

Literature for admission in Fellowship & M.Phil in Regenerative Medicine and Translation Sciences: Academic session starting 2016, School of Tropical Medicine, Kolkata, The West Bengal University of Health Sciences

Summary:

The Department of Regenerative Medicine and Translation Science, Calcutta School of Tropical Medicine under The West Bengal University of Health Sciences is among the few centres in the world focused on clinical applications of cell based therapies.

Background and Rationale:

Regenerative Medicine (RM) is a branch of medical science which studies the replacement or regeneration of human cells, tissue and organs, to counter chronic diseases that debilitate organs and hence bodily function. It includes biomedical approaches to clinical therapies that may involve the use of stem cells by injection of stem cells or progenitor cells. It may also be done by inducing regeneration by biologically active molecules or by transplantation of in vitro grown organs and tissues through tissue engineering. Regenerative Medicine is an exciting new field that holds much promise for generating innovative therapies for a wide variety of diseases and disorders. Regenerative Medicine focuses on harnessing the body's own repair mechanisms to replace or heal damaged tissues and organs. This field has the ability to touch every ailment, ranging from cancer to heart disease to nervous disorders. This multidisciplinary field incorporates stem cell biology, tissue engineering, biomaterials engineering, and transplantation science. In addition, it also includes various enabling technologies and clinical application areas, with the ultimate goal of improving patient lives.

The course objectives are:

1. To spread knowledge about this newly emerging field of modern medicine and cell therapy as this holds immense potentialities for future clinical and experimental therapies.
2. To explain the principles and clinical applications of stem cell therapy for regenerative purposes.
3. To promote theoretical and practical knowledge on the subject.
4. To teach stem cell biology and the application of technologies therein.
5. To develop research and analytical skills.
6. To promote independent/group original research and project work.

Teaching-Learning Methods: Course Coordinator and Head of the Department:

Prof. (Dr).Niranjana Bhattacharya, D.Sc, MD, MS, FACS, FICS, FICOG, FSOG (Department of Regenerative Medicine and Translational Science, Stem Cell and Progenitor Cell Research).

Global stalwarts in the field of Regenerative Medicine who were involved in formulation, instruction and execution of the previous edition of the course included:

1. Prof. Elaine Gluckman, Emeritus Prof University of Paris, France.
2. Prof David Harris, University of Arizona.
3. Prof. Ian Mc Niece, MD Anderson Hospital, University of Texas
4. Prof. Zygmunt Pozda, Curie Institute, Poland
5. Prof. Himansu Basu, Ex Vice President, RCOG, London, U.K
6. Prof. Phillip Stubblefield, Emeritus Prof University of Boston USA
7. Prof. S.Arulkumar, Emeritus Prof University of London, U.K.
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The course combines lectures, tutorials with hands-on experiments, demonstrations. The course joins together a unique group of renowned international experts with the aim of exchanging scientific knowledge on cells, biomaterials and strategies for tissue regeneration. Attendees will also have the opportunity to discuss ideas directly with the resource persons.

Academic assessment and evaluation of M.Phil and Fellowship courses:

- (1) Post-registration: Continuous assessment class room (CR) Sessions 8 CR Modules 150 hrs/yr. The Regenerative Medicine and Translational Science Department has outstanding faculty members based at top tier level Universities in the world. Invited talks and lectures from foreign faculty professors round the year are an essential component of the learning methods and students are also expected to actively participate during such interactions.

- (2) Distance Learning (DL), No. of Sessions: 4. Distance Learning Sessions: 20 hrs

(3) Clinical and pre clinical rotation. Submission of Log Book.

(4) Practicals: Hands-on practical in laboratory work pertaining to cell therapy and Clinical ward study.

(5) Group Dynamics and Practical Sessions. Method: 4 Group Dynamics: 80 hrs.

(6) Dissertation Work: Subjects are to be selected by the learner 150 hrs.

For M. Phil: Research proposal and work to be completed in 2 years.

For Fellowship: Research proposal in the first year eventually moving into a M.Phil program for the subsequent years with the option of carrying previous research thesis during fellowship program in the next year.

(7) Continuous and intensive assessment with annual theory and practical exams. To be completed in not more than 2 yrs, Internship Assignment (2 years).

Selection of Candidates for M.Phil and Fellowship are through a 3 stage performance evaluation:

Stage I: Candidates will appear for an entrance examination which will be a written test.

Stage II: Based on the performance in the theory test (stage I), candidates will be called for departmental assessment keeping in view the practical knowledge of the candidate, ability to attain the high academic level in the discipline and aptitude for research and teaching.

Stage III: Those candidates who secure 50% marks or above in theory plus departmental assessment will be finally interviewed by the selection committee under the chairmanship of HOD Regenerative Medicine and Translational Science.

Candidates, who fail to attend any of the three stages mentioned above or secure less than 50% aggregate marks in the above three stage performance evaluation, will not be considered for admission.

Fellowship Eligibility criteria:

No. of seats: 100 (One hundred only)

Duration of Course: 1 year.

M.Phil Eligibility criteria:

No. of seats: 30 (Thirty only)

Duration of the course: 2 years.

Eligible degree requirements (for M.Phil and Fellowship courses):

MBBS, MD, BDS, MDS, M.Sc in any branch of Life Science /M Tech Biotechnology /BDS/B.VSc or equivalent degree and background; Students with Clinical Embryology and other paramedical courses and a minimum of 50% marks in aggregate, are also eligible.

Tuition fees:

Fellowship: Rs.1,00,000/ only (Approx. 1518 US Dollar) which includes registration fee, tuition fee, distance learning (online) charges, examination fees, library fee, course kit for 1 year.

M.Phil: Rs.3,00,000/ only (Approx. 4600 US Dollar) which includes registration fee, tuition fee, distance learning (online) charges, examination fees, library fee, course kit for the entire duration of the M.Phil program.

Eligible international applicants will be interviewed through Skype.

Age: No upper age limit.

Payment Type:

All students are requested to submit their full tuition fees at the time of admission to the School of Tropical Medicine, Kolkata.

Scholarship/Stipends: All successful candidates are eligible for a competitive and entrance based stipend/scholarship according to local standards amounting to 3, 58,200 Indian Rupees only annually. (Approximately 5168 USD per annum)

Intending candidates who are eligible as per qualifications stated in the enclosed literature may apply within 06.12.2016, personally at the office of Controller of Examinations or send by speed post so as to reach by 06.12.2016 in the address of the University mention the name of course on the left hand corner of the envelope, in plain paper with recent photograph and particulars pertaining to Registration (where it is applicable), permanent address, address for communication, Father's name, email, cell number and copy of certificates passed (in case of MBBS/BDS 3rd Part – II / 4th (proof as applicable) mark sheet) and a bank draft of Rs. 1000/- (Rupees one thousand only) favouring “The West Bengal University of Health Sciences” payable at Kolkata for joining one year full time course mentioned above. Interested candidates can also visit the following websites for further information.

Discipline:

Life Sciences, Biomedical Sciences, Biotechnology, Stem Cells, Health Sciences, Clinical Medicine, Clinical Research, Regenerative Medicine, Translational Research

<http://www.wbuhsexams.in>

https://en.wikiversity.org/wiki/Fetal_tissue_transplantation_in_Regenerative_Medicine

https://en.wikiversity.org/wiki/Human_Fetal_growth_and_development_upto_second_trimester#External_Links

https://en.wikiversity.org/wiki/Regenerative_Medicine_using_Non-Fetal_Stem_cell_sources#Authors

https://en.wikiversity.org/wiki/Regenerative_medicine_using_pregnancy_specific_biological_substances

https://en.wikiversity.org/wiki/Cord_Blood_Science_and_its_Frontiers

https://en.wikipedia.org/wiki/Cord_blood_transfusion