Master Program in
Molecular Biotechnology

Academic Year 2018/19

October 2, 2018
1 p.m.

Leonardo Room

MBC, Via Nizza 52,
10126 Torino
What is Molecular Biotechnology?

In its broadest sense, molecular biotechnology is the use of laboratory techniques to study and modify nucleic acids and proteins for applications in areas such as human and animal health, agriculture, and the environment.
Master Program in Molecular Biotechnology

- Translational Biotechnology
- Diagnostics & Drug Discovery

Duration: 2 years
ECTS: 120
Where?

MBC, Via Nizza 52, Torino
Class Schedule

First semester: from October 1, 2018 to January 18, 2019
Second semester: from March 4, 2019 to June 14, 2019

### Translational Biotechnology

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.00 - 6.00 p.m.</td>
<td>Physiology</td>
<td>Copernico</td>
</tr>
<tr>
<td>09.00 - 11.00 a.m.</td>
<td>Interaction and Gene Networks</td>
<td>Eraclito</td>
</tr>
<tr>
<td>11.00 a.m. - 1.00 p.m.</td>
<td>Genomics and Epigenomics of Gene Regulation</td>
<td>Eraclito</td>
</tr>
<tr>
<td>2.00 - 5.00 p.m.</td>
<td>Computational Genomics and Epigenomics</td>
<td>Aristotele</td>
</tr>
<tr>
<td>09.00 - 11.00 a.m.</td>
<td>The Genetic Basis of Cancer</td>
<td>Eraclito</td>
</tr>
<tr>
<td>11.00 a.m. - 1.00 p.m.</td>
<td>Genomics and Epigenomics of Gene Regulation</td>
<td>Copernico</td>
</tr>
<tr>
<td>2.00 - 4.00 p.m.</td>
<td>Molecular Dynamics of Cellular Processes</td>
<td>Copernico</td>
</tr>
<tr>
<td>4.00 - 6.00 p.m.</td>
<td>Physiology</td>
<td>Copernico</td>
</tr>
</tbody>
</table>

### Diagnostics & Drug Discovery

<table>
<thead>
<tr>
<th>Time</th>
<th>Monday</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.00 - 6.00 p.m.</td>
<td>Spectroscopy of Biomolecules</td>
<td>Adenina</td>
</tr>
<tr>
<td>3.00 - 4.00 p.m.</td>
<td>Biochemistry</td>
<td>Timina</td>
</tr>
<tr>
<td>4.00 - 6.00 p.m.</td>
<td>Physiology</td>
<td>Copernico</td>
</tr>
<tr>
<td>09.00 - 11.00 a.m.</td>
<td>Interactions and Gene Networks</td>
<td>Eraclito</td>
</tr>
<tr>
<td>11.00 a.m. - 1.00 p.m.</td>
<td>Drug Discovery: Basic Principles</td>
<td>Adenina</td>
</tr>
<tr>
<td>2.00 - 5.00 p.m.</td>
<td>Computational Genomics and Epigenomics</td>
<td>Aristotele</td>
</tr>
<tr>
<td>09.00 - 11.00 a.m.</td>
<td>Drug Discovery: Basic Principles</td>
<td>Adenina</td>
</tr>
<tr>
<td>2.00 - 4.00 p.m.</td>
<td>Biochemistry</td>
<td>Timina</td>
</tr>
<tr>
<td>4.00 - 6.00 p.m.</td>
<td>Physiology</td>
<td>Copernico</td>
</tr>
</tbody>
</table>

Thinking

Set and perform an experiment

Discuss data

Present data
Laboratory activity

The Parts of a Scientist

- Curious and Creative Mind
  - For exploring and discovering
- Observing Eyes
  - To inquire and discover
- Big Heart
  - For giving it your all
- Careful Hands
  - For writing your ideas and conducting your experiments
- Quick Feet
  - To discover and explore the world
- Listening Ears
  - For listening to ideas and sounds
- Sharing Mouth
  - To share your thoughts and ideas
- Tools
  - To help you succeed
Question 1: How much time do I have to spend in lab?
Answer: All time I have

Question 2: Which are the labs where can I get my internship?
Answer:

Academia:
- Molecular Biotechnology Center – MBC [https://www.mbc.unito.it/it/il-centro](https://www.mbc.unito.it/it/il-centro)
- Candiolo Cancer Institute – IRCCS [http://www.ircc.it/irccit/](http://www.ircc.it/irccit/)
- CeRMS– Centro di Ricerca in Medicina Sperimentale [http://www.cerms.it/](http://www.cerms.it/)

Industry:
- Bioindustry Park Silvano Fumero, Colleretto Giacosa (TO) (Bracco, Merck-Serono)
- DiaSorin
- Chiesi Farmaceutici
Laboratory activity: ECTS

**Study Plan**

<table>
<thead>
<tr>
<th>1.st Year</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage I</td>
<td>6</td>
</tr>
<tr>
<td>Thesis I</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.nd Year</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage II</td>
<td>6</td>
</tr>
<tr>
<td>Thesis II</td>
<td>14</td>
</tr>
</tbody>
</table>
Laboratory activity: Administrative Procedure

Stage I and Stage II

Before starting the internship, contact the Job Placement office (jobplacement.medicina@unito.it) and fill-in the requested forms

Thesis I and Thesis II

Before starting the internship, contact the Job Placement office (jobplacement.medicina@unito.it) and fill-in the requested form

Exam sessions

From January, 21 to February, 28, 2019
April 11-17, 2019
From June, 17 to July, 31, 2019
September, 2-30, 2019
November, 11-15, 2019

International Exchange: Erasmus Project

https://en.unito.it/international-relations/students-mobility

**Erasmus Committee**

Prof. Valeria Poli [valeria.poli@unito.it](mailto:valeria.poli@unito.it)

Prof. Giulia Caron [giulia.caron@unito.it](mailto:giulia.caron@unito.it)
International Exchange

University of Torino, Dept. Molecular Biotechnology and Health Sciences (Italy) and University of Grenoble Les Alpes (France):
Prof. Emanuela Tolosano emanuela.tolosano@unito.it

University of Torino, Dept. Molecular Biotechnology and Health Sciences (Italy) and University of Minnesota (USA):
Prof. Claudio Medana claudio.medana@unito.it
Contacts

Website: http://www.molecularbiotechnology.unito.it/do/home.pl

Prof. Emanuela Tolosano: emanuela.tolosano@unito.it

Prof. Enzo Terreno: enzo.terreno@unito.it

Tutor: Dr. Cristian Albergo cristian.albergo@edu.unito.it

Segreteria Biotecnologie: segdid.biotecmol@unito.it

Segreteria Studenti:
Corso Massimo d’Azeglio 60 - 10126 Torino
Telefono: 011/6709900 - Fax 011/670.5676
WELCOME