

Curriculum Vitae

DR. (MRS) MRUDULA A. PHADKE

M. D. D.C.H.F.I.A.P. MRCP (UK) FRCPCH (UK), MNAMS, FNAMS

Office & Address For Correspondence

**Ex VICE CHANCELLOR, MAHARASHTRA UNIVERSITY OF HEALTH
SCIENCES, MHASRUL, DINDORI ROAD, NASHIK – 422 004.**

TEL. No. (O).91+253+2531835 FAX NO. 91+253+2539113

Residence

**181, BUENA VISTA SOCIETY, JAGANNATH BHOSALE MARG,
NEAR MANTRALAYA, MUMBAI-400 021**

TEL. NO. 91+22+2202 2654 MOBILE NO. 98210 69353

E-mail- drmapaa@yahoo.com

Index

- Background at a Glance.
- Highlights of Achievements.
- Details about Educational Status.
- Details about Academic & Clinical Experience.
- List of Medals, Prizes & Scholarships.
- University Experience.
- International Academic Achievements.
- Research Projects at International Level.
- Research Projects at National Level.
- Major Research Works.
- Administrative Achievements as Director Medical Education & Research.
- Social Activities for the Community.
- Plans for Future of Medical Education.
- Policy & Conceptualization of Medical Education.
- Annexure – Research Publications.

DR. (MRS) MRUDULA A. PHADKE

Visiting Scientist, Haffkine Institute for Training, Research & Testing, Parel, Mumbai – 400 012.

Consultant UNICEF

Independent Director, Serum Institute of India Limited, Pune

Advisor : Maharashtra State AIDS Control Society, Govt. of Maharashtra

Adjunct Professor, Maharashtra University of Health Sciences, Nashik

Member : DSMB, MENINGOCOCCAL VACCINE, WHO Vaccine Safety Committee, Geneva

POSITIONS HELD

Vice Chancellor, Maharashtra University of Health Sciences, Nashik, Maharashtra, India (Upto 22nd December 2009)

Director, Medical Education & Research, Govt. of Maharashtra, Mumbai - 400 001

Dean, B J Medical College, Pune

Senior Technical Advisor: Bill and Melinda Gates Foundation

Member, Global Advisory Committee on Vaccine Safety, WHO, Geneva

Date of Birth : 22-12-1944

Place of Birth : Mumbai

EDUCATIONAL QUALIFICATIONS

M.B.B.S. - University of Bombay, 1967

D.C.H.- C.P.S., Bombay 1969

M.D. (Pediatrics)-University of Poona, 1970

F.I.A.P. – Fellow of Indian Academy of Pediatrics. 1991

MRCP, FRCPCH. (U. K.) 2003

MNAMS – 2008

FNAMS – 2009

*🏆 Recipient of over **20 prizes and gold medals** during undergraduate and postgraduate career.*

*🏆 **Recipient of President of India's medal.***

Highlights of Achievements

Academic

- ✿ Under Graduate and postgraduate Medical Career – Stood first in the University in all the examinations and received over 20 gold medals and prizes
- ✿ Recipient of President of India's Medal.
- ✿ Intense involvement in patient care, student teaching and research while working as Professor of Pediatrics.
- ✿ Set up & enhanced the Department of Genetics at B.J. Medical college – the only center in Western Maharashtra, started with the help of Govt. of Maharashtra, Dept of Science & technology, Dept. of Biotechnology.
- ✿ Extremely Sound Academic Development.
- ✿ The second pediatrician in India to receive Hon. Fellowship of the Royal College of Pediatricians FRCP (UK2003)
- ✿ Member, **Child Survival Group Planning Commission**
- ✿ Actively involved in Immunization Research, Nutrition and HIV/AIDS Research

Administrative

- ✿ Gained a lot of administrative experience while working as Dean B.J. Medical College, Pune, Director Medical Education and Research Govt. of Maharashtra, Mumbai and Vice Chancellor, Maharashtra University of Health Sciences, Nashik, Maharashtra, India
- ✿ Helped the Government in Policy-making, Conceptualization and establishment of **3 New Medical Colleges** –Govt. Medical College Kolhapur, Latur, Akola.
- ✿ Started seven Departments of Excellence viz. University Department of Interdisciplinary Research & Technology, University Department of Medical Education Technology, University Department of Genetics Immunology & Biochemistry, University Department of Infectious Diseases, University Department of Public Health & Community Ophthalmology, Department of Tribal Health and Department of Microdentistry.

- ✿ **Experience of working with the University** as Dean of Faculty of Medicine, Member of Management Council & others.
- ✿ Started Star Research Award and a Journal-Milestone for the Directorate.

Research

- ✿ Research publications in National and International Journals, written chapters in Medical Journals,
 - ✿ Delivered Lecturers and orations on Medicine, Medical Education –Policy and Conceptualization
 - ✿ A comprehensive and concise knowledge and understanding of working of the University, Government, with vast academic and administrative experience, appropriate to lead the University to attain higher laurels.
-

Details About Educational Status.

- ✿ Passed Secondary School Certificate Examination from St. Ursula Girls' High School Nagpur 1959. Stood 2nd in the Board with distinctions in all subjects.
- ✿ Passed Inter Science Examination University of Mumbai, with University Prize in 1961 in Chemistry.
- ✿ 1st M.B.B.S., 2nd M.B.B.S., 3rd M.B.B.S. Examinations - University of Mumbai in 1962, 1966 Stood First in the University in all the three examinations and received all the prizes& medals.
- ✿ Diploma in Child Health- Stood First in the University College of Physicians & Surgeons Mumbai & Received Gold Medals.
- ✿ M. D. University of Pune 1970. Stood First & the only student to have passed the examination.
- ✿ Fellow – Indian Academy of Pediatrics (FIAP)
- ✿ Members of Royal College of Pediatricians UK & Fellow of Royal College Pediatrics & Child Health (MRCP) (FRCPH) 2003.
- ✿ 1st Pediatrician from Maharashtra to have received the degree.

Academic and Clinical Experience

1. Resident House physician in Pediatrics (30-10-67 to 31-12-68) and Radiology (1-1-1969 to 30-6-69) Resident Registrar in Pediatrics (1-7-69 to 30-6-71) at B.J. Medical College & Sassoon General Hospitals, Pune, 3 years and 8 months.
2. Consultant in Pediatrics at Infectious Disease Hospital, Pune 9 months. (1-7-71 to 14-3-72)
3. Reader in Genetics at B.J. Medical College, Pune- 5 years and 7 months (15-3-72 to 14-10-77)
4. Professor of Pediatrics at B.J. Medical College, Pune 11 years 6 months (15-10-77 to 24-3-89).
5. Director of Tribal Research and Professor, B.J. Medical College, Pune 3 years (25-3-89 to Oct. 91. Feb 92 to June 1992)
6. Dean, B.J. Medical College and Sassoon General Hospitals, Pune 7 years 4 months 1-11-91 to 28-2-92 (Addl. Charge) 31-7-92 onwards to 6-1-2000. Also holding additional charge of Director (Tribal) for the above period.
7. Director, Haffkine Institute for Training, Research, Mumbai (Addl. charge) 28-4-2000 till Feb. 2001 - 10 months.
8. **Director of Medical Education & Research, Govt. of Maharashtra, Mumbai - 3 years (7-1-2000 to 31-12-2002)**
9. **Consultant UNICEF – 1 ½ Years Aug, 2003 Onwards**
10. Senior technical Advisor: Bill and Melinda Gates Foundation May, 2004 onwards
11. Advisor MSACS, Govt of Maharashtra.- Oct 2003 onwards
12. Member, WHO Vaccine Safety Committee Geneva.– June 2004 onwards
13. Member, WHO's study committee of preliminary tests - influenza vaccine for UN agencies – October 2006 onwards.
14. Independent Director, Serum Institute of India Ltd., Pune (Raj Bhavan Letter No. CS/MUHS/AVC-1/07/2979 dated 20-09-2007.
15. Member, Advisory Board, Sakaal's Educational Journal on 'Higher Education. (August 2007)

Publications:

- ✿ Over **200** research papers read and published at various National and International journals.
 - ✿ Editor of the ' Genetics 'Chapter of Association of Physicians of India's, (API) Textbook of Medicine.
 - ✿ Written a chapter on 'Inborn Errors of Metabolism and Genetics' in Textbook of Pediatrics by Dr. S. Gupta.
 - ✿ Editor of journal- Journal of Clinical Genetics & Tribal Health.
 - ✿ **Author of award winning papers at National Conference.**
 - ✿ Was the Founder Editor of Journal of Directorate of Medical Education & Research "**Milestone**"
 - ✿ **Author – Prevention of Parent to Child Transmission of HIV/AIDS Book published by Maharashtra State AIDS Control Society (MSACS) & supported by UNICEF.**
-



List of Medals, Prizes, Scholarships

- awarded to Dr. (Mrs) M.A. Phadke (Nee - Miss M V Bapat)

- ✿ **YESHWANT GOVIND NADGIR** Scholarship for **standing first in Anatomy.**

- ✿ Lady Reay Medical Scholarship for **standing first in Physiology in lady candidates.**

- ✿ Sir James Fergusson Scholarship for **standing first at First M.B.B.S.**

- ✿ Louis Borges Scholarship and prize for **standing first at first M.B.B.S.**

- ✿ Miss Guli Khanchand Mirchandani Scholarship for **standing first at II M.B.B.S.**

- ✿ Bai Ratanbai Ratanji Lentin Scholarship for **standing first at II M.B.B.S.**

- ✿ Seth Jairamdas Bery Gold medal for **standing first in Pharmacology.**

- ✿ T.C.F.Gold medal for **standing first in Pharmacology.**

- ✿ The Lord Sandhurst gold medal for **standing first in Pathology**

- ✿ The Late Bowman and Falli H,. Khan prize for **standing first in Forensic Medicine and Toxicology.**

- ✿ The Dowager Lady Shantabai Sitaram Patkar gold medal for **standing first at final M.B.B.S.**

- ✿ The Lady Reay Silver medal for standing **first in ladies at final M.B.B.S.**

- ✿ The Bai Hirabai Pestanji Hormasji gold medal for **standing first in Surgery.**
- ✿ Manorama Vijayrai Hazarat Scholarship and prize for **standing first in final M.B.B.S.**
- ✿ Sir Jamashedji Duggan prize for **standing first in Ophthalmology**
- ✿ **Pfizer gold medal** during post graduation.
- ✿ **Lady Tata Scholarship** for postgraduate research,.
- ✿ Indumati Zaveri medal for **standing first at D.C.H.**
- ✿ **Dr. B. N. Purandare Outstanding Service Award**
- ✿ **Dr. Shirodkar Outstanding Service Award**
- ✿ **Junior Chamber International Marine Lines "Achiever Award – 2006"** for outstanding achievement in the field of Medical Profession.
- ✿ **International Award “HIV/AIDS Ambassador” during International workshop on “Defining the Future-HIV/AIDS Next 25 Years”** as a leading specialist & health care professional who has promoted scientific collaboration and enhanced Indo-US Scientific Ties in the field of HIV/AIDS.
- ✿ **International Educator Of The Year 2009 Award** by the Research and Advisory Board of International Biographical Centre of Cambridge, England for illustrious achievements and leadership among the international teaching community.

🏆 **President's Medal for Final M.B.B.S.**

Experience with Universities:

- Undergraduate and postgraduate teacher
University of Pune – 30 years
 - Guide for Ph.D. University of Pune –20 years
 - Member of Board of Studies in Medicine ,University of Pune
– 5 years.
 - Member and Chairman, Faculty of Medicine University of Pune
– 5 Years.
 - **DEAN** of Faculty of Medicine, University of Pune
– 5 years 1995 to 2000.
 - Member of Management Council of Maharashtra University of
Health Sciences, Nashik, 2000 – 2002.
-

International Academic Achievements

- Selected for ICMR Indo-German Genetic Training in Germany-1993 and visited 9 Genetic Centers in Germany for academic exchange.
- Visiting Professor to Libya-1989 - Delivered guest lectures in Pediatrics and Genetics at Garyonis University.
- Visiting Researcher to Bremen, Germany for collaborative research 1991 on genetics.
- Visiting Professor to Germany (Bremen) - 1994 – For specialized research in Molecular Genetics.
- Delivered guest lectures and orations in National International Conferences at Singapore, 1979, Thailand-1994.
- Participant at the W.H.O.meeting E.P.I. Immunization Committee- 1993.
- Invited to participate in W.H.O. meeting of regional group in Bangkok, Thailand - 1994 for country presentation.
- Invited as Fogarty International Fellow to Johns Hopkins Medical School, Baltimore, USA, Oct 1995 - Delivered lectures on Tuberculosis Thalassemia, Pediatric AIDS.
- Invited to deliver talk on 'Indian Thalassemia' at the International BMT conference held in Pesaro ,Italy, - Oct. 1996.
- HIV/AIDS Conference at Montreal, Canada 1998
- Member of various National and International Medical Academies.
- Conferred Honorary Degree of fellow of Indian Academy of Pediatrics-1995.
- Visiting Professor to various International Universities in Libya, Germany, U.S.A., Moscow, Thailand
- Organized various International, National & regional Pediatric &

Genetic Conferences as Organizing Secretary / Chairperson

- ✿ Participated in International HIV/AIDS Conference (Global) 2002 at Barcelona, Spain.

- ✿ As Director of Medical Education & Research, directly In charge of various NACO projects in the State of Maharashtra PMTCT (Prevention of mother to child transmission of HIV/AIDS - Use of AZT, Use of Nevirapine)

- ✿ Conferred membership & Fellowship of Royal College of Pediatricians U.K., 2003

- ✿ Attended HIV/AIDS Conference at Bangkok Thailand July, 2004

- ✿ Appointed as WHO temporary adviser for Global committee on Vaccine Safety- June 2004 – 3 Yrs.

- ✿ Nominated as Member in Syllabus Committee of WHO Data Safety Monitoring Board for Immunogenicity Trials on Monovalent Opv versus Tribulent Opv Set – Oct 2005.

- ✿ Visited WHO's Head Office, Geneva, Switzerland – 07-08 June 2005

- ✿ Attended WHO's Global Advisory Committee Meeting on Vaccine Safety as a WHO Temporary Adviser at Geneva, Switzerland – 09- 10 June 2005

- ✿ Attended Department-related Parliamentary Standing Committee on Health & Family Welfare-Indian Medical Council (Amendment) Bill 2005 to express the views before the Committee at Parliament House, New Delhi – 21 October 2005

- ✿ Attended WHO's Meeting : Data & Safety Monitoring Board (DSMB) to serve as a WHO Temporary Adviser at Indore – 12th December 2005

- ✿ Attended National Institutes of Health, Division of Vaccine and Prevention, Data Safety and Management Board Meeting at Washington, DC as India Principal Investigator of Indo-US collaborative research project to be available at Johns Hopkins University (JHU) School of Medicine, US – 29-31 January 2006

- ✿ Attended WHO's Global Advisory Committee Meeting on Vaccine Safety as a WHO Temporary Adviser at Geneva, Switzerland – 06-07 June 2006

- ✿ Attended WHO's Global Advisory Committee Meeting on Vaccine Safety as a WHO Temporary Adviser at Geneva, Switzerland – 29-30 September 2006
- ✿ Attended WHO's Conference : The role of Universities in Low-and Middle-Income Countries 2007 and Beyond in the Response to the HIV Pandemic To examine critically the strategic role of Universities in low- and middle-income countries in the regional, national and international response to the HIV pandemic and to consider the idea of establishing a South-South network of Universities in order to increase the involvement of institutions in mitigating the impact of HIV and AIDS Ocho Rios on the North Coast of Jamaica – 12 –14 November 2007.
- ✿ Attended WHO's Meeting of The Data and Safety Monitoring Board (DSMB) for the Polio Vaccine Study Series in Cape Town, South Africa, on 21st and 22nd October 2008 to review the status of the studies, discuss progress and outcome of each study, and to confirm the ongoing scientific and ethical integrity of each study.
- ✿ Attended UNICEF sponsored Technical consultation on “The evaluation of the impact of prevention of mother-to-child transmission of HIV (PMTCT) programmes in low- and middle-income countries in averting new infections in children and improving child survival" at Vanderbilt Institute for Global Health, 2215 Garland Avenue, 319 Light Hall, Nashville, Tennessee (TN) 37232, U.S.A from 12-13 February 2009.
- ✿ Attended Ministry of Health & Family Welfare, Government of India and WHO's National Level Consultation on Public Health Workforce in India on 24th June 2009 in New Delhi with a view to review and share experiences and engage in a dialogue to address public health related issues and to re-orient the workforce, to expand the horizons of public health, and to strengthen its infrastructure.
- ✿ Attended WHO's Meeting of The Data and Safety Monitoring Board (DSMB) for the Polio Vaccine Study Series at Salle M105, WHO-HQ, Geneva, Switzerland, on 22nd and 23rd October 2009 to review the status of the studies, discuss progress and outcome of each study, and to confirm the ongoing scientific and ethical integrity of each study.

✿ **Member - Child Survival Group, -
Planning Commission, Govt. of India : 1997-2002**

Research Projects at International National Level

- Indo German Collaborative project On Molecular Genetics of Thalassemia & Sickle cell Anemia-1996- 2003.
- Acceptability of Rapid HIV testing of pregnant women & John Hopkins University Baltimore-USA
- Infant feeding practices of HIV positive mothers-- John Hopkins University Baltimore-USA
- Awareness of HIV AIDS in household environment of pregnant women - John Hopkins University Baltimore-USA
- Optimizing HIV/AIDS informed consent process- John Hopkins University Baltimore-USA
- Prevention of maternal to Infant HIV transmission in India Aug-2002 As Principle Investigator N.I.H. Bethesda, Maryland USA sponsored project in collaboration with Dr. R.C. Bollinger-John Hopkins University Baltimore, USA. & B.J. Medical College, Pune

Research Projects at National Level

- I.C.M.R.**
- Mental Retardation
 - Genetic Disorders
 - Counseling in Genetics
 - Neural Tube Defects (NTD)
 - Anthropometrical Measurements
 - Prophase Banding
 - Feasibility of genetic services in community
- D.S.T.**
- Prenatal Diagnosis of Thalassemia, Mental Retardation.
- D.B.T.**
- Genetic Counseling and Prenatal diagnosis.
 - Collaborative Project with NACO on HIV/AIDS – Mother to Infant Transmission.
 - Collaborative State level research projects.
- a) Hib-vaccine studies
- b) National AIDS Research Institute projects.
- c) Behavioral studies in HIV AIDS
-

Major Research works undertaken in the past 2 decades.

1. ***Thalassemia:***

The genetic center of the B.J. Medical College undertook a number of research projects pertaining to thalassemia:

- a) Research in clinical picture of thalassemia major
- b) Research on thalassemia intermedia
- c) Molecular characterisation of beta thalassemia
- d) Carrier detection of thalassemia
- e) Community control of thalassemia
- f) Prenatal diagnosis.

2. ***Community control programme for sickle cell anaemia.***

- a) Population screening programme
- b) Study of clinical picture of sickle anaemia & treatment
- c) Marriage counseling
- d) Whenever required prenatal diagnosis

3. ***Congenital malformations:***

Detailed investigations of patients attending genetic clinic

- Biochemical & cytogenetic studies
- Family studies
- Counseling programme

4. ***Inborn errors of metabolism***

Patients attending genetic clinics are screened for following inborn errors of metabolism.

1. Phenylketonuria
2. Alcaptonuria
3. Mucopolysaccharidoses
4. General aminoaciduria
5. Cystinuria
6. Homocystinuria

5. ***Infectious diseases:***
Tuberculous & pyogenic meningitis
- DNA studies PCR based.

 6. ***HIV/AIDS*** - Mother to child transmission prevention - using AZT,
Nevirapine funded by NACO, Johns Hopkins Collaboration (USA) -
funded by NIH U.S.A.

 7. Nevirapine Nano particles
-

Academic & Administrative Achievements as the **Director of Medical Education & Research, Govt. of Maharashtra**

- ✿ - Started 3 new Medical Colleges in Maharashtra after a gap of 11 years. It's conceptualization planning and setting up of staff, equipment, planning of construction buildings was done by me.
 - ✿ - Administration of other 11 Govt. Medical Colleges, 3 Dental Colleges, Nursing Colleges.
 - ✿ - Conducted Common Medical Entrance Tests at Undergraduate & Postgraduate levels for 3 years i.e. 2000,2001 and 2002
 - ✿ - Introduced "Star Research Award" Scheme for the first time to promote Research in Medical Colleges in Maharashtra State.
 - ✿ - Was responsible for conceptualization proposal writing & follow-up of the Bill and Melinda Gates Foundation's Project on HIV /AIDS (Rs.115 Crores for the State of Maharashtra)
-

Plans For Future of Medical Education

- ✿ To nurtures academic excellence in the field.
- ✿ To Direct Medical Education to suit the health needs of the community.
- ✿ To lay emphasis on emerging diseases like HIV/AIDS.
- ✿ To ensure continuing medical education (CME) for practicing doctors.
- ✿ To promote research with International & National Collaborations.
- ✿ To promote interdisciplinary research.
- ✿ To establish & treatment courses for paramedical staff.
- ✿ Participated in many health camps.
- ✿ Participated in immunization camps.
- ✿ Undertook research on - Tribal of Maharashtra with special reference to sickle cell disease.
- ✿ Delivered health talks on Radio, TV, in Newspapers & Magazines.
- ✿ Written in newspapers and magazines for lay Public on medical issues.
- ✿ Delivered talks on health issues in Rotary & Lions Clubs.
- ✿ Arranged health Exhibitions.

POLICY AND CONCEPTUALISATION OF MEDICAL EDUCATION

Status Paper – Prepared by Dr. Phadke M.A.

An academic proclivity and national priority:

The last decade has seen rapid increase in the global demand for education. The Universities of today have become decisive catalysts in the modern society. They provide the knowledge, which will catalyse human development leading to effective functioning and well being of the society. In this millennium, knowledge is the economic capital without which viability may not be possible. Education is the most fundamental of all social responsibilities. Universities have a dual role, conservation of knowledge and creation of new knowledge. While approaching for the latter i.e. creation of new knowledge, the link of research in the University creeps in.

In terms of global percentage of higher education at the University level in the population, one is aware of the fact that it is highest in U.K. i.e. 35.1% with U.S.A on 32.1%. Figures from developing world are less than 10%. This must change for India and certainly for Maharashtra.

Medical Education, an important component of higher and professional education needs to be studied in depth, if we wish to bring about a change. The four main complementary pillars of medical education are :

Teaching resulting into **diffusion of knowledge**

And **research** resulting into **advancement of knowledge**

Medical educational landscape is painted with colours of monotony. Teaching and research must have a wide horizon, yet a narrow focus. It must be traditional and yet change with societal needs from time to time. With this background in mind it is attempted to put forth some ideas that will bring a change in medical education to enhance quality and also to visualize its role in light of globalization.

- 1) Quality education
- 2) Costs

- 3) Consistency
- 4) Current needs

Quality Education :

A medical graduate from the State of Maharashtra should be able to compete on the global scene of medicos. It may be true for a few percent of the doctors that are churned out of every year. But for the remaining majority the truth is less satisfactory. How can we improve quality education?

a) **Component of the student:** - The method of admission to health science courses is by and large based on the merit of the common entrance test conducted by the State Government which is good. The examination is conducted as per Supreme Court directive. Thus majority of the students are extremely meritorious. Even students admitted under the NRI/management seats have to compete and be in merit of the NRI seats. Their standard may be bit lower than those who have secured a merit seat but these students have adequate opportunity to show their merit and compensate for the little less number of marks that they secured, by their hard work.

It therefore appears that merit is guarded whilst admitting students for medical and health science course. However the question of **aptitude and attitude** remains unanswered. There is an urgent need of assessing these two domains before a student joins health science courses so that corrective steps can be taken, if required.

Frank Rhodes has mentioned at one point that a medical graduate may have a much better attitude towards patients if he had learnt some subjects of “arts” like Philosophy, Psychology, Sociology and literature in addition to “science” before entering a medical college. May be a little reading of Shakespeare or Tagore or Pu La Deshpande will make him a better human to deal with real life situations and change his attitude towards human suffering. This learning can be brought about when a student has finished his 12th standard examination, CET etc and is a little free to ponder.

Personality development of the student should also form an integral part of medical education.

b) **Components of the teacher:** - Medical teachers of today need to develop far more excellence than what is the situation in existence. **Poor**

standard of students is a direct result of poor quality of teachers. How can we improve this?

i) By creating a large number medical teachers cadre. Many successful, experienced, practitioners have an aptitude to teach. These teachers could be given assigned lectures in their speciality. They could comprise of a group of adjunct professors.

ii) Medical full time teachers: - These faculty members have a great task ahead of them. How should a teacher be?

He or she must be a successful investigator, a scholar of originality with sound knowledge of medicine, a successful entrepreneur and fund raiser, a substantial medical author, effective mentor of graduate and postgraduate students, a challenging and inspiring guide and adviser, effective participants in the life of the department, an informed citizen, with professional guild and human qualities.

Given this lengthy list of expectations, one wonders, how can we make our teachers so good? The only way is to set examples, recruit excellent material, train them continuously, set benchmarks and examinations for them to maintain and improvise their skills, inculcate research and nurture the potential of young teachers.

These teachers must have adequate incentives to work and these should be directly related to the quantum and quality of teaching and research. They should be able to work in a free academic environment without being

burdened by superfluous regulations. This is a difficult task, but can be achieved by having structured work programme, continuous medical education, examinations and evaluation of all teachers (by students and superiors.)

Consistency :

Structured medical teaching programme should be implemented continuously over a span of minimum 5 years. Medical education is continuously evolving, yet too frequent changes in curriculum, mode of teaching, operation and training can lead to more confusion. Consistency in training is the essence of traditional leading medical universities worldwide.

Continuing Medical Education :

It is of paramount importance that practicing doctors who have graduated sometime back should be updated with knowledge and skills. This updating should be an essential component of medical license to practice. Most Western Universities have adopted this practice and is important if patients have to receive the best and currently acceptable treatment.

Costs :

Medical education in Government and corporation colleges is largely subsidized. But, for an average citizen, the cost factor in private colleges may be difficult. In cutting costs, one cannot compromise quality. Therefore, private colleges will need adequate revenue. This is by and large generated from the NRI or management seats. Private colleges could be given subsidy in different forms like patient's beds, land, duty waiver on goods etc.

Establishment of linkages of Government and private colleges with foreign universities could be a matter that can be considered. These linkages can be in the form of training of students, teaching, exchange of students, teachers, scientists, establishment of collaborative research, medical tourism and others.

Current needs :

The medical needs of the society of Maharashtra should be taken into consideration. The needs of rural folk and urban elite are equally important. In as much as oral polio immunization and treatment of malaria are needs of

both rural and urban population. There are some specific requirements of both the groups. Treatment of snake bite, scorpion bite may be important in hilly areas, sickle cell disease important in tribal areas, removal of superstitions in specific villages and reduction of infant mortality with RCH training will be more relevant in certain geographic areas.

Therefore a medical graduate must be groomed not as an export quality doctor but the one who will cater to the felt health needs of his community at a given point of time.

Medical education is thus a crucible within which the future of all doctors is formed and framed. Boiling, steaming, frothing, sublimation, formation of new amalgam are all a part and parcel of the process. It is our duty to see that the new amalgam produced day after day is of golden quality, which does not sublime easily and sure enough, keeps the crucible intact.

Important Research Publications

1. **A clinical survey of infective hepatitis (1970)**
Maharashtra Medical Journal 27(5): 271
2. **Evaluation of Nail sodium as compared to sweat chloride in cases of chronic diarrhea with special reference to cystic fibrosis (1971)**
Ped. Clin India g.237
3. **Prevalence of erythrocyte Glucose-6-Phosphate Dehydrogenase deficiency in a population of Poona District - A survey (1974)**
Book-Human Population Genetics in India Vol.(1) :50-59
(Orient Longman Ltd., Bombay)
4. **Serological and Biochemical Investigations among the Nandiwallas of Maharashtra (1974).**
Book Human Population Genetics in India Vol. (1): 11-20.
(Orient Longman Ltd., Bombay)
5. **A pedigree of Mongol like facial form (1974)**
Ind. Anthropologist 4:137-140
6. **Evaluation of dermal pattern in Down's Syndrome (1974)**
Book-Human Population genetics in India Vol.(1):251-25
(Orient Longman Ltd., Bombay)
7. **Giemsa banding technique for human chromosomes.**
8. **Zygoty of Twins (1974)**
Ind.Ped.11 (5): 381-3
9. **Hyperhaemolytic and vascular occlusive crises in sickle cell disease. A case report with brief review of literature.**
J.Asso.Phys.Ind. 1975 Jan;23(1): 41-44
10. **Partial deletion of "G" group autosome: A case report with review of literature, (1975)**
Ind.Paed.Vol.12 (3): 427-432
11. **Turner's Syndrome - A clinical and cytogenetic study (1975)**
J.Asso.Phys.Ind.23: 427-431
12. **Cerebrospinal fluid electrophoretic proteinograms in tuberculous and pyogenic meningitis (1975)**
Ind. Pediatrics. 12(1): 1169-1172.
13. **Dermal patterns in congenital heart disease: A preliminary communication (1976)**
Indian Heart Journal 28:10-15

14. **Nitroblue tetrazolium test in tuberculous and pyogenic meningitis**
Ind. Pediatrics 1976 Jun; 13(6):447-450
15. **Study of erthrocyte Glucose-6-phosphate Dehydrogenase and abnormal haemoglobin in an endogamous community-Katkaris a survey**
J.Asso.Phys.Ind. 1976 Jan24(1):1-3
16. **Study of glucose-phosphate dehydrogenase deficiency in an endogamous tribe Katkari (1976)**
(Science and culture. 42(1):483-487 U
17. **Anetnatal sex determination by endoscerival smears (1976)**
Book-Seminar on Medical Genetics. Vol.1
18. **Prenatal sex determination by endocerival smear (1976)**
Science and culture. 42(1): 483-487
19. **Chromosomes in clinical Medicine (1976)**
Maharashtra Med. J.15(6) 223-224
20. **Endocervical smear - A new approach in antenatal diagnosis (1977),**
Book proceedings of symposium on genetics applied to Human needs. Bhabha Atomic Research Centre, Bombay, Jan 10-11: 51-56
21. **Abnormal haemoglobin in a psoriatic family (1978)**
Ind. J.Dermatol-venerol Lepr.44:160-161
22. **Protone in malnutrition (1978)**
Book-Aristo pharmaceutical Booklet 78
23. **Liv 52 in Malnutrition (1978)**
24. **A study of dwarfism with special reference to chromosomal aberrations**
Ind. Pediatrics 1978 May;15(5):409-12
25. **Prenatal diagnosis of thalassemia major. Preliminary observations (1978)**
Book-Medical Genetics in India, Editor, I.C. VERMA, Vol.2:42-43 (Aurome Enterprises, Pondicherry.
26. **Sex determination by endocervical smear (1978)**
Book-Medical Genetics in India, Editor, I.C. VERMA, Vol.2:42-43 (Aurome Enterprises, Pondicherry.
27. **Sickle cell haemoglobin and G-6-PD deficiency in tribal groups of Maharashtra (Maharashtra 1978)**
Book-Medical Genetics in India, Editor, I.C. VERMA, Vol.2:89-92 (Aurome Enterprises, Pondicherry.

28. **Role of Emplte in dehydration - Oral rehydration therapy (1978)**
The Ind. Practitioner 31(12): 883-887
29. **Prevalence of Hb'D' in Sindhi community (1979)**
J.Asso.Phys. Ind. 1979 May;27(5):411-4
30. **Congenital Nephrotic Syndrome- Case report (1979)**
Indian pediatrics 1979 Sep;16(9): 817-8
31. **Prenatal diagnosis of thalassemia major (1979)**
Lancet 11:1143
32. **Prenatal diagnosis of Genetic disease (1979)**
Doctor to Doctor 3:63-87
33. **Growing child and growth failure (1979)**
Mah. Med. jour.Vol.26 (2) 120-123
34. **Estimation of alpha-fetoprotein levels in India Childhood cirrhosis**
Indian pediatrics 1979 Dec;16(12):1077-9
35. **Use of piracetam (2 pyrrolidine Actamide) in sickle cell anaemia (19*80).**
Book-problems in perinatology, Editor, S.M. Karim PP 301-303
Proceedings of 1st Asia Oceania Congress of perinatology, Singapore.
36. **Effect of 'Elcarim' on weight gain, sleep disturbances, appetite, flatulence (1981)**
The Indian Practitioner 34(1): 19-32
37. **Role of Buclizine Hydrochloride in promoting weight gain in children (1981)**
The indian Practitioner 34(3) 147-149
38. **Reye's Syndrome associated with influenza A & B virus (1982)**
Indian Pediatrics 19:719-722
39. **Screening of newborns for inborn errors of metabolisms (1982)**
Indian Pediatrics 19:767-770
40. **Sex chromosomal aberration and their modes of presentation (1983)**
Indian Pediatrics 20:141-144
41. **Predicting genetic disorders (1983)**
Science Today (1983)
42. **Clinical and Serological Evaluation of Live Measles vaccine in India**
Indian Pediatrics. Accepted and published 1984.

43. **Mental Retardation: Problems and perspectives of prevention.**
Editorial (1995) Indian Pediatrics Vol. 122, 1985.
44. **Ibuprofen in children with infective disorders antipyretic efficacy.**
British Journal of Clinical Practice. 1985 Nov-Dec;39(11-12):437-40
45. **Yearbook of Pediatrics, FF USK. 1986** Article on Aspirin at No.44 has been abstracted.
46. **Antenatal diagnosis of Genetic Disorders-Review Article**
Indian Pediatrics. Jan. 1986.
47. **Trisomy-8**
Indian Pediatrics, 1986 March;23(3) 226-7
48. **Poliomyelitis in Pune Vis a Vis immunisation urban slums (1986)**
Indian pediatrics. May 1986
49. **Progerin in Medical Journal of Western India, 1986**
50. **Antenatal diagnosis of neural tube defects simple cytological Examination**
Indian pediatrics. 1987 Jul;24(7): 557-9
51. **Antenatal diagnosis of Genetic disorders-**
Indian Pediatr. 1986 Jan; 23(1):51-5
52. **Aplastic Crisis in thalassemia**
Medical Journal of Western India, 1988.
53. **Gene therapy for human disease. A review,**
Medical Journal of Western India,1988.
54. **Clinical trial of Aristogyl F in Pediatric diarrhoea.**
The Abtiseptic March 1988.
55. **Cytogenetic and molecular basis of human disease in D.A.E. symposium on Human Genetics,1989.**
56. **Presentation of thalassemia in Indian children - A pointer towards separate molecular identify**
Medical Journal of West. India, 1989.
57. **Mental retardation, a clinicians approach to the diagnosis of aminoacidopathies.**
Indian Pediatrics, 1989 Sep;26(9):921-7
58. **Toxic shock syndrome: an unforeseen complication following measles vaccination.**
Indian Pediatric, 1991, 28(6):663-665.

- 59 **Idiopathic Nephrotic Syndrome: The frequent Relapser,**
Edition 1, Indian Pediatrics, October 1990.
- 60 **1:10 Translocation in a boy with mental retardation and dysmorphic features.**
Indian Pediatrics March, 1991
- 61 **Toxic shock syndrome: An unforeseen complication following measles vaccination.**
Indian Pediatrics, 1991, 28:663-665
- 62 **Experience with a measles vaccine manufactured in India.**
Indian Pediatrics, 1991, 28:883-887.
- 63 **Experience with a measles vaccine manufacturing in India, Indian Pediatrics, 1992, vol.29: 885-887.**
- 64 **Investigations on the variability of Genetic Markers in Three Tribal Population from Maharashtra, India.**
Journal of Human ecology, 1993,42(2) :193-144.
- 65 **Squint An aetiological Marker in Microcephaly.**
Journal of Royal Society of Tropical Medicine, 1994,87:60-61.
- 66 **A Randomised Multicentric Study to compare the safety and efficacy of the J.of Clinical Genetics Vol.1 page 6, 1996.Albendazole in the Treatment of Giardiasis in children**
Indian Pediatrics 1994, 61:689-692.
- 67 **Efficacy of Halofantrine in Malaria**
Indian Pediatrics 1994, 61: 689-693.
- 68 **Sickle cell Anaemia in Parsi boy. A case report (1994)**
Ind. J. Haemtol & Blood Tansf. 12:235-236.
- 69 **Prevalence of sickle cell hemoglobin in vanada Dist. of Gujrat . A pilot study (1994)**
Ind. J. of Haemtol & Blood Trans. 12:216-218.
- 70 **HB - Pune: A New Gamma Beta Crossover Hemoglobin from an Indian Family.**
International Journal of Pediatrics Hematology/ Oncology, 1995.I
- 71 **Serum Amino Acids and Genesis of Protein Energy Malnutrition**
Indian Pediatrics, 1995, 32:300-306.
- 72 **"Overview of Tribal Health" 1995, Published in Book " An overview of Tribal Research studies "** Editor in Chief Navinchandra Jain, Tribal Research and Training Institute Pune. Vol.1: 46-60.

- 73 **Impact of Genetics Disorders on Health problems Amongst Tribla population groups of Maharashtra.**
Book-An overview of Tribal Research Govt. of Maharashtra, Studies Vol. Page 99-108:1995.
- 74 **Common problems in clinical genetics**
The Journal of Clinical Genetics & Tribal Research
Vol.1 No.2 Page 135:1996
- 75 **Congenital Malformation**
The J.of Clinical Genetics Vol.1 Page 6-1996
- 76 **Reactogenecity of Indigenously produced measles vaccine**
Indian Pediatrics, 1996 Vol.33, Page 827-831.
- 77 **Multicentric study of efficacy of perioconceptional folic acid containing vitamin supplementation in prevention of open neural tube defects from India**
Indian J Med Res 112 Dec.2000 pp 206-211.
- 78 **Sensitivity and Specificity of rapid HIV testing of pregnant women in India.** International J of STD & AIDS 14,2003,37-41.
- 79 **Patterns of Opportunistic infections in Females in reproductive age group**
Uganda Conference September 9-13,2001
80. **Histopathology of cryptococcosis in AIDS patients**
Barcelona Conference 7-12,2002
81. **Awareness of HIV/AIDS amongst pregnant Women in Pune, India.**
Barcelona Conference 7-12,2002
82. **Need to develop culturally relevant informed consent process for HIV screening in INDIA**
Barcelona Conference 7-12,2002
83. **HIV screening of Women presenting in early labour to the delivery room in Pune.**
Barcelona Conference 7-12,2002
84. **High post – partum morbidity in replacement fed infants born to HIV – infected women in India**
Barcelona Conference 7-12,2002
85. **Infant feeding practise among HIV infected mothers in India**
Barcelona Conference 7-12,2002
86. **Profile of lesions in patients in HIV/AIDS with tuberculosis –an autopsy study**
Paris Conference 13-16,2003

87. **Profile of bone marrow examination in HIV patients with special emphasis on detection of associated infection, study of 140 cases**
Paris Conference 13-16,2003
88. **Correlation of CD4 count and tuberculosis lymphadenopathy in HIV/AIDS patients**
Barcelona Conference 7-12,2002
89. **Sensitivity and specificity of rapid HIV testing of pregnant Women in India.**
International Journal of STD and AIDS 2003
90. **Infant feeding practices of HIV positive mothers in India**
Journal of Nutrients, May 2003
91. **Awareness of HIV-AIDS and household environment of pregnant women in Pune, India**
International Journal of STD and AIDS, Dec 2003
92. **Pharmacovigilance on MMR vaccine containing L-Zagreb Mumps strain Vaccine**
22 Oct 2004, (31-32) Pg. 4135 – 4136
93. **Optimizing the HIV/AIDS informed consent process in India**
02 Aug 2004,
94. **UNICEF : Suggestions for change**
Lancet, 22 Jan 2005
95. **Making the choice : the translation of global HIV and infant feeding policy to local practice among mothers in Pune, India**
Journal of Nutrients, Apr 2005
96. **Feasibility of voluntary counseling and testing services for HIV among pregnant women presenting in labour in Pune, India.**
International Journal of STD and AIDS, Aug 2005
97. **No definitive evidence for L-Zagreb mumps strain associated aseptic meningitis: a review with special reference to the da Cunha study**
Vaccine, Nov 2005
98. **Women's acceptability and husband's support of rapid HIV testing o pregnant women in India.**
AIDS Care. 2003 Dec; 15(6):871-4
99. **Replacement-fed infants born to HIV-infected mothers in India have a high early postpartum rate of hispitalization.**
J Nutr. 2003 Oct;133 (10):3153-7

100. **Pattern of hemoglobinopathies in western Maharashtra.**
Indian Pediatr. 2001 May;38(5):530-4.
101. **Fetal hydantoin syndrome with rheumatic valvular heart disease.**
Indian J. Pediatr. 1999 Mar-Apr;66(2):209-3
102. **Asian paralysis syndrome.**
Ann Trop Paediatr. 199 Dec;19(4):317-20
103. **Efficacy of two dose measles vaccination in a community setting.**
Indian Pediatr. 1998 Aug; 35(8):723-5
104. **Immunogenicity study of Haemophilus influenzae type B conjugate vaccine in Indian infants.**
Indian Pediatr. 1997 Sep;34(9):779-83
105. **Burkholderia pseudomallei and Indian plague-like illness.**
Lancet. 1995 Oct 7;346(8980):975.
106. **Immunogenicity and reactogenicity of indigenously produced MMR vaccine.**
Indian Pediatr. 1995 Sep;32(9):983-8
107. **Prevention of thalassemia**
Southeast Asian J Trop Med Public Health. 1995;26 Suppl 1:261-5
108. **Outbreak of plague-like illness caused by Pseudomonas pseudomallei in Maharashtra, India**
Lancet. 1994 Dec 3;344(8936):1574
109. **Prenatal diagnosis of sickle cell anemia using polymerase chain reaction.**
Indian Pediatr. 1993 Nov;30(11):1340-3.
110. **Successful treatment of hepatic hemangiomas with corticosteroids**
Indian Pediatr. 1992 Jun;29(6):769-70
111. **A translocation between chromosome 1 and 10 in a boy with mental retardation and dysmorphic features.**
Indian Pediatr. 1991 Mar;28(3):289-91
112. **Hormonal modulation of invitro biosynthesis of inhibin like peptide by human prostate**
Andrologia. 1990 Jan-Feb;22(1):7-11
113. **Argininemia.**
Indian Pediatr. 1989 Dec;26(12):1260-2
114. **Circulating levels of inhibin, prolactin, TSH, LH, and FSH in benign prostatic hypertrophy before and after tumor resection**
Prostate. 1987;10(2):115-22

- 115 **Biosynthesis and localization of inhibin in human prostate.**
Prostate. 1987;10(1):33-43
- 116 **Poliomyelitis in Pune vis-à-vis immunization in urban slums**
Indian Pediatr. 1986 May;23(5):351-4
- 117 **Antenatal diagnosis of genetic disorders.**
Indian Pediatr. 1986 Jan;23(1):51-5
- 118 **Binding characteristics of inhibin in at ventral prostate**
Prostate 1985;6(2):195-203
- 119 **Aspirin in acute gastroenteritis: a clinical and microbiological study**
J Pediatr Gastroenterol Nutr. 1984 Nov;3(5):692-5
- 120 **Clinical and Serological Evaluation of Live Measles vaccine in India**
Indian Pediatrics. 1983 Aug;20(8):573-6.
- 113 **Cell mediated immunity in rheumatic fever**
Indian Heart J. 1981 Nov-Dec;33(6):270-3
- 114 **Prenatal diagnosis of thalassemia major.**
Lancet, 1979 Nov 24;2(8152):1143
- 115 **The role of the nitroblue tetrazolium test in respiratory tract infections.**
Indian Pediatr. 1979 Aug;16(8):669-71
- 116 **Prenatal sex determination by endocervical smear. A new approach diagnosis**
Indian Pediatr. 1979 Aug;16(8):661-3
- 117 **Red cell glucose-6- phosphate dehydrogenase deficiency and haemoglobin variants among ten endogamous groups of Maharashtra and West Bengal**
Hum Genet. 1978 Nov 16;44 (3):339-43
- 118 **Immunogenicity of a new, low-cost recombinant hepatitis B vaccine derived from Hansenula polymorpha in adults**
Vaccine 2006 Apr ;34:57-3460
- 119 **Non-physician Clinicians in India**
The Lancet 2008 Feb; 371:648-649
- 120 **Polio eradication for India: Shift of focus**
Vaccine 2008 Apr. 30
-