RESUME

Dr Reem Rachel Abraham

E-mail:
Phone:
Phone:
Mobile:

Snapshot

Education

Ph.D	Medical Education (Physiology)
MSc	Medical Physiology
BSc	Microbiology, Chemistry, Botany
XII	Biology / Chemistry / Physics English / Hindi
X	General Science, Mathematics, Social Science, English, Malayalam and Hindi

Career Progression

Assistant Professor in Physiology (current position – July 2007 onwards)
Senior Grade Lecturer in Physiology: (December 2006 to July 2007)
Lecturer in Physiology: (September 25th 2001 to December 2006)
At Melaka Manipal Medical College, (Manipal campus) attached to Kasturba Medical College, Manipal, India

Lecturer in Physiology:
(Janury 2001 to September 2001)
Vinayaka Mission's Medical College Karaikkal, Pondicherry, India

Awards & Recognitions

1. 'New Investigator Award 2007' by the American Physiological Society.
2. Dr T.M.A. Pai Gold Medal - 2007 for Excellence in Medical Research by the Manipal University, India
3. 'Research Recognition Award' by the American Physiological Society in the year 2005
4. FAIMER Regional Institute Fellowship for the year 2007-2009

Areas of interest

- Teaching and Learning
- Educational Research

Objective:

To be a part of the global research front to enhance my technical, analytical and teaching skills and to utilize them to the optimum by imparting Physiology education to students in the most comprehensive manner, and to add value to the institution and achieve professional and personal growth.

Career Progression

Melaka Manipal Medical College (Manipal campus) (Attached to Kasturba Medical College, (KMC)Manipal)

Date of Joining: 25th September 2001

Melaka Manipal Medical College is a part of Kasturba Medical College, (KMC) Manipal of Manipal group of institutions. The group owns and operates medical colleges in India, Nepal and Malaysia. Melaka Manipal Medical College is a twinning program where pre clinical education is done at Melaka Manipal Medical College (Manipal Campus).

My Role

Assistant Professor in Physiology (current position)

1. **Teaching:** Impart Physiology education to students – MBBS (Bachelor of Medicine and Bachelor of Surgery) and Paramedical courses through lectures, practical sessions, Problem-Based Learning (PBL) Self-Directed Learning (SDL) sessions.
2. **Assessment:** Conduct class tests, sessional exams and university exams. Serve as internal examiner in the university examination for MBBS course.
3. **Research:** Involved in Medical Education research. Guide students in Student Research Projects.
4. **Mentor:** SupervisE academic activities of a group of students.

5. **Distance Education.** Conduct distance education classes of Manipal University through satellite mode.

Vinayaka Mission's Medical College *(From January to August 2001)*

Vinayaka Missions Medical College is a part of the reputed Vinayaka Missions group, Salem, Tamilnadu.

My Role
Lecturer in Physiology

1. **Teaching:** Imparted Physiology education to students through lectures and practical sessions.

2. **Assessment:** Conducted class tests, sessional exams and university exams.

Educational Details:

DEGREE	YEAR OF PASSING	INSTITUTION	AFFILIATION	MAJOR SUBJECTS	MARKS (%)
Ph.D	Completed in July 2007		Manipal University		
M.Sc (Medical Physiology)	2000	Kasturba Medical College, Manipal	Manipal Academy of Higher Education, Manipal (DEEMED UNIVERSITY)	First year: Anatomy, Physiology and Biochemistry. Second and Third years: Physiology	66
B.Sc	1997	St. Aloysius College, Mangalore	Mangalore University, Mangalore	Microbiology. Botany, Chemistry, English, Hindi	75
Pre-Degree	1994	B.C.M College, Kottayam	Mahatma Gandhi University, Kerala	Physics, Chemistry, Biology, English, Hindi	65
X th Standard	1992	St.Theresas Bethany Convent High school, Kerala		Physics, Chemistry, Biology, English, Hindi, Malayalam, Science, Social science	79

Awards/Fellowships received

1. Recipient of the Teaching of Physiology section **'New Investigator Award'** by the **American Physiological Society** in the year 2007.
2. Received first prize for the poster presentation entitled "Validating the effectiveness of Clinically Oriented Physiology Teaching (COPT) in undergraduate physiology curriculum" presented at the International Conference in Medical Education which was held in Bangalore, India from January 27th to 28th, 2007.
3. Recipient of the **Dr T.M.A. Pai Gold medal for Excellence in Medical Research** by the **Manipal University**, India in the year 2007.
4. Selected for the **FAIMER Regional Institute Fellowship for the year 2007-2009**.
5. Recipient of a travel grant awarded by Asian Medical Education Association (AMEA) to attend the AMEA conference in Bangkok, Thailand in October 2007.
6. Recipient of International Union of Physiological Sciences (IUPS) travel award of US $1500 to attend the XXXV IUPS Congress, which was held in San Diego, California, in 2005.
7. Recipient of **"Research Recognition Award"** by the American Physiological Society in the year 2005.

Publications:

1) **Reem Rachel Abraham**, K. Ramnarayan, Vinod Pallath, Sharmila Torke, Maneesh Madhavan, Sue Roff. Perceptions of academic achievers and underachievers regarding learning environment at Melaka Manipal Medical College (Manipal Campus) using the DREEM inventory. South East Asian Journal of Medical Education 1: 18-24, 2007.
2) **Reem Rachel Abraham,** Subramanya, Upadhya, K. Ramnarayan. Self-Directed Learning (SDL) in undergraduate physiology curriculum in an Indian medical school. Indian Educational Review 43 (1): 120-124, 2007.

3) Sharmila Torke, **Reem Rachel Abraham**, K. Ramnarayan, Subramanya Upadhya. Peer-guided Co-operative Learning (PCL) enhances performance of refresher students. Advan. Physiol. Edu. 31: 118-118, 2007.

4) **Reem Rachel Abraham,** Asha Kamath, Subramanya Upadhya, K. Ramnarayan. Learning approaches to physiology of undergraduates in an Indian medical school. Medical Education 40: 916-923, 2006.

5) Sharmila Torke, Subramanya Upadhya, **Reem Rachel Abraham**, K. Ramnarayan. Computer assisted Objective Structured Practical Examination (COSPE):.an innovative method of evaluation. Advan. Physiol. Edu. 30: 48-49, 2006.

6) Sharmila Torke, Asha Kamath, K.Ramnarayan, **Reem Rachel Abraham**, Subramanya Upadhya. Impact of multiple true false questions on student performance in written examinations. Indian Educational Review 42 (2): 71-80, 2006.

7) **Reem Rachel Abraham**, Subramanya Upadhya, Sharmila Torke, K. Ramnarayan. Students' perspectives of assessment by TEMM model in Physiology. Advan.Physiol.Edu 29: 94-97, 2005.

8) **Reem Rachel Abraham**, Subramanya Upadhya, K. Ramnarayan. Self-Directed Learning. Advan.Physiol.Edu 29: 135-136, 2005.

9) **Reem Rachel Abraham**, Subramanya Upadhya, Sharmila Torke, K. Ramnarayan. Clinically oriented physiology teaching: strategy for developing critical thinking skills in undergraduate medical students. Advan.Physiol.Edu 28: 102-104, 2004.

10) **Reem Rachel Abraham,** Vinod Pallath, Ganesh Kamath, Asha Kamath, K.Ramnarayan. Learning approaches of undergraduate medical students to physiology in a Non-PBL (NPBL) and a Partially PBL (PPBL) oriented curriculum. (*in press:* journal Advances in Physiology Education)

11) **Reem Rachel Abraham,** K. Ramnarayan ,Vinod Pallath, Sharmila Torke. Students' perceptions of learning environment in an Indian medical school. (accepted for publication in the journal BMC Medical Education)

12) **Reem Rachel Abraham,** K. Ramnarayan, Asha K. Validating the effectiveness of Clinically Oriented Physiology Teaching (COPT) in undergraduate physiology curriculum (under peer review in the journal BMC Medical Education).

13) **Reem Rachel Abraham.** Pathway-MCQ: An Active Learning Strategy. (under peer review in the journal Indian Educational Review)

14) **Reem Rachel Abraham**, Eva Mahirah binti Zulkifli, Elaine Soh Zi Fan, Gan Ning Xin, Jennie Tan Geok Lim. Stress among first year students in an Indian medical school. (under peer review in the journal Advances in Physiology Education)

15) **Reem Rachel Abraham,** Raghavendra Rao K, Surekha Kamath, Asha Kamath. Multi-format Objective Structured Practical Examination (MOSPE) in Physiology in an Indian medical school: The initial experiences (under peer review in the journal Advances in Physiology Education)

Other honors

Judged as the third good teacher in the year 2007 (among teachers who teach first year MBBS students) by the students.

Peer review activities

Reviewed one manuscript which was submitted to the illumination section of the journal, 'Advances in Physiology Education'.

Conferences attended

1. Attended and presented a paper entitled **"**Learning approaches of undergraduate medical students to physiology in a Non-PBL (NPBL) and a Partially PBL (PPBL) oriented curriculum at the 5th Asia Pacific Medical Education Conference (APMEC) which was held in Singapore from 24th to 27thJanuary, 2008.
2. Attended and presented a paper entitled "Perceptions of academic achievers and underachievers regarding the learning environment at Melaka Manipal Medical College (Manipal Campus), using the DREEM inventory in the Asian Medical Education Association conference held in Bangkok, Thailand from 23rd to 27th October 2007.
3. Attended and presented a paper entitled "Learning approaches to physiology of undergraduates in an Indian medical school" at the 4th Asia Pacific Medical Education Conference (APMEC) which was held in Singapore from 8th to 11th February, 2007.

4. Attended and presented a paper entitled "Validating the effectiveness of Clinically Oriented Physiology Teaching (COPT) in undergraduate physiology curriculum" at the International Conference in Medical Education which was held in Bangalore, India from January 27th to 28th, 2007.
5. Attended and presented a paper entitled "Self-Directed Learning (SDL) in undergraduate physiology curriculum in an Indian medical school" in the South East Asian Association of Institutional Research (SEAAIR) conference which was held in Langkawi, Malaysia from September 5th to 7th 2006.
6. Attended and presented a paper entitled "Clinically Oriented Physiology Teaching" in the XXXV congress of International Union of Physiological Sciences (IUPS) and Experimental Biology held at San Diego, California from March 31st to April 5th 2005.
7. Attended the "GOLDEN APPICON" conference held at the National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, India in December 2004.

CME and Workshops attended

1. Participated in the Workshop on "Assessment of Professionalism in Medical Students" conducted by the Yong Loo Lin School of Medicine, National University of Singapore in February 2007.
2. Participated in the Workshop on Assessment Methods: What Works, What Doesn't" conducted by the Yong Loo Lin School of Medicine, National University of Singapore in February 2007.
3. Participated in the Workshop on "Measurement 101 in Medical Education" conducted by the Yong Loo Lin School of Medicine, National University of Singapore in February 2007.
4. Participated in the Workshop on "Problem-Based Learning: Process and Outcomes" conducted by the Yong Loo Lin School of Medicine, National University of Singapore in February 2007.
5. Participated in the " Faculty Development workshop on Strategies for Teaching, Learning and Evaluation" conducted by the KMC International Center, Manipal Academy of Higher Education, India from September 29th to October 1st, 2005.

6. Participated in the Teaching and Learning workshop conducted by the Department of Medical Education, Kasturba Medical College (KMC), Manipal, India in April 2002.
7. Participated in the Teaching and Evaluation workshop conducted by the Department of Medical Education, Kasturba Medical College (KMC), Manipal, India in September 2003.
8. Attended a CME on Pathophysiology of Neurodegenerative disorders held at the National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore, India in December 2004.
9. Attended a CME on "Ageing: Irreversible but Manageable" conducted by K.S.Hegde Institute, Mangalore, India in March 2004.
10. Attended a CME on "Hypertension" conducted by the Department of Physiology, Kasturba Medical College (KMC), Mangalore, India in March 2004.

Professional society membership:

- Student member of the American Physiological Society (APS) from October 2004 till date

Computer Proficiency:

Operating Knowledge of various utility softwares

Personal Details:

Name	**:**	Dr Reem Rachel Abraham
Date of Birth	**:**	
Sex	**:**	
Languages Known	**:**	English, Malayalam, Hindi and Kannada
Residential Address	**:**	16 / 48A, Opposite Crystal Apartments Ananth Nagar I Stage, Manipal, INDIA 576 104
Address for communication	**:**	Department of Physiology, Melaka Manipal Medical College (Manipal campus), Karnataka, India 576 104
Marital status	**:**	

DECLARATION

I confirm that the above information provided by me is true to the best of my knowledge.

Place: Manipal,

Date: 5-12-2007.

Reem Rachel Abraham

Proposed Project

Developing an assessment tool for assessing students' performance in Problem Based Learning sessions

The undergraduate medical program at Melaka Manipal Medical College (MMMC) (Manipal Campus), India conducts the Bachelor of Medicine and Bachelor of Surgery (MBBS) program which is of five years duration. The first two and a half years students spend in Manipal, India, and the remaining in Malaysia. The first year subjects include anatomy, physiology and biochemistry. The first year curriculum is divided into four blocks as follows:

- Block 1: Basic concepts, blood and nerve-muscle physiology
- Block 2: Cardiovascular, respiratory, and gastrointestinal physiology
- Block 3: Endocrine, reproductive, and renal physiology
- Block 4: Central nervous system and special senses

The teaching and learning strategies adopted at MMMC include didactic lectures, practical classes, Self-Directed Learning (SDL) and Problem-Based Learning (PBL) sessions. During the PBL sessions, students are presented with paper based case scenarios and the sessions are conducted in the traditional manner including both brainstorming and presentation sessions. At present, no proper assessment method exists for evaluating the participation of students in PBL. Marks are allotted to individual students based on the clarity, content, time management and the presentation style. Students complain that the assessment method is not fare as students are assessed by different teachers based on their (teachers') perceptions. There is no proper checklist. Therefore it is necessary that a proper assessment method for PBL should be developed in my institution.

Essential Skills in Medical Education (ESME), Research Essential Skills in Medical Education (RESME) and Fundamentals of Assessment in Medical Education (FAME) courses

These courses are conducted as a part of the Association for Medical Education in Europe (AMEE) conference. This year, the conference is to be held in Prague, Czech Republic from 30 August to 3 September.

Research Essential Skills in Medical Education (RESME)

In this course, participants are invited to write a research proposal for an empirical study on a topic of their interest. Each participant will be assigned to an experienced research mentor. Peers and mentors will be involved in helping the participants to write the proposal. The participants will share research proposals. Approval of the proposal by the mentor within 6 months after the AMEE conference completes this course.

By attending this course, I would gain more insight regarding the appropriate methodology and research design of my proposed project. As the support from an experienced research mentor is available, I believe that attending this course would be of great help to me in designing the project.

Essential Skills in Medical Education (ESME)

The ESME Program has been designed in the context that all doctors in any branch of medicine or field of practice are likely to have some teaching responsibilities for undergraduates, postgraduates, peers, other healthcare workers or patients. ESME provides an entry-level teaching qualification, and will be of particular interest to

teachers who are engaging in medical education for the first time, or who have been given some new responsibilities or assignment relating to teaching.

Attending this course provides me an opportunity to apply the principles of medical education research to my proposed project.

Fundamentals of Assessment in Medical Education (FAME)

FAME is directed at those with responsibility for assessing undergraduate medical students, graduate trainees, and practicing doctors. In addition, the scope of the course will include selected aspects of program evaluation. Instruction will concentrate on application of assessment principles to participants' specific assessment problems.

By attending this course, I believe that I would gain more insight into the different assessment methods which I can attempt to implement in my institution.

Justification for requested funds

The course fee for ESME, RESME and FAME courses are £500, £500 and £350 respectively. As I am working in a developing country, I find the course fees as well as the travel expenses extremely high.

Essential Skills in Medical Education (ESME), Research Essential Skills in Medical Education (RESME) and Fundamentals of Assessment in Medical Education (FAME) courses

These courses are conducted as a part of the Association for Medical Education in Europe (AMEE) conference. This year, the conference is to be held in Prague, Czech Republic from 30 August to 3 September.

Essential Skills in Medical Education

The ESME program has been designed in the context that all doctors in any branch of medicine or field of practice are likely to have some teaching responsibilities for undergraduates, postgraduates, peers, other healthcare workers or patients. ESME provides an entry-level teaching qualification, and will be of particular interest to teachers who are engaging in medical education for the first time, or who have been given some new responsibilities or assignment relating to teaching.

The ESME program is accredited by AMEE and approved by an international Advisory Board. It has been designed around a set of competencies that all practising teachers should possess. These include: Effective Teaching, Skilled Educational Planning and Informed Assessment and Evaluation. The ESME program consists of:

1. Courses built around major medical education conferences
2. ESME Short Assignment: leading to award of the ESME Certificate

All participants who complete the five day course will be awarded a Certificate of Attendance. Some participants will choose to complete further work which, together with

their participation in the five-day program, will qualify them for the award of the ESME Certificate in Medical Education. This Certificate will be awarded on the basis of satisfactory completion of a portfolio which demonstrates that the participant has applied and reflected on the principles discussed in the course during his/her own day-to-day teaching program..

Research Essential Skills in Medical Education (RESME) Course

The purpose of this course is to introduce participants to some essential principles and methods of research in medical education. The course aims at giving participants a basic understanding of some fundamentals concerning research in medical education such as phrasing a research question, methodology of research and research designs. It is the intention of this course to encourage participants to engage in doing their own research and help them to outline a research proposal for an empirical study. At the end of the full course participants will be able to:

- formulate a research question
- select an appropriate global methodology
- operationalize the research question into a research plan
- write a research proposal

Curriculum:

The curriculum is organised around the annual AMEE conference and consists of one full day pre-conference workshop, attendance at the AMEE conference and daily lunch-session discussions with a tutor, participation in at least three in-conference workshops of the participant's own choice, and finally one half-day post-conference workshop. After

the conference participants are invited to write a research proposal for an empirical study on a topic of their interest. Each participant will be assigned to an experienced research mentor. Peers and mentors will be involved in helping the participants to write the proposal. The participants will share research proposals. Approval of the proposal by the mentor within 6 months after the AMEE conference completes this course.

Fundamentals of Assessment in Medical Education (FAME)

The Fundamentals of Assessment in Medical Education course is offered by the National Board of Medical Examiners (NBME) and the Foundation for Advancement of International Medical Education and Research (FAIMER), Philadelphia, USA, in collaboration with AMEE. FAME is directed at those with responsibility for assessing undergraduate medical students, graduate trainees, and practicing doctors. In addition, the scope of the course will include selected aspects of program evaluation. Instruction will concentrate on application of assessment principles to participants' specific assessment problems. The five-day FAME course will feature one full day and one half day pre-conference workshop, one-hour lunch sessions with faculty on each conference day, concluding with a post-conference half-day session.

Course Design

FAME is designed around two complementary dimensions, namely, five assessment themes and four assessment frames:

Themes:-

Test Design is addressed in two segments. The first concentrates on establishing the

purpose(s) of the assessment, defining the content that should be included, and identifying validity evidence. The second segment addresses *assessment formats that include constructed response (e.g., essay, fill-in) and oral examinations.* Matching methods to assessment needs is emphasized in these segments.

Test Material Development refers to the writing and preparation of test items (e.g., MCQs, case simulations) and other assessment instruments.

Standard Setting describes the methods that may be used to establish levels of adequate performance. In the main these methods will emphasize content-based approaches.

Scoring, Analysis and Reporting addresses the processes surrounding post-administration processes. Procedures for equating are included here. Provision of feedback to students and participants is also addressed in this segment.

Frames:-

Assessment of Knowledge and Reasoning involves typical classroom testing of student learning. Often these assessments are associated with assigning marks or course grades. Usually, paper testing is the method of convenience, with reliance on MCQ formats preferred. Longitudinal comprehensive assessment would usually be accommodated here as well.

Assessment of Skills concerns selected aspects of clinical performance, some of which may be related to physical examination manoeuvres (detecting heart murmurs) or therapeutic procedures (inserting Swann-Ganz line) or interpersonal skills (eliciting a

focused history of recent illness). Usually these assessments require higher-fidelity simulations associated with OSCE, SP, computer-based, or mechanical devices and mannequins. Oral examinations with short or long cases may be considered to fall within this frame as well. Checklists and ratings scales are almost always required, and administration almost invariably occurs in special settings.

Assessment of Workplace Performance is more often invoked for issues involving graduate doctors and practitioners where naturalistic observation may be called into play. Assessment instruments will more likely relate to collecting observational data, but there may be augmentation with systematic data-gathering from indirect measures, such as, chart audits or review of SOAP notes. It is likely that multiple assessments may be more frequent in this frame.

Assessment of Programs occurs most commonly when curriculum changes of any dimension are contemplated, or have been implemented, and there is a need to document the results of the changes. Here the scale of the assessment is conceivably very large, involving multiple measures of different facets of the institutional environment, possibly undertaken over an extended period of time. This frame may also call for careful documentation of activity without any necessary assessment character, as when faculty teaching is monitored to gather data about the extent of implementation of a program change. As a consequence of all these factors, this frame is likely to be encountered less commonly.

Participants will be asked to rank the above assessment frames in order of priority relating to how relevant they are in their work.