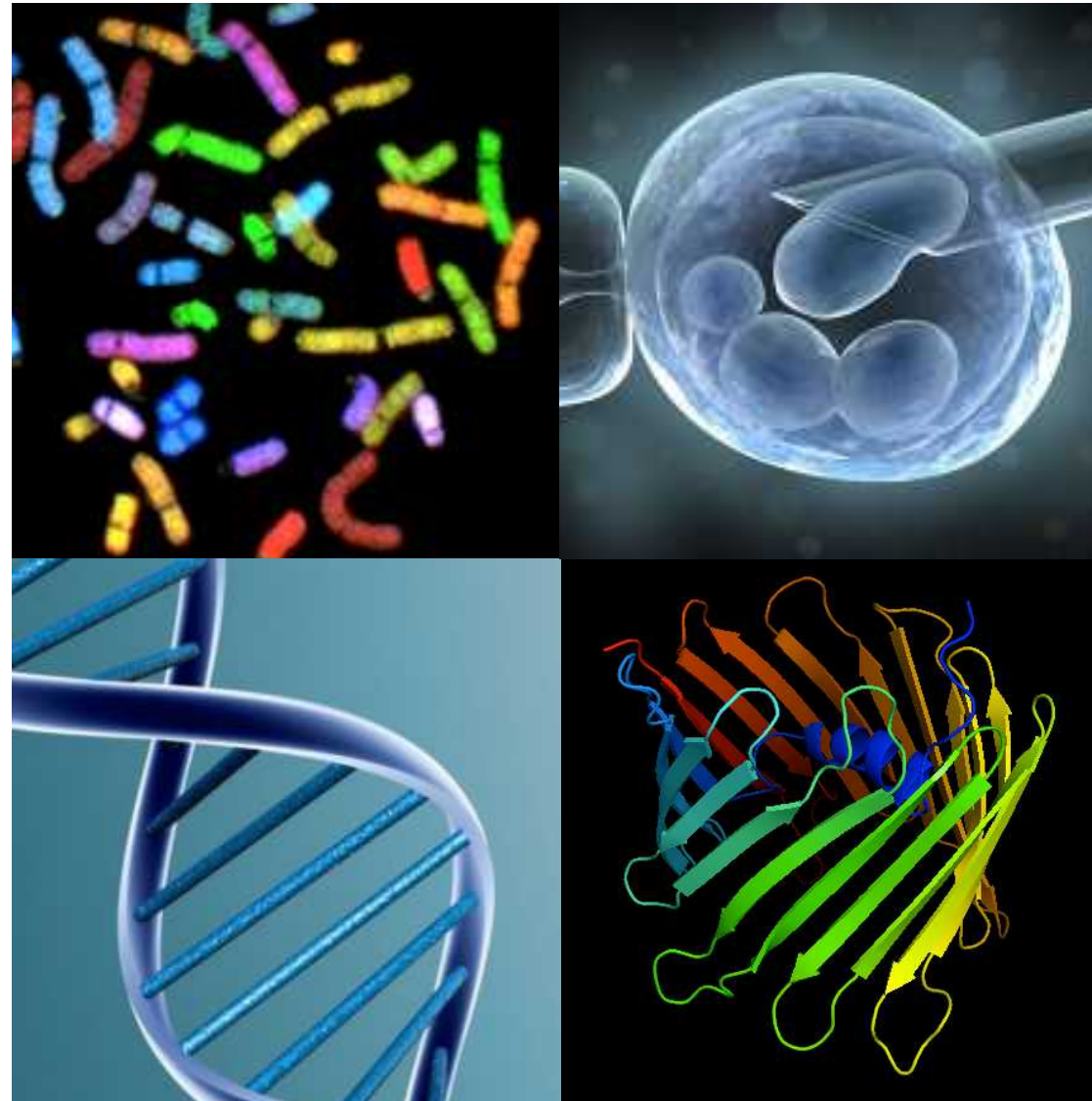




UNIVERSITÀ DEGLI STUDI DI PAVIA

LAUREA MAGISTRALIS (2-YEAR MASTERS PROGRAMME) IN  
MOLECULAR BIOLOGY AND GENETICS



<http://mbg.unipv.eu/>





E-mail address: [mbg@unipv.it](mailto:mbg@unipv.it)

Website: <http://mbg.unipv.eu/>

Coordinator of the Programme: Federico Forneris

Manager for Internationalization: Marco Santagostino





The Department of Biology and Biotechnology offers a **Master Degree Programme** in Molecular Biology and Genetics.

Relevant characteristics

- **Activated in 2009 with the support of Cariplo Foundation.**
- **First Master Degree Programme in Biology (LM6) entirely taught in English to be activated in Italy.**
- **Entirely taught in English language, from lectures to graduation.**
- **Intensive 2-year internship for experimental thesis in a Scientific Laboratory.**
- **The Department of Biology and Biotechnology was awarded with a grant for “Dipartimenti d’Eccellenza” by the Ministry of Education**





The Department of Biology and Biotechnology offers a Course for a **Master Degree** in Molecular Biology and Genetics.

This **2-year** second level degree (Biology class) is an

**intensive**

**full-time**

graduate programme entirely taught in **English** and designed for graduates at the BA level who are seeking a qualification in advanced areas of Biology.

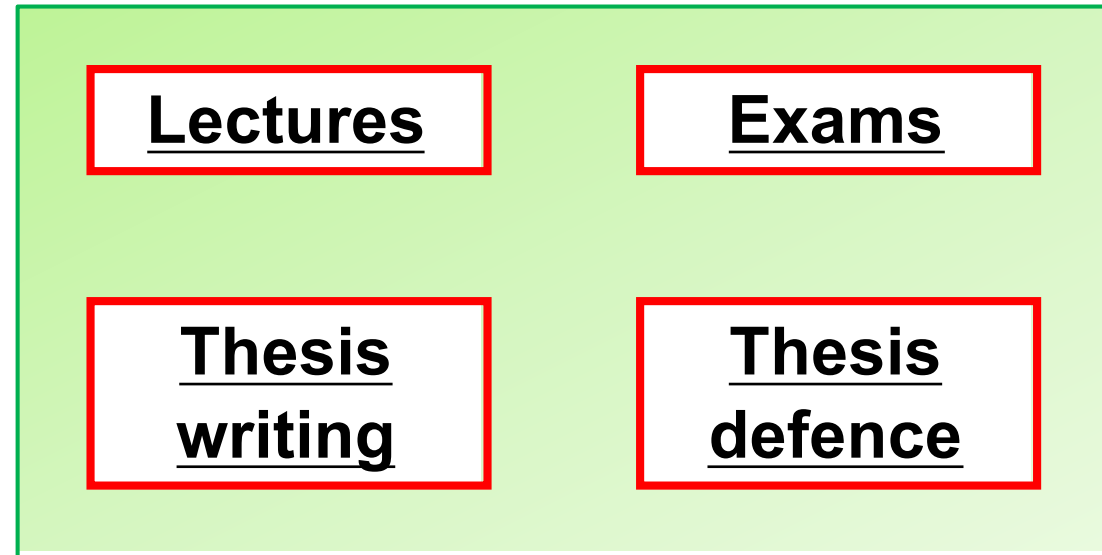


# Why in English?



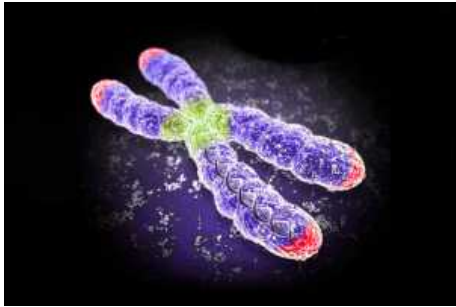
- **Science is spoken and written in English.**
- **Students are exposed to scientific terminology in the language of choice for Science.**
- **It simplifies international relations.**

## English

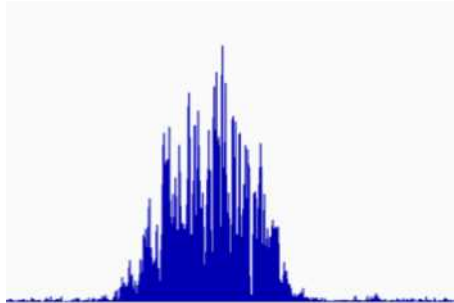


# Compulsory courses

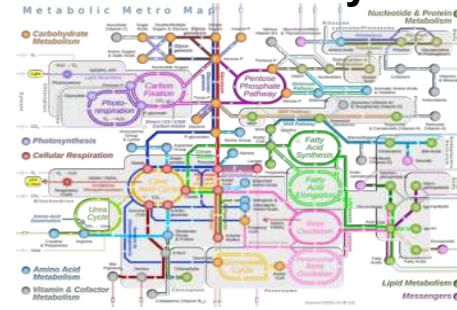
## Advanced Molecular Biology



## Bioinformatics



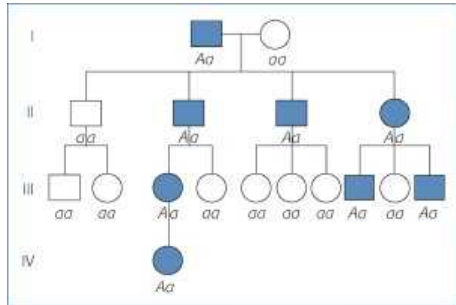
## Cellular Biochemistry



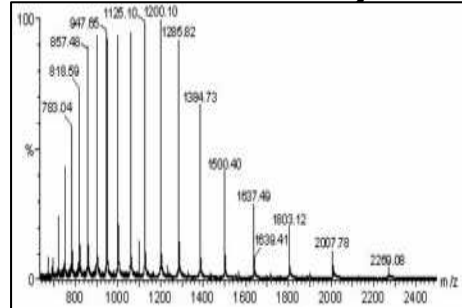
## Developmental Biology



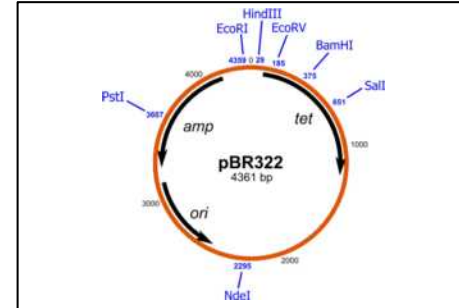
## Human Molecular Genetics



## Methods in Biochemistry



## Microbial Genetics



## Molecular Microbiology



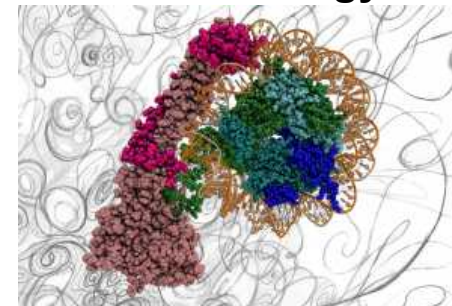
## Plant Molecular Biology and Biotechnology



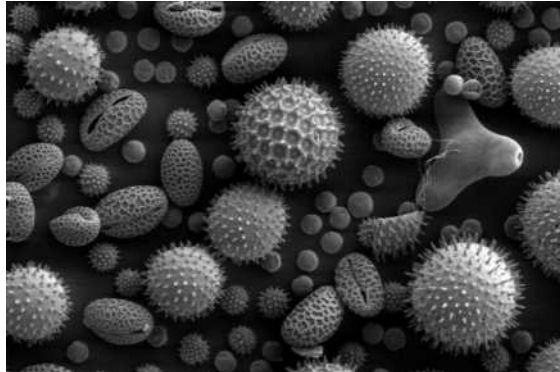
## Molecular Pharmacology



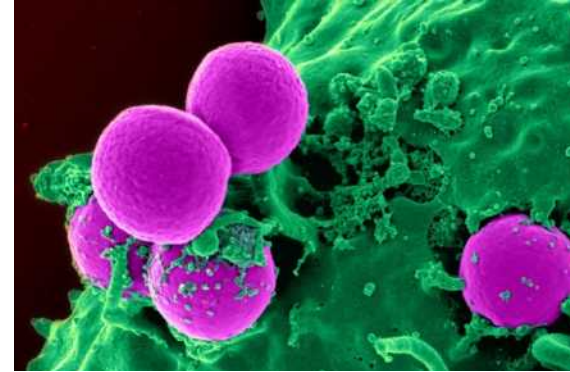
## Structural Biology and Pharmacology



## Advanced Microscopy



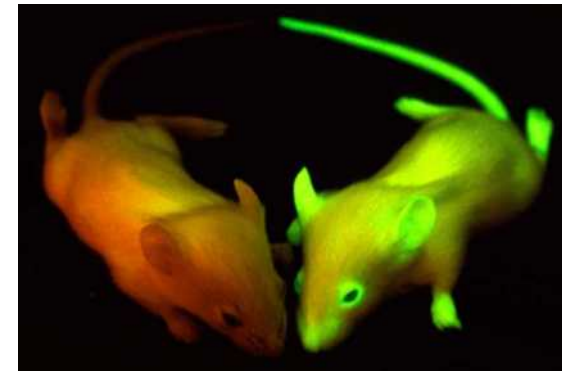
## Immunology



## Molecular Entomology



## Molecular Genetics



# Internship for thesis

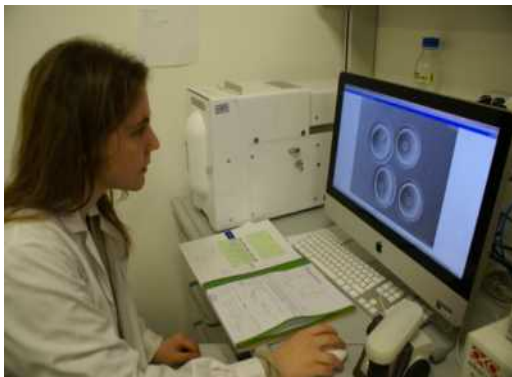
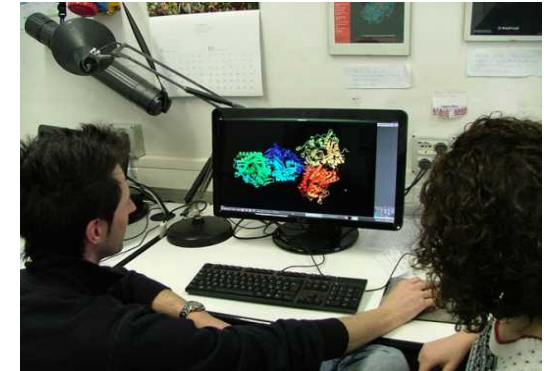
Students carry out a scientific investigation under the supervision of a faculty member (38 credits).

Graduates will benefit from the informal atmosphere between staff and students that is traditional in our University.

**For the experimental component of the Curriculum each student is associated to a research group and actively participate in one of the group's research projects.**



Experimental work in a research group (2 years)



Dissertation (Master of Sciences)





# Why a 2-year internship?



Students learn:

**How to plan scientific work**

**How to perform scientific work**

**How to critically evaluate results  
and products**

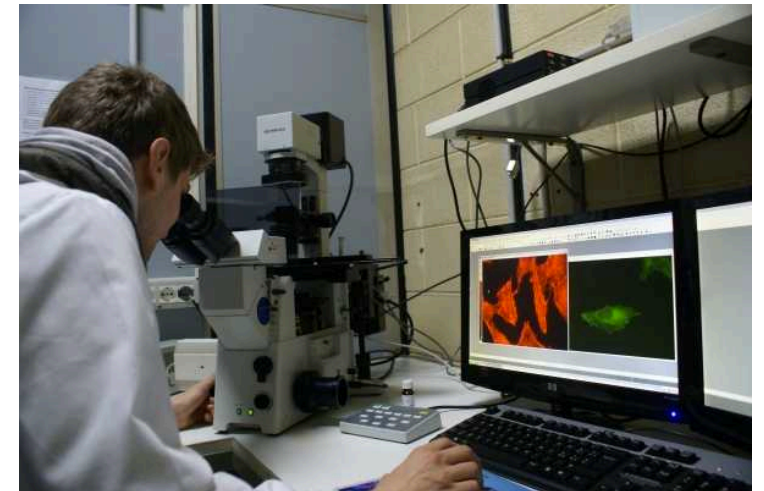
**Students learn how a  
Scientist works**

**Students graduated in this  
MSc can work both in  
research and biotech  
industry with awareness of  
the dynamics of the work in  
a scientific laboratory**



## Where?

- **Department of Biology and Biotechnology**  
**Laboratories of Genetics and Microbiology**  
**Laboratories of Biochemistry**  
**Laboratories of Animal Biology**
- Institute of Molecular Genetics – CNR
- Department of Molecular Medicine
- Department of Pharmaceutical Sciences
- Hospitals in Pavia (San Matteo, Maugeri, Mondino)



# Thesis defense



**The experimental work carried out during the two year-Degree, must result into a Dissertation (Master of Sciences) that will represent an essential component of the Course programme.**



# International classes



- Many students come from European and extra-European countries.
- Several foreign visiting students join the course thanks to specific projects promoting internationalization and cultural exchange.



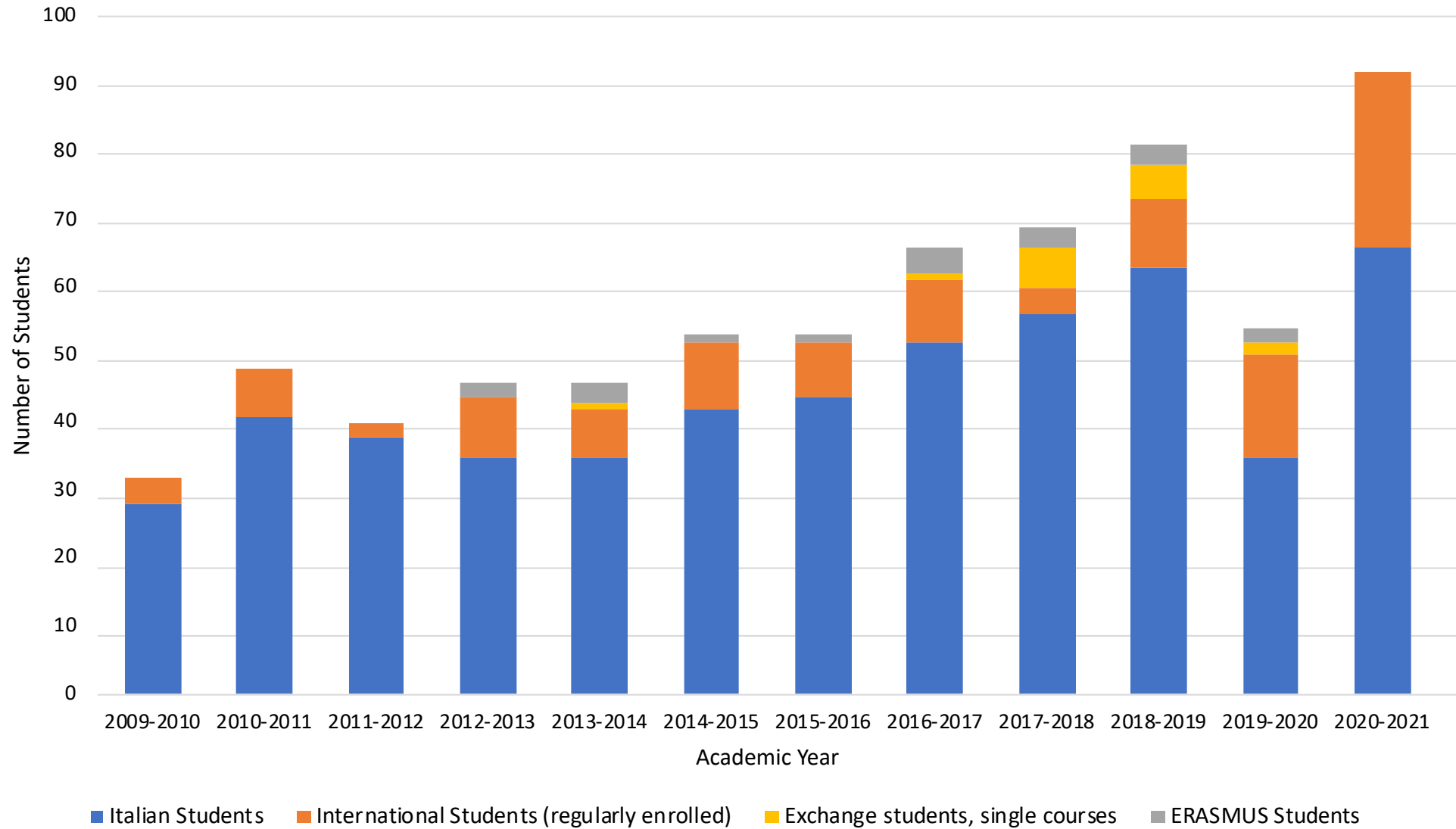
# Foreign students in the last 11 years (2009-2020)

Country	Number of Students																				Total
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Albania																					5
Argentina																					1
Austria																					2
Azerbaijan																					6
Bulgaria																					1
Brazil																					1
Cameroon																					1
Canada																					1
China																					2
Colombia																					2
Cyprus																					1
Denmark																					1
Egypt																					3
Ethiopia																					2
Finland																					1
Germany																					2
Ghana																					2
Greece																					4
Guatemala																					1
India																					17
Iran																					5
Israel																					3
Ivory Coast																					1
Jordan																					2
Kenya																					1
Lebanon																					14
Montenegro																					3
Nigeria																					2
Pakistan																					3
Palestine																					3
Poland																					2
Portugal																					1
Romania																					2
Sierra Leone																					2
South Africa																					1
Spain																					10
Sri Lanka																					1
Switzerland																					1
Syria																					2
Turkey																					6
Ukraine																					1
United Kingdom																					1
United States																					16
Vietnam																					3
Yemen																					1
Zimbabwe																					1
<b>Total</b>																					<b>119</b>

46 countries



## Number of students attending the Master Programme in Molecular Biology and Genetics



# Job profile

Graduates will find work opportunities in a wide range of fields and institutions, including a continuation of the study towards Ph.D. programmes



Academic and Research organizations



Health sector



Teaching in the private or public sector

Laurea Magistralis in Molecular Biology and Genetics

Agrobusiness research



Industry



Communication and media



**Visiting Professors from foreign institutions are responsible for lectures that are part of the study plan of the Master Programme**

- **2014/2015 1 VP** from Cyprus
- **2015/2016 6 VP** from France, Germany, Ireland, Poland, USA
- **2016/2017 7 VP** from Germany, Ireland, Netherlands, Portugal, UK, USA
- **2017/2018 7 VP** from Germany, Ireland, Netherlands, Portugal, UK
- **2018/2019 6 VP** from Austria, Belgium, Germany, Ghana, Portugal, Spain
- **2019/2020 6 VP** from Austria, Germany, Ghana, Portugal, two from Spain
- **2020/2021 6 VP** from Austria, France, Germany, Ghana, Portugal, Spain

**Students found a job thanks to Visiting Professors**



# Conclusions

- First Master Degree in Biology in Italy.
- Lectures entirely taught in English: all courses, thesis writing and defence.
- Italian Professors from the University of Pavia and Visiting Professors from foreign Universities. Besides deepening specific subjects, Visiting Professors expose students to different didactic approaches and favour international exchanges.
- Students from European and extra-European countries: international open-minded individuals and favouring cultural exchanges. Erasmus and exchange students
- **Strong experimental component:** students join a laboratory to carry out a research project that will last for the two years of the Master Course. The experimental work is a fundamental aspect of the study course. Students will have to write and discuss the experimental thesis in English.
- Website (<http://mbg.unipv.eu/> ). Official Facebook groups.

# MBG Teaching Staff

Balestrazzi Alma  
Biggiogera Marco  
Bione Silvia  
Bonizzoni Mariangela  
Buroni Silvia  
Calvio Cinzia  
Forneris Federico  
Gherardi Ermanno  
Giulotto Elena  
Guidetti Gianni Francesco  
Iadarola Paolo  
Macovei Anca  
Masiello Irene  
Mattevi Andrea  
Minetti Giampaolo  
Orioli Donata  
Pellegata Natalia  
Ranzani Guglielmina Nadia  
Riccardi Giovanna  
Sassera Davide  
Zuccotti Maurizio

## **Coordinator**

Federico Forneris

## **Manager for Internationalization**

Marco Santagostino

E-mail address: [mbg@unipv.it](mailto:mbg@unipv.it)

Website: <http://mbg.unipv.eu/>

# The 2016/2017 class

