UNIVERSITÀ
DEGLI STUDI DI TRIESTE

Sezione Ricerca e Dottorati

Ripartizione Dottorati

LAST REVISED 28/09/2011

DOCTORAL SCHOOL IN MOLECULAR BIOMEDICINE

GENERAL DESCRIPTION

SUBJECT AREAS COVERED BY THE SCHOOL:
- main area: BIO/10
- other areas: BIO/06; BIO/09; BIO/11; BIO/12; BIO/13; BIO/14; BIO/18; MED/01; MED/03; MED/04; MED/05; MED/06; MED/07; MED/08; MED/09; MED/11; CHIM/04; CHIM/05; CHIM/06; CHIM/09; INF/01

RESEARCH FIELDS:
1. Molecular Pathophysiology
2. Molecular genetics
3. Tissue engineering
4. Molecular oncology
5. Molecular Therapeutics and Diagnostic

ORGANIZING DEPARTMENT: Dip. di Scienze della vita
OTHER PARTICIPATING INSTITUTIONS (Italian):
- CBM - Cluster in biomedicine - Trieste
- FIF - Fondazione Italiana Fegato – Trieste
- LNCIB - Laboratorio Nazionale - Consorzio Interuniversitario per le Biotecnologie – Trieste
- CRO – Aviano (PN)
- Sincrotrone Trieste S.C.p.A.
- ICGEB - International Centre for Genetic Engineering and Biotechnology

DURATION: 3 years
MAXIMUM NUMBER OF MONTHS TO BE SPENT ABROAD: 12
OFFICIAL LANGUAGE OF THE SCHOOL: English

ADMISSION INFORMATION

NUMBER OF PLACES AVAILABLE: **18**
- SCHOLARSHIPS: 11
  FUNDING BODY/IES:
  - [cod M/1-2] Università degli Studi di Trieste 2
  - [cod G/3] MIUR funded by "Fondo Giovani Ricercatori" (MIUR "Progetto Giovani Ricercatori" (reserved to one of the following research projects within the strategic program Human Health (post genomic approaches to the study and treatment of cancer and neurodegenerative disease): 1) *"Role of microRNAs in the regulation of the p53 pathway"*; 2) *"Oncogenic (Gain Of Function) activities of mutant p53 in tumor progression"*; 3) *"Characterization of the functional interaction between tumor suppressor p53 and a ribosome assembly factor"*) 1
    N.B: This scholarship does not provide extra funding for eventual periods of study abroad within the duration of the doctorate, unless the organizing Department decides to make these funds available.
  - [cod MD/4-9]Università degli Studi di Trieste + Dip. Scienze della Vita 6
  - [cod D/10-] Dip. Scienze della Vita (Project title "*Structural and functional studies of human replication factors*") 1
  - [cod D/11-] Dip. Scienze della Vita (Project title "*Elucidation of the structure and function of human MCM helicases*") 1

NON-FUNDED PLACES
- holders of a research grant (see Art. 1.1 - Requirements) **1**
- grant-holders funded by the Italian Ministry of Foreign Affairs sitting the entrance examination in the country

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of origin **1**

ACADEMIC QUALIFICATION REQUIRED: see Announcement (art. 1.1 - Requirements)
DEADLINE FOR COMPLETION OF DEGREE: **14.11.2011**
ASSESSMENT CRITERIA: qualifications + oral interview.

- FINAL SCORE (the final score is based on the sum total of marks obtained in the interview plus the points given for qualifications and publications): 120
  MINIMUM FINAL SCORE REQUIRED: 75/120
- MAXIMUM NUMBER OF POINTS AWARDED FOR QUALIFICATIONS+ PUBLICATIONS: 20/20
  QUALIFICATIONS REQUIRED/RELATIVE WEIGHT:
  - Art. 11 Rules for Doctorates: all candidates are required to present the following documents, regardless of whether or not a score is assigned to them (see below):
    a. a detailed curriculum vitae et studiorum, + degree score and publications: 14/20
    b. a copy of the Master's degree thesis.
    For students with a degree awarded by a non-Italian university, an abstract of the thesis in English or Italian is sufficient.

    as well as 6/20:
    1. A letter of self-presentation (in English) outlining the candidate's reasons for wishing to enroll in the doctoral programme and the research objectives s/he intends to achieve by the end of the Doctoral course;
    2. A brief summary, in English, of the degree thesis (maximum 600 characters);
    3. Two letters of presentation.
  - Qualifications Evaluation Form (unless this form is presented, qualifications and publications CANNOT be assessed by the Examining Board)

  MINIMUM SCORE REQUIRED FOR QUALIFICATIONS/PUBLICATIONS:..... 5/20

ORAL EXAMINATION MARK OUT OF: 100
MINIMUM SCORE REQUIRED FOR INTERVIEW: 70/100
ABSOLUTE DEADLINE FOR RECEIVING CERTIFICATES: ..... **14.11.2011 (if by email within by midnight CET)**
ADDRESSES TO WHICH CERTIFICATES SHOULD BE SENT: by e-mail to the address of the School: dmm@units.it - Otherwise by post to the following address: Prof. Del Sal, LNCIB - AREA Science Park, Padriciano 99, 34149 Trieste.

EXAMINATION SCHEDULE:

- INTERVIEW: **21.11.2011 at 09.30 a.m.** at "Sala Riunioni", Dipartimento di Scienze della Vita, Via L. Giorgieri, 1 – 34127 TRIESTE

ALTERNATIVE LANGUAGE TO ITALIAN FOR THE INTERVIEW: English
CEFR LEVEL: --

CONTACT INFORMATION

DIRECTOR OF THE SCHOOL: Prof. Giannino Del Sal - Dipartimento di Scienze della Vita - Università degli Studi di Trieste - tel. 040/398.992 fax 040/398.990 e-mail delsal@lncib.it

VICE DIRECTOR: Prof. Guidalberto Manfioletti Dipartimento di Scienze della Vita - Università degli Studi di Trieste - tel. 040/558.3690 fax 040/558.3691 e-mail manfiole@units.it

WEB SITE: http://www2.units.it/dmm/

SCIENTIFIC PROJECT: Molecular Medicine studies the molecular bases of health and disease, producing knowledge that may be useful in diagnosis and therapy. Sequencing of the human genome opened a new avenue for research in medicine, that will lead to key improvements in our understanding of the mechanisms of disease, and their treatment (globally referred to as "post-genomic" science). In the near future it will be possible to define molecular and genetic mechanisms of diseases, evaluate the genetic risk of disease, and predict the outcome of treatment for each patient.

Molecular Medicine aims to integrate technological and scientific advances with a novel approach to the patient and his/her needs, aiming to develop personalized pharmacological treatments as well as a more efficient prevention of diseases, based on the genetic profile of each individual.
This School aims to prepare young scientists that will be able to think and develop independent research projects that will be internationally competitive in the field of Molecular Medicine. Both in the area of basic research, as well as in the area of technological transfer and clinical applications.
To achieve this objective, the School encourages and promotes critical knowledge of state-of-the art literature, but mostly will give the students a solid research experience in laboratories of high international profile. The School has therefore a strong experimental connotation. Training of PhD students involves:

i) daily research activity in close interaction with high quality researchers,
ii) attendance to seminars of Italian and international scientists,
iii) presentations activities (progress reports),
iv) critical reading of the literature (Journal clubs),
v) training in writing of project proposals and progress reports (important for future grant applications).

This practical research activity is integrated by periodic seminar courses organized by members of the teaching board.
Particular attention is devoted to monitoring and evaluation of the career of the students, and their progress during their training.
To guarantee a high quality standard of research, also the host laboratories must be evaluated. The Scientific Board of the School will carefully review international standing and scientific productivity of the supervisors who request PhD students, with particular attention to the availability of sufficient funding and infrastructure.

EDUCATIONAL AIMS AND RESEARCH TOPICS: The PhD School in Molecular Biomedicine aims to provide higher education to young University graduates in biomedical – and scientific in general – disciplines, to prepare them for a career in basic, clinical or translational research in the field of molecular medicine, with specific reference to the areas of molecular oncology, metabolic diseases, molecular genetics, biochemistry, cell biology, regenerative medicine, and pharmacology. Key to the program is research activity in the laboratory, where students develop a critical approach to scientific observation and carry out a specific project; such research is expected to be translated into one or more publications in international peer-reviewed journals. To provide specific competences the School organizes intensive courses on the core disciplines of modern bimolecular science. The teaching activity of the School relies essentially on seminars given by national and international experts. The program also aims to provide students with expertise in science management, more specifically in “grant-writing”, and the development of technologically oriented research projects. The PhD School in Molecular Biomedicine is a logical choice for young University graduates in biomedical subjects (e.g. Medicine, Biology, Biotechnology, Pharmacology), but also other experimentally oriented fields of study (e.g. Physics, Chemistry), who wish to pursue a career in basic and translational biomedical research.The School gathers a significant number of researchers with strong experience in many fields of biomedicine, and offers to prospective students a broad set of choices spanning the entire spectrum of modern research in molecular medicine. Currently, the School covers the following fields of research: Molecular oncology, Pathophysiology of metabolism, Tissue engineering, Molecular genetics, Molecular therapeutics and diagnostics.The School is part of a newly created Italian Network of PhD programs in biomedical and biotechnological sciences (NEIDOS, http://dev.neidos.it) which involves the two major scientific societies in this field: the Association of Cell Biology and Differentiation (Associazione Biologia Cellulare e Differenziamento, ABCD) and the Italian Society of Biophysics and Molecular Biology (Società Italiana di Biofisica e Biologia Molecolare, SIBBM). NEIDOS is a spontaneous gathering of Italian Graduate Schools and Courses, which aims at an overall improvement of the training and educational activities offered by national graduate programs, to make them more attractive to bright, talented and highly motivated students, both nationally and internationally.