

SEMM

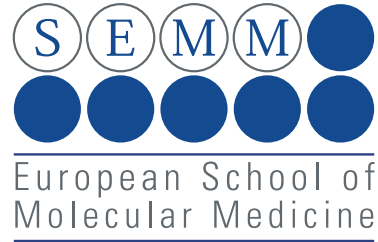
European School of Molecular Medicine



European School of
Molecular Medicine

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Who are we?



European School of
Molecular Medicine

The Foundation

SEMM is a private foundation for higher education in biomedicine that is promoted by three Government Ministries: the Ministry of Health, the one of University and Research, and the Treasury.

The founding members are:

3 of the most prestigious Italian Universities:

- THE UNIVERSITY OF MILAN
- THE UNIVERSITY OF NAPLES "FEDERICO II"
- THE VITA-SALUTE SAN RAFFAELE UNIVERSITY OF MILAN

2 of the largest biomedical research charities in Italy:

- FIRCA, the Italian Foundation for Cancer Research
- THE TELETHON FOUNDATION

4 of the most important research institutes:

- IFOM, the FIRCA Institute of Molecular Oncology Foundation - Milan
- IEO, the European Institute of Oncology - Milan
- CEINGE, the Centre for Genetic Engineering - Naples
- TIGEM, the Telethon Institute of Genetics and Medicine - Naples

People

CHAIRMAN

Prof. Umberto Veronesi

VICE-CHAIRMAN

Prof. Adriano de Maio

SCIENTIFIC DIRECTOR

Prof. Pier Giuseppe Pelicci

SCIENTIFIC COORDINATORS

MILAN: Elisabetta Dejana

NAPLES: Francesco Salvatore

ADVISORY BOARD

The board is composed of representatives from each founding institution.

ACADEMIC BOARD

The Academic Board oversees all scientific and training activities. Current members are: Pier Giuseppe Pelicci, Pier Paolo Di Fiore, Elisabetta Dejana, Gioacchino Natoli, Francesco Salvatore, Andrea Ballabio and Riccardo Cortese.

MILAN

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FACULTY

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TIGEM

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Diego di Bernardo
Maria Pia Cosma
Brunella Franco
Germana Meroni
Vincenzo Nigro
Michèle Studer
Enrico Surace

our project



Mission and tools

SEMM promotes training and research within emerging sectors of biomedicine, such as genomics, molecular medicine, nanotechnologies and bioethics.

SEMM operates within centres of excellence and promotes the integration of basic research and clinical practice.

SEMM collaborates with Italian Universities to create its training programmes.

Aims

To set up a new training scheme that integrates knowledge and know-how, and that centres on:

- EMERGING DISCIPLINES
- TRANSFERABILITY TO THE MEDICAL PRACTICE
- INTERDISCIPLINARY PRINCIPLES
- AN INTERNATIONAL OUTLOOK

Activities

- THREE Ph.D. COURSES
- INTERNATIONAL EVENTS
- SCIENTIFIC SEMINARS

SEMM in numbers

3 Ph.D. courses:

- MOLECULAR MEDICINE
- MEDICAL NANOTECHNOLOGY
- FOUNDATIONS OF LIFE SCIENCES AND THEIR ETHICAL CONSEQUENCES

150 students, 20% of which are foreigners

55 teachers

3 international events per year

4 scientific research centres of excellence

70 scientific seminars per year

multidisciplinary and international outlook



where are we?



Our branches

SEMM has branches in Milan and in Naples.

Lessons and laboratory sessions take place in four research centres.

CIMAINA

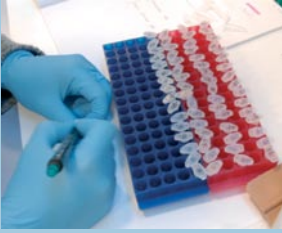
Milan

This centre was opened in 2004 by the University of Milan, with the support of the MIUR (Ministry of University and Research). CIMAINA hosts researchers who work in the fields of physics, chemistry and biology, from both Italian and foreign institutions. The laboratories are equipped with the most advanced technologies for the synthesis and characterization of nanostructured materials and interfaces.

CAMPUS IFOM-IEO

Milan

The IFOM-IEO Campus is an important centre for cancer research in Europe. The campus covers an area of 24,000 square metres, hosts 33 research groups and a total of 450 researchers. Research activity is supported by a technological core that offers advanced technologies, including nanotechnologies, genomics, bioinformatics, robotics, proteomics and structural biology.



TIGEM

Naples

The Telethon Institute of Genetics was created in 1994, with the generous support of the Telethon Foundation. Its mission is to understand the molecular mechanisms of genetic diseases, in order to develop new preventive and therapeutic strategies. TIGEM currently hosts 17 research groups, including a total of 120 students, researchers, technicians and administrative personnel. Research activity is supported by a technological core that provides scientists with advanced technological services.

CEINGE

Naples

The Centre for Genetic Engineering is a non-profit consortium, of which the University of Naples Federico II was a founding member in 1984. The centre focuses on research in the field of advanced biotechnologies and on its applications in the fields of health and production. Research at CEINGE ranges from viral vectors to gene therapy and proteomics. The new CEINGE site covers an area of 8,500 square metres and includes 16 research laboratories as well as laboratories for various supporting technological platforms.

research centres
of excellence



Ph.D. courses



Molecular Medicine

Scope of the course

The Ph.D. course is open to anyone having a degree in the sciences and to M.D.s who wish to embark upon a career in the field of experimental medicine. The aim of the course is to train researchers in Molecular Medicine and in Post-Genomics, focusing particularly on Molecular Oncology and Genetic Diseases.

Training activities

Intensive laboratory training is complemented by advanced courses on emerging disciplines, such as structural biology, bioinformatics, genomics and proteomics, molecular diagnostics and drug discovery.

Professional outlook

Possible future careers can be expected in research centres, in the biotechnology industry and in other biomedical sectors.

research topics

ANIMAL MODELS

BIOINFORMATICS

CELL BIOLOGY

EPIGENETICS

GENOMICS

HUMAN GENETICS

IMMUNOLOGY

MOLECULAR ONCOLOGY

PROTEOMICS

STRUCTURAL BIOLOGY

Agreements

- THE UNIVERSITY OF MILAN
- THE UNIVERSITY OF NAPLES "FEDERICO II"



UNIVERSITÀ
DEGLI STUDI
DI MILANO



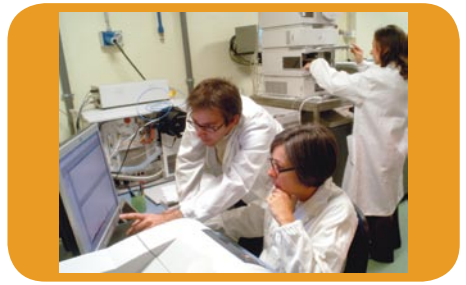
School sites

- CAMPUS IFOM-IEO - Milan
- CEINGE, the Centre for Genetic Engineering - Naples
- TIGEM, the Telethon Institute of Genetics and Medicine - Naples



Molecular Medicine

Ph.D. courses



Medical Nanotechnology

Scope of the course

This course is open to students having a degree in the sciences, especially to chemists, physicists, biologists and biotechnologists. It aims to train its students in the use, development and integration of a nanotechnology approach in the medical sciences.

Training activities

The Ph.D. course will cover advanced bioinformatics, proteomics, materials sciences, imaging technologies, and will allow students to have hands-on experience with nanosensors, biochips and robotics.

Professional outlook

Possible future careers can be expected in research and clinical centres, in the biotechnology and nanotechnology industries and in other biomedical sectors.

research topics

CELL ARRAYS

MICRO AND NANOPATTERNING

DRUG DELIVERY

HYBRID BIO/ARTIFICIAL INTERFACES

SINGLE MOLECULE INTERACTIONS

NANOSENSORS

IMAGING TECHNOLOGIES

MICROARRAYS AND BIOCHIPS

Agreements

- THE UNIVERSITY OF MILAN
- ITALIAN INSTITUTE OF TECHNOLOGY



UNIVERSITÀ
DEGLI STUDI
DI MILANO

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School sites

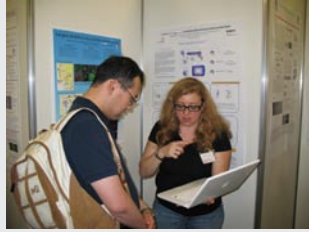
- CAMPUS IFOM-IEO - Milan
- CIMAINA, Interdisciplinary Centre for Nanostructured Materials and Interfaces - Milan



CIMaINa

Medical
Nanotechnology

Ph.D. courses



Foundations of Life Sciences and their Ethical Consequences

Scope of the course

This Ph.D. programme is open to students having either a scientific or a philosophical degree as well as to medical doctors. The course aims to create internationally recognized scholars in the fields of the foundations of the Life Sciences, ethical analysis and the relationships between biomedicine and society.

Training activities

The Ph.D. course will include a full, multidisciplinary training in biology and medicine, as well as in logic, philosophy of science, ethics and epistemology. Theoretical courses are complemented by a mandatory period of training in a research laboratory. This teaching approach is highly innovative both in Italy and in Europe.

Professional outlook

Graduates of this course can envisage Humanistic careers as well as careers in the fields of scientific communication and mass media.

Other possible occupations include jobs within clinical and academic research centres, in the biotechnology industry and in other biomedical sectors, such as ethical committees.

research topics

PHILOSOPHY OF LIFE SCIENCES

BIOETHICS

BIOMEDICINE AND SOCIETY

Agreements

- THE UNIVERSITY OF MILAN



UNIVERSITÀ
DEGLI STUDI
DI MILANO

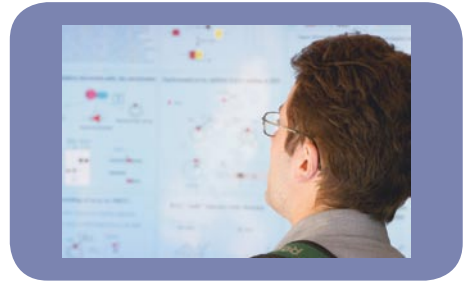
School sites

- CAMPUS IFOM-IEO, Milan



Foundations of Life Sciences and
their Ethical Consequences

international events



SEMM organises annual international events covering themes within Molecular Oncology, Molecular Medicine and Nanotechnology.

the major categories of events are

Workshops

SEMM organises two annual international workshops for experts, young researchers and students.

In addition, in collaboration with other research institutes, SEMM organises a workshop that is entirely dedicated to students. The collaborating institutes include the Vita-Salute San Raffaele University/DiBiT-HSR Scientific Institute San Raffaele, the National Cancer Institute (Istituto Nazionale per lo Studio e la Cura dei Tumori) and the Mario Negri Institute (Istituto di Ricerche Farmacologiche Mario Negri).

Theoretical/Practical Courses

The aim of these courses is to offer Ph.D. students and external academic or industrial researchers, the chance to acquire expertise in advanced technologies. The courses also provide a forum in which to discuss technological advantages, limits and future developments.

All SEMM activities are described on our website - www.semm.it - and individual international events are further advertised on websites linked to relevant fields and in the major international scientific journals.

Subscribing to the SEMM *mailing list* will allow you to keep up-to-date with events. If you wish to subscribe, please fill in the online registration form on our website, or send an email request to events@semm.it.

A photograph of a conference booth with people and a yellow callout box. The booth has a blue carpet and a white wall with a sign that says 'A37'. There are several people in the booth, including a man in a white shirt and a woman in a dark jacket. A yellow callout box with a white background and a yellow border contains the text 'education and interaction' in a pink, cursive font.

education and interaction

scientific seminars



SEMM organises some 70 scientific seminars each year. These are held by internationally recognised scientists from around the world.

The seminars provide students with an opportunity to meet and exchange ideas with researchers coming from other institutes. SEMM also offers students the chance to meet with speakers personally, in order to discuss their results.

topics

MOLECULAR AND CELLULAR BIOLOGY

MOLECULAR ONCOLOGY

STRUCTURAL BIOLOGY

GENOMICS AND PROTEOMICS

BIOINFORMATICS

NANOMEDICINE

BIOETHICS

Collaborators

In view of the fields of research covered, as well as the high level of speakers invited, the seminar programme is sponsored by an Educational grant from the **European School of Oncology (ESO)**.



international speakers

how to support SEMM activities

SEMM appeals to the generosity and vision of all citizens and private or public institutions who share its mission.

You can support the Foundation and its training activities by making a donation via bank transfer.

Our bank details

Banca Intesa
Agenzia Milano Navigli

Account number
074684380176

Account holder:

Fondazione SEMM

ABI: 03069

CAB: 09560

CIN: D

IBAN:

IT53 D030 6909 5600 7468 4380 176

our sponsors

SEMM started up thanks to an endowment fund from the Ministry of Health. We have several sponsors.

- THE UMBERTO VERONESI FOUNDATION

has been especially important to us as it contributes funding for research costs, SEMM teaching staff and student fellowships.



Other sponsors:

- EUROPEAN SCHOOL OF ONCOLOGY
- FONDAZIONE GIOVANNI GRASELLI
- ISTITUTO BANCO DI NAPOLI - FONDAZIONE
- ITALIAN INSTITUTE OF TECHNOLOGY



Istituto Banco di Napoli - Fondazione

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"support the training of new researchers"

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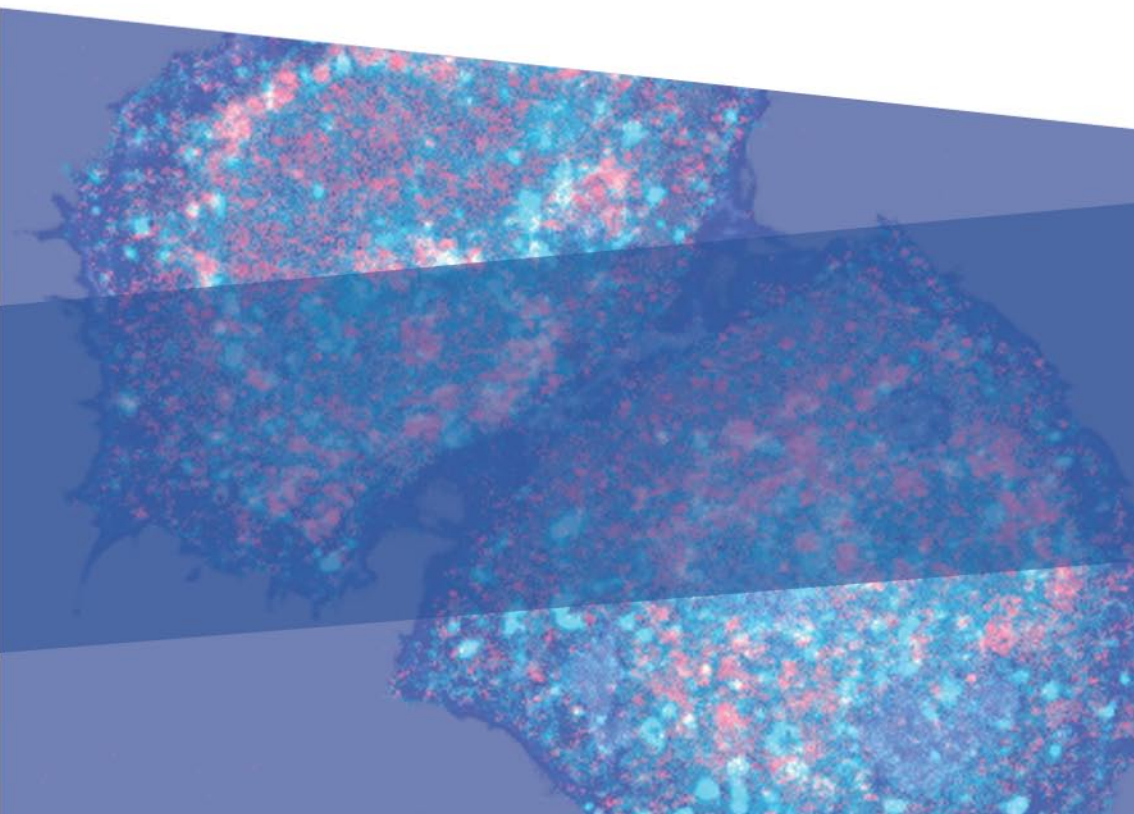
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