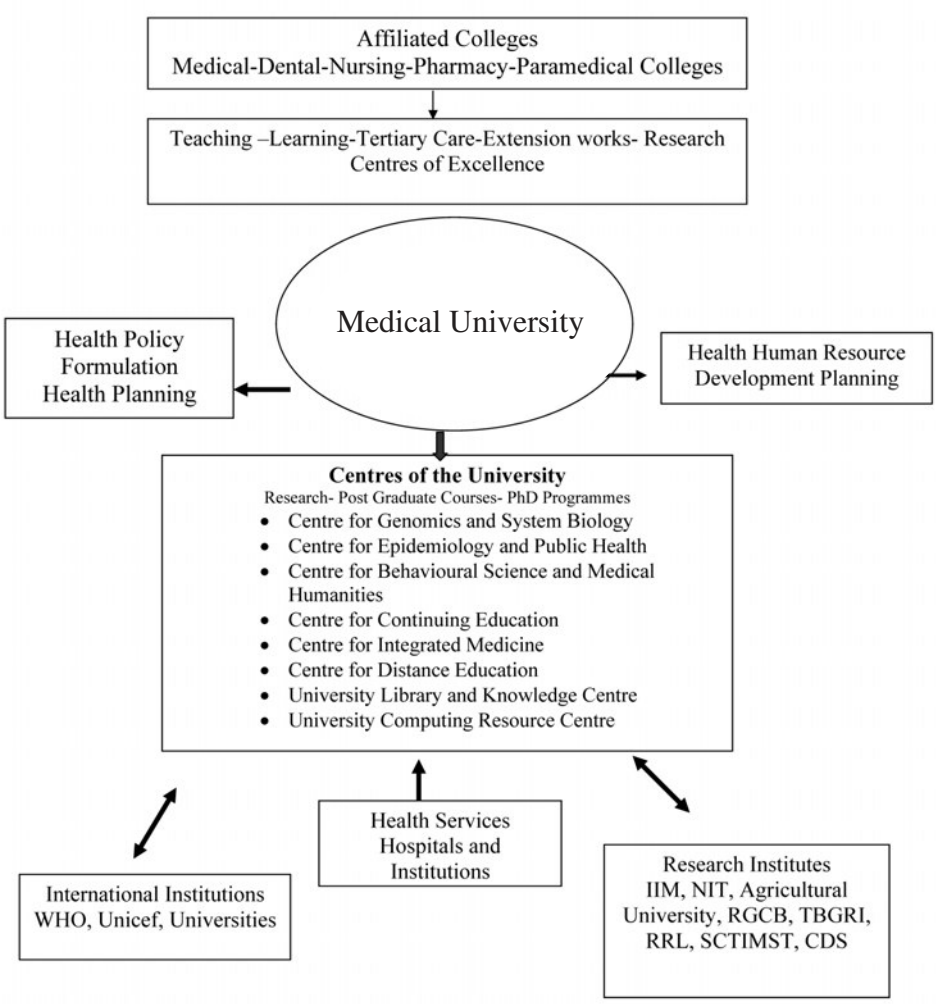
9.1 ACADEMIC LINKAGES

The University should have academic linkages with international agencies like WHO, Unicef etc and also with National Research Institutes under CSIR and ICMR and the institutions located in the State like Indian Institute of Management and National Institute of Technology in Kozhikode, SCTIMST, Rajiv Gandhi Centre of Biotechnology, Tropical Botanical Garden and Research Institute, Centre for Development Studies, Regional Research Laboratory etc at Thiruvananthapuram, Agricultural University in Thrissur, National Institute of Virology and Infectious Diseases in Alapuzha and the Rubber Research Institute in Kottayam.

9.2 The University should take the initiative to design and establish integrated courses and research programmes with the cooperation of these institutions and agencies.

9.3 Relationship with Health Services: The University should interact and organise joint academic programmes for the doctors, nurses, pharmacists and paramedical staff of the health services department. The University would establish linkages between the affiliated colleges; the health services hospitals and local self-government institutions and should take the initiative to advice and help the local self-government institution to prepare health projects, conduct field studies etc.

STRUCTURE OF UNIVERSITY



10.1 UNIVERSITY ADMINISTRATION

The administration of the University should be efficient and transparent fully utilizing the possibilities of Information and Communication Technology. The ministerial staff should be new recruits with multiple skills in administrative matters. There should not be any automatic transfer of staff from other government departments to the University. As far as possible recruitment of fresh candidates with multi skills in areas like information technology, communication and other life skills should be done. In case employees from other departments are transferred to the University they should be selected by separate interview to ensure their capabilities in these skills. No automatic transfers should be done.

10.2 Regular administrative training, works assessment and redeployment of the staff if necessary should be done.

10.3 The University should have a separate Administrative Manual and A Financial Code conducive enough to realize the objectives of the University.

11.1 UNIVERSITY FINANCES

University funds shall include grants and loans received from the following:

- Kerala State Government
- Government of India
- University Grants Commission
- ICMR/CSIR and other research institutes
- All revenues of the University
- Funds generated by Consultancy Work and Joint Research Programmes
- Contribution from International Agencies like WHO and UNICEF
- Contributions from Companies/Corporate Bodies
- Contributions from Non Resident Malayalees
- Contributions from Philanthropists and Philanthropic Organisations
- Contributions from the Alumni

11.2 The state government should try to get a **Medical Grants Commission** established in the country in the model of University Grants Commission for funding the research and development activities of the Medical Universities.

12.1 OFFICERS OF THE UNIVERSITY

The following shall be the Officers of the University

The Chancellor
The Governor of Kerala shall be the Chancellor of the University
The Pro Chancellor
The Minister of Health shall be the Pro Chancellor of the University
The Vice Chancellor
Pro Vice Chancellor
The Registrar
The Finance Officer
The Controller of Examinations

12.2 Selection of Vice Chancellor

Vice Chancellor shall be appointed by the Chancellor on the recommendation provided by a committee appointed for the purpose consisting of:

- A nominee of the Chancellor
- A nominee of the Government, not below the rank of a Chief secretary, who shall be the Convener of the Committee
- an elected representative from the Senate of the University/a nominee of the Governing Council

In the case of the Committee unanimously recommends the name of only one person the Chancellor shall appoint that person to be the Vice Chancellor. In case the Committee is unable to recommend a name unanimously the Chancellor shall appoint the Vice Chancellor from among a panel of minimum three or maximum five names submitted by the committee. No person above the age of 65 shall be appointed or hold office as Vice Chancellor. The Vice Chancellor shall hold office for a period of four years but shall be eligible for reappointment provided that no person shall be appointed as Vice Chancellor for more than two terms.

12.3 The first Vice Chancellor

The first Vice Chancellor shall be appointed by the Chancellor on the recommendation of the government. The first Vice Chancellor shall in consultation with the Chancellor make such rules as may be necessary to begin the functioning of the University It shall be the duty of the first Vice Chancellor to make arrangements for constituting the Governing Council and other authorities of the University. It shall be the duty of the first Vice Chancellor to draft such statues as may be immediately needed. Until such time an authority is duly constituted under the Act of the University the first Vice Chancellor may appoint any officer or constitute any committee temporarily to exercise and perform any of the powers and duties of such authority under the Act.

12.4 Pro Vice Chancellor

The Pro Vice Chancellor shall coordinate and monitor the functioning of the administrative, financial and examination wings of the University and give leadership to the research activities and the planning the development of the University.

The Pro-Vice Chancellor shall be appointed by the Chancellor from a list of three submitted by the Vice Chancellor prepared in consultation with the Governing Council.

12.5 The Registrar, Finance Officer and Controller of Examinations

The Registrar, Finance Officer and Controller of Examinations shall be whole time salaried officers of the University and shall be appointed by the Governing Council for such period and such terms as may be prescribed by the statute.

13.1 AUTHORITIES OF THE UNIVERSITY

The constitution of the authorities of the University and their powers and functions shall be such as to be prescribed by the statues. The following shall be the authorities of the University:

- The Senate
- The Governing Council
- The Academic Council
- The Faculties
- The Board of Studies
- The Research Council
- The Finance Committee
- The Planning Committee
- The Students' Union
- University Assessment and Accreditation Council
- University Examination Vigilance Squad
- University Ethics Committee
- University Socially and Economically Backward Students' Aid Fund

13.2 The Senate:

The Senate shall act as a forum for social auditing of the functioning of the University. The senate shall have the following powers:

- To review the broad policies and programmes of the University
- To suggest measures for the improvement and development of the University
- To consider and pass resolutions on the annual report, the annual accounts and the audit report and the development plans of the University

13.3 Governing Council

The Governing Council shall be the principal executive authority of the University. The powers and functions of Governing Council shall be those prescribed by the Statutes

The Governing Council shall have the following powers:

- To make statues and amend or repeal the statues. Every new statutes or amendment to the existing statues shall require the approval of the Chancellor
- To make ordinances and amend or repeal the same
- To hold control and administer the properties and funds of the University
- To consider and pass the budget according to the provisions of the statues
- To affiliate medical institutions in accordance with the terms and conditions of such affiliation prescribed in the University Act and Statues
- To ensure transparency in admission and fair and non-exploitative fees structure in the affiliated colleges
- To arrange for the direct inspection of colleges and associated Institutions to ensure the academic quality and standards set by the University
- To appoint faculty members and employees of the University and prescribe their qualification and duties
- To take all academic and administrative steps, procedures and make required rules to realize the objectives of the University
- To fix and regulate the fees payable by the students in colleges affiliated to the University
- To award fellowships, scholarships, medals and prizes
- To exercise supervision and control over the discipline of the staff and students of the affiliated colleges
- To conduct University Examination and publish the results

- To regulate the internal assessment and other evaluation procedures conducted by the affiliated colleges
- To appoint members of the Board of Studies based upon their qualification and academic standards
- To approve the panel of examiners
- To approve the appointment of faculty members in the private colleges
- To take steps for the maintenance of the academic standards and quality of service and to ensure the proper service conditions of the staff of the colleges affiliated to the University and in case of disregard to these to modify conditions of affiliation or recognition or take such other steps deemed proper.
- To exercise such other powers and perform such other functions as may be assigned to it by the Act and Statues

13.4 The Academic Council

The academic council is the principal academic body of the University with full responsibility to take all academic decisions

Powers of the Academic Council shall be:

- To advice the Governing Council on all academic matters
- To make regulations and to amend or repeal the same
- To make proposals for research and advancement and dissemination of knowledge
- To prescribe the courses of studies in the institutions maintained by or affiliated to the University
- To prescribe the qualifications of teachers in affiliated colleges and University /Centres
- To prescribe the qualifications for admission of students to the various courses of studies and to the examinations

- To make provision for the admission of students to various courses of studies on the basis of merit in order to maintain standards of education
- To make proposals for granting degrees, diplomas and Academic distinctions by the University
- To coordinate the teaching learning process in the affiliated colleges and University / Centres
- To exercise such other powers and perform such other duties as may be conferred by the Act, Statues, Regulations and Rules.

14.1 Constitution of the Senate, Governing Council and Academic Council The members of the Senate, Governing Council and Academic Council shall consist of Ex officio members: The Vice Chancellor, Secretary Health, Finance, Education, Director of Medical Education and Director
of Health Services.

14.2 Representations from the research institutes like Rajiv Gandhi Centre for Biotechnology, TBGRI, Regional Research Laboratory, SCTIMST, Indian Institute of Management and National Institute of Technology etc. should be members of the different bodies of the University.

14.3 Deans of the Faculties, Directors of the University Centres, and Faculty Members of the affiliated colleges should be included in the bodies.

14.4 Distinguished Scientists and Academicians should be included by the Chancellor in consultation with the Vice Chancellor.

14.5 Student Representatives should be included in all the bodies of the Universities.

14.6 The selection of the members other than the ex officio members shall be done by election and nomination based upon sound academic and democratic criteria as per the statues of the University.

14.7 It should be noted that:

- The representatives from the Constituent Colleges of the University should be given proportionately higher representation in the University bodies
- In the non ex-officio category women should be given one-third representation.
- Adequate representation from SC/ST category should be ensured.

15.1 Faculties of the University

The University may have such Faculties as may be prescribed by the Statues from time to time. Each Faculty shall subject to the control of the Academic Council has the responsibility of designing the courses of studies and research in such subjects as may be assigned to such Faculty by the Ordinance and Regulations.

15.2 The following shall be the Faculties of the University

- Faculty of Basic Medical Sciences
- Faculty of Diagnostic Sciences (Pathology, Bio Chemistry, Microbiology, and Laboratory Technology)
- Faculty of Internal Medicine and Medical Specialties
- Faculty of Surgery and Surgical Specialties
- Faculty of Pediatrics and Pediatric Specialties
- Faculty of Obstetrics and Gynecology
- Faculty of Community Medicine
- Faculty of Social Medicine and Public Health
- Faculty of Behavioural Sciences and Medical Humanities
- Faculty of Dentistry
- Faculty of Nursing
- Faculty of Pharmaceutical Sciences

The Deans of Faculties shall be nominated by the Chancellor in consultation with the Vice Chancellor. The Dean and members of faculty shall hold office for a term of three years.

16. The Board of Studies

Each faculty shall have a UG and PG Board of Studies wherever necessary

17. The Research Committee

- There shall be a research committee consisting of the VC, Directors of the University Departments, and Directors/Scientists from the research institutes within and outside Kerala and distinguished scientists nominated by the Chancellor and Professors of the affiliated colleges.

18. The Finance Committee

The financial committee shall give advice to the University on any matters affecting its finances.

The powers of the Finance Committee shall be:

- To prepare the budget estimates of the University and to review the accounts of expenditure and to make recommendations to the Governing Council
- To consider and make recommendations to the Governing Council on the proposals for new expenditure on major works and purchases
- To scrutinize reappropriation statements and audit notes and make recommendations to the Governing Council
- To review the finance of the University and to suggest concurrent audit conducted wherever necessary
- To give advice and make recommendations to the Governing Council on any other financial question affecting the affairs of the University

19. The Planning Committee:

The Planning Committee shall be the principal planning body of the University and shall be responsible for monitoring the development of the University on the lines indicated in accordance with the objectives of the University.

20. University Union

The University should have a University Union and the office bearers of the University Union shall be elected from among the University Counselors who are democratically elected from the students of the affiliated colleges. The affiliated colleges should give democratic rights to the students to form student unions and other democratic forums. The University Union should be given adequate funds and powers to organise University Youth Festivals, Sports Events and other cultural and social events.

21. University Assessments and Accreditation Council

The objective of the Assessment and Accreditation Council is periodic examination of the academic standards, democratic functioning and social commitment of the affiliated colleges and University Centres. The members of the council can be decided by the Governing Council.

22. University Ethics Committee

University level ethics committee should be formed as per the guidelines of national agencies like the Department of Biotechnology and ICMR for examining the research projects undertaken by the University centres and to give advice to the affiliated colleges for maintaining ethical principles in research works.

23. University Examination Vigilance Squad

There should be a University Examination Vigilance Squad to ensure that the University rules and regulations are not violated either by the students, or the faculty of the affiliated colleges and University centres.

24. University Socially and Economically Backward Students' Aid Fund

By mobilizing funds from various sources the University should set up a Students' Aid Fund for helping the socially and economically backward Students of the University centres and affiliated colleges. This fund can be utilized for arranging Book Banks, for course and career guidance, organising remedial courses for those who require them, cooperative societies for providing educational materials, loan facilities etc.

26.1 UNIVERSITY CAMPUS

A master plan for campus development should be prepared. The campus should be environment friendly. Adequate facilities for water supply and sanitation should be ensured. Optic Fibre cabling of the campus should be done for High Bandwidth connectivity.

26.2 The Campus should have an Administrative Block housing the office of Vice Chancellor, Statutory Officers (Registrar, Finance Officer, Controller of Examinations), Finance, Administration and Examination Wings, Senate Hall, General Council Hall, Auditorium, Computer Centre and Public Relations Wing.

26.3 Other buildings and facilities to be provided are:

- Separate Buildings for the University Centres, University Library etc.
- Quarters for VC, Statutory Officers and Faculty
- Hostels for PG Students and Research Fellows and for those who attend training programmes, research works etc.
- Amenities Building: For Post Office, Bank, Cooperative Store, and Canteen
- Sports Facilities: Playgrounds, Football, and Tennis, Basketball courts
- Open-air theatre
- Guest House

27.1 ESTABLISHMENT OF THE UNIVERSITY

The Government may take steps to ensure the establishment of the Medical University in the current financial year itself utilizing the fund that is already allotted in the state budget for 2007-08.

The Government should take steps to establish the Medical University in a phased manner.

27.2 High Power Committee

The Government should appoint a High Power Committee to monitor the various processes for the establishment of the University. The Honorable Chief Minister should be the Chairperson of the Committee with the Minister for Health and Family Welfare as the Convener with Education Minister, Finance Minister, Law Minister, Health Secretary, Finance Secretary, Law Secretary, Director of Medical Education, Chairman Higher Education Council and Director of SCTIMST and distinguished experts in Medical Education as members.

27.3 The Government may also appoint a Project Director who should be a medical expert with proven administrative efficiency with full administrative and financial powers to monitor and give leadership to the establishment of the University including preparation of Acts, Statues and the construction works till a Vice Chancellor is appointed.

27.4 Selection of the Location of the University

The Government should select the location of the University and initiate the construction of the administrative block immediately. A minimum of 25 acres is required for the establishment of the University. Very large Campus can be avoided by vertical growth and establishment of new centres in other parts of the state.

27.5 Preparation of the Act and Statutes of the University

The Acts and statues of the University should be drawn up and presented if possible before the next Legislative Assembly for approval. The High Power Committee can set up a committee to prepare the Acts and Statues of the University under the leadership of the Project Director.

27.6 Appointment of First Vice Chancellor

As soon as the Legislative Assembly approves the Act/Statues, the first Vice Chancellor may be appointed. The VC should take steps for the minimum appointments required for kick starting the establishment of the University like appointments of the statutory officers, Directors of the centres, Ministerial staff etc. Once the VC is appointed, the post of the Project Director should be terminated.

27.9 Time Frame: First Phase

Formation of High Power Committee/Special Officer/

Selection of the Location of the University:	May-June-2007
Preparation of the Acts/Statues:	June-July 07
Approval from Legislative Assembly:	July 07
Appointment of First Vice Chancellor:	August 07
Appointments of Directors, Faculty, Officers, Ministerial Staff:	Sept 07
Construction of Administrative Block:	Sept -December 2007

The University should start functioning from January 2008. The other phases of development can be decided by the Governing Council. It suggested the full implementation of the project should be completed by December 2010.

28.1 ESTIMATE OF EXPENDITURE

The break up of the minimum expenditure that need be incurred in the financial year 07-08 is given below:

29.2 Capital Investment:

Building (Administrative Block), Equipping and Furnishing: Rs.5 Crores

29.3 Salary

Sl. No.	Designation	No. of posts	Salary per month R	Annual Salary Rs
1	Vice Chancellor	1	50,000 x1=50,000	6.0 Lakh
2	Directors of Centres	3	35,000 x 3=105,000	12.6 Lakh
3	Faculty Members	6	25,000 x 6=150,000	18.0 Lakh
4	Registrar	1	25,000 x 1=25,000	3.0 Lakh
5	Controller of Examinations	1	25,000 x 1=25,000	3.0 Lakh
6	Finance Officer	1	25,000 x 1=25,000	3.0 Lakh
7	Ministerial Staff	15	15, 000 x 15 =225,000	27.0 Lakhs
8	Technical Staff (IT)	5	15,000 x 5=75,000	9 Lakhs
9	Other expenses, Communication, Vehicles, Electricity			50 Lakhs
		Total		**131.6 Lakhs**

Grand Total: 6.31 Crores