DIPARTIMENTO
DI SCIENZE DELLA VITA

UNIVERSITÀ
DEGLI STUDI
DI TRIESTE

Laurea magistrale in GENOMICA FUNZIONALE

A.A. 2023-24
PROGRAMMI DI DOPPIO DIPLOMA

Université de Paris Cité

Université de Rennes1

UNIVERSITÉ
FRANCO
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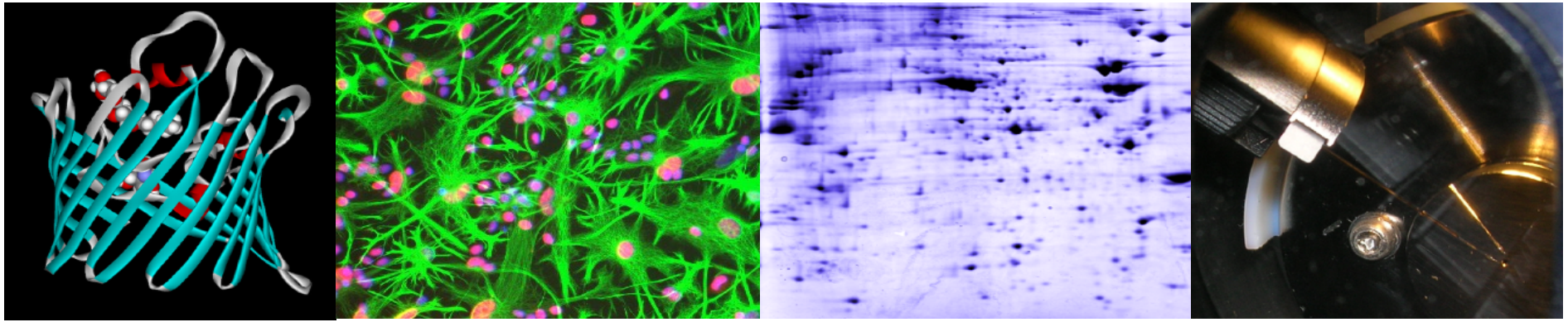

Che cos'è il Doppio Diploma?

Gli studenti iscritti al corso di Laurea magistrale in Genomica funzionale per conseguire il Doppio Diploma dovranno:

1. seguire i corsi del secondo anno presso le università partner (Paris oppure Rennes);
2. svolgere il tirocinio per la preparazione della tesi sperimentale nella sede ospitante, a Trieste oppure in altri laboratori convenzionati in italia o all'estero;
3. discutere la tesi nella sede ospitante (e a Trieste).

Al termine del percorso lo studente conseguirà sia il diploma di LM in Genomica funzionale sia il Master de Sciences Santé et Applications - mention «Génétique» (Parigi) oppure il Master Biologie Moléculaire et Cellulaire (Rennes).

Caratteristiche e organizzazione del Master de Sciences Santé et Applications presso la Université Paris Cité

- Corsi tenuti in inglese in vari campi collegati alla genetica
- Organizzazione su base settimanale
- Più di 25 corsi organizzati nel primo semestre
- Corpo docente costituito da più di 250 ricercatori provenienti dai migliori Istituti di Ricerca di Parigi
- Gli studenti del corso sono al loro quinto anno di Università (il secondo del Master, chiamato M2)
- Corso a vocazione europea
- Più di 150 laboratori dove svolgere il tirocinio sperimentale

Numero di posti e borse disponibili

Ad ogni Anno Accademico potranno accedere al percorso un numero selezionato (sei) di studenti iscritti alla LM in Genomica funzionale.

Al fine di fornire un supporto finanziario gli studenti devono fare domanda per la mobilità Erasmus studio (mobilità studio 5 mesi) ed eventualmente per le borse di mobilità internazionale.

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Modalità e requisiti per la partecipazione

Gli studenti iscritti al primo anno del corso di LM in Genomica funzionale che intendono partecipare al programma potranno presentare domanda entro le date indicate nel relativo bando Erasmus studio bandito dall'Ateneo.

Per partecipare al programma gli studenti dovranno aver superato il primo anno del corso di LM (dovranno cioè aver completato il primo anno prima di iniziare il secondo presso l'Università partner).

Selezione dei partecipanti

La selezione dei partecipanti sarà effettuata dalla componente italiana della commissione didattica del Doppio Diploma che valuterà l'idoneità del candidato sulla base della carriera di studi, della sua motivazione, della conoscenza della lingua inglese (e francese).

Laurea magistrale in GENOMICA FUNZIONALE I anno

I semestre

- Genetica e genomica molecolare 6 CFU
- Processi biochimici in microbiologia 6 CFU
- Biochimica cellulare 6 CFU

Selezione di studenti per il Doppio Diploma

II semestre

- Genomica applicata 6 CFU
- Principi e tecniche di rigenerazione tissutale 6 CFU
- Tecnologie molecolari e cellulari 6 CFU
- Biologia del cancro con lab. 7 CFU
- Epigenetica con lab. 7 CFU
- Proteomica con lab. 7 CFU

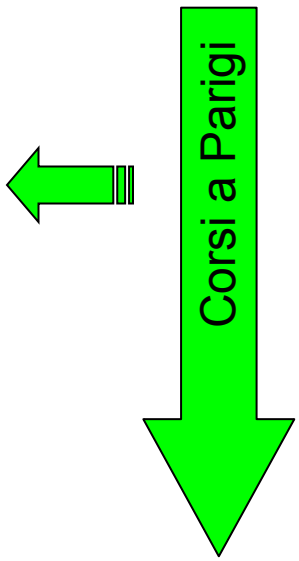
- A scelta 15 CFU

Corsi a scelta: Comunicazione scientifica in lingua inglese 3 CFU

Laurea magistrale in GENOMICA FUNZIONALE II anno

I semestre

- Gene expression 3 CFU
- International workshop 3 CFU
- Biology of ncRNA 6 CFU
- Advanced immunology 6 CFU
- Model organisms 6 CFU



Internato a TS o altre sedi

Internato a Parigi o TS (30 CFU)

Diploma

Doppio Diploma (6 CFU)

International Master's Program in Genetics!

A top research program in Paris, France
All classes are taught exclusively in English

Our Master's degree offers a choice of 28 one-week modules to create a personalized study program, covering 12 disciplines

Human Genetics, Genomics, Cancer Genetics, Evolution, Epigenetics, Cell biology, Neurosciences, Immunology, Developmental Biology, Microbiology, Aging, Stem cells

7 advanced classes at the Pasteur Institute

2 to 6-weeks selective theoretical and practical training in Immunology, Molecular Biology of the Cell, Development of the Nervous System , Genomics, Genome Analysis, Molecular and Cellular Genetics, Multiple roles of RNAs

Erasmus exchange program with one-week module in Europe

Visit and attend lectures in partner universities:
Roma, Firenze, Padova, Milan, Trieste, Barcelona

Research: 6-months laboratory training at the best institutes in Paris

More than 200 research teams in Pasteur Institute, Curie Institute, Institut Jacques Monod, IUH, Cochin Institute, Center for Epigenetics and Cell Fate, Imagine (Necker Hospital for Sick Children), ...

Several Master's fellowships available for international students

Information & Application:
www.magisteregenet.univ-paris-diderot.fr

Corsi a Parigi

- Normal and pathological intracellular signalization (3 ECTS)
- Bibliographic module (5 ECTS)
- Trieste Erasmus module (4 ECTS)
- RNA seq analysis(3 ECTS)
- Genomic analysis of cancer (3 ECTS)
- Stem cells (3 ECTS)
- Epigenetics (3 ECTS)
- Somatic Genetic in Cancer (3ECTS)
- Molecular Genetic of Human Diseases (3 ECTS)
- Biotherapy (3 ECTS)
- Genetic predisposition to Cancer (3 ECTS)
- Human evolutionary genetics (3 ECTS)
- Course Pasteur: Mouse Genetics (15 ECTS)
- Cellular aspects of development (3 ECTS)
- Cell imaging (3 ECTS)
- Aging: and neurodegenerative diseases (3 ECTS)

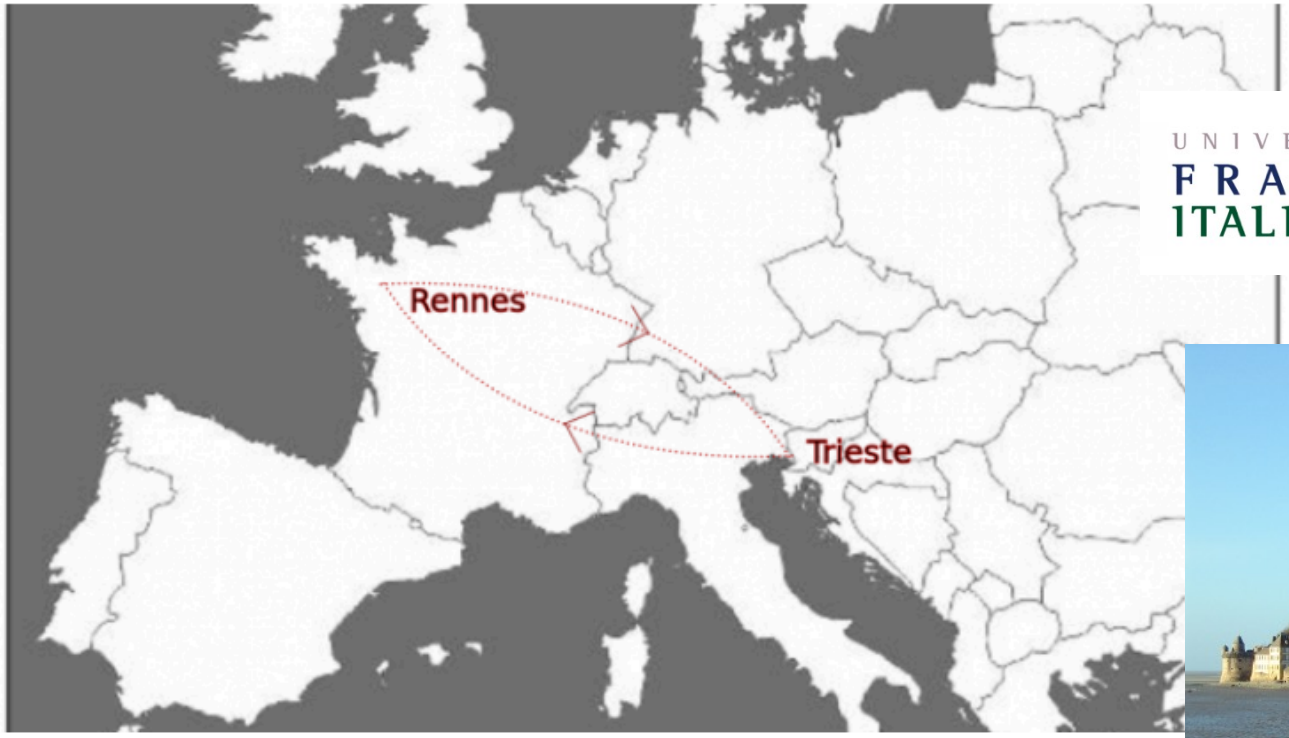
Progetto G.E.N.E. (Genetics and Epigenetics New Education)

Video 10 years of Double diploma

Dall'A.A. 2018-19
Programma di Doppio diploma con Rennes 1

Bi-diploma Rennes (FR)-Trieste (IT)

Starting 2018, Students will be allowed to apply to a bi-diploma: Master Biologie Moléculaire et Cellulaire, Rennes FR, and Master's degree in functional genomics, Trieste IT.



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- Master 1 in the first University, Master 2 in the second University.
- Master 2 in Trieste for students from Rennes
- Master 2 in Rennes for students from Trieste

https://sve.univ-rennes1.fr/le-master-biologie-moleculaire-et-cellulaire

The master diploma: what next?

About one-third of graduates undertake a PhD, in France or anywhere in the world. The others find a job in public or private research structures, companies or technology platforms.

Why studying molecular and cellular biology in Rennes?

The master's degree is devoted tohealth, biotechnology, food industry and agronomy. Rennes and the region Brittany is well placed in all these fields:

The health sector is one of Brittany's strategic sectors, with strong research in health technologies and more than 9000 jobs in a health company.

Brittany is the third region in France for biotechnology.

Brittany is the leading food-processing region in Europe.

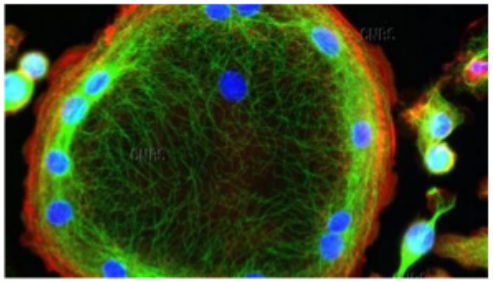
Rennes is ranked second in the 2016-2017 french student cities ranking list established by the magazine l' Etudiant, and even first for the quality of training and student life.

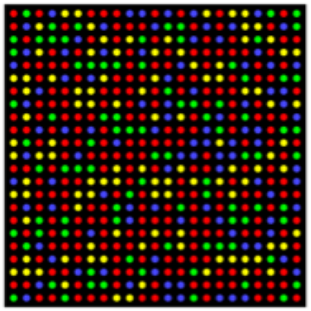
Rennes is also a city of art and history. It is the capital of the region of Britanny, in the middle of Atlantic Europe. Britanny is renowned for its beaches, coastal walks, rocky shoreline and small fishing harbours, but also for its walled medieval towns and its pan-celtic traditions.

Le master Biologie Cellulaire et Moléculaire
The Master's degree in molecular and cellular biology

UNIVERSITÉ DE RENNES 1

The master's degree trains high level cellular and molecular biologists in research or R&D for research institutes, universities, start-ups or industrial groups. The main fields of application are health, biotechnology, food industry and agronomy.





Students will acquire the following skills:

- Set up an experimental approach in cellular and molecular biology.
- Integrate scientific and technological knowledge with regulatory, ethical and economic requirements.
- Genetic analysis and engineering
- High throughput biological data analysis (including x-omics: genomics, transcriptomics, proteomics)
- Modeling, machine learning
- Strategies for studying cells and their interactions with their environment (imaging, biophysical approaches, etc.).
- Cellular communication in a healthy and pathological context.
- Drug development.

Contact: https://sve.univ-rennes1.fr/le-master-biologie-moleculaire-et-cellulaire
master-bmc@univ-rennes1.fr

A two-year (four-semester) diploma

Semester 1 (sept-dec): Core curriculum

- Prepare professional integration #1 (30 hours)
- Applied cell biology (55h)
- Applied Genetics (55h)
- Applied biochemistry (55h)
- Statistics (55h)
- Bioinformatics (30h)

Semester 2 (jan-may):

- Prepare professional integration #2 (30 hours)
- English (24h)

Choose 3 courses among:

- Toxicology
- Drug development
- Cell communication
- Cancerology
- Cellular and molecular immunology
- Structural biochemistry
- Genetics and genomics
- Quantitative biology

Full-time internship (apr-may)

Semester 4 (jan-jun): Internhsip

Semester 3 (sep-dec):

- Prepare professional integration #3 (30 h)
- English (24h)

Choose courses in the following list, to reach 160 h:

- Cellular and molecular toxicology (40h)
- Toxicology, metabolism and organ pathology (40h)
- Drug design (20h)
- Preclinical drug development (20h)
- Biotechnologies and therapeutic innovation (20h)
- Normal and pathological cellular microenvironment (40h)
- Cellular communication in the organism and its dysfunctions (20h)
- Host-pathogen interactions (40h)
- Advanced immunology (20h)
- Molecular modeling (20h)
- Protein and nucleic acid engineering (40h)
- Molecular genetics (40h)
- NGS mapping and data analysis, a practical course (40h)
- Handling massive biological data (20h)
- Simulating dynamical systems in biology (20h)
- Applied interdisciplinarity (20h)
- Machine learning for biology (20h)
- Tutored Project in cell communications, immunology or toxicology (20h)

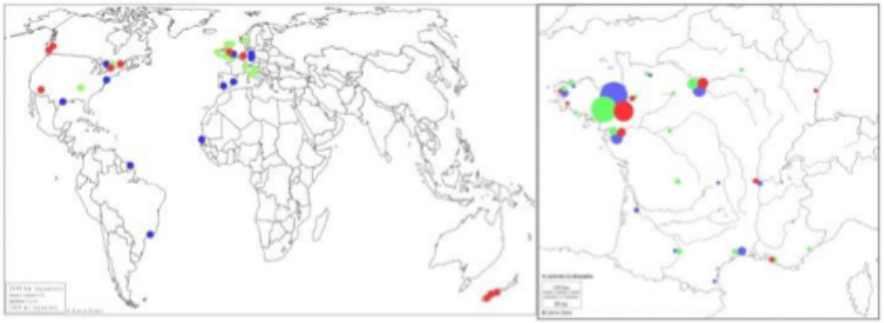
The courses in **red** are held in English.

What?
The Master's degree in Molecular and Cellular Biology includes two compulsory internships of at least 2 months in M1 and 5 months in M2.

How?
The master's teaching team is attentive to students' wishes and accompanies the research of internships.

The internships

Where?
Internship offers are proposed to students, but without obligation. Students are free to do an internship in any research or R&D facility, in France or abroad, as long as this internship is in line with the Master's training objectives.



Location of internship sites over the last three years

Corsi a Rennes1

- MOG: Molecular genetics (6 ECTS)
- NGS: Gene mapping and NGS data analysis: a practical course (6 ECTS)
- AIM: Advanced immunology (3 ECTS)
- IHP: Host-pathogens interactions (6 ECTS)
- BS1: Simulating dynamical systems in biology (3 ECTS)
- HBD: Handling massive biological data (3 ECTS)
- PRJ: Project in immunity and infection (3 ECTS)
- *MMA: Molecular modeling (3 ECTS)*
- *MLB: Machine learning for biology (3 ECTS)*

University of Trieste – Erasmus week 2022
XIV Edition

Altre opportunità di studio all'estero

Universität Wien

www.univie.ac.at

N°borse: 2 Mesi : 5

Environmental Sciences
Botany
Ecology and Ecosystems
Molecular Microbiology
Microbial Ecology
Immunobiology

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DIPARTIMENTO DI SCIENZE DELLA VITA

Universitat Autonoma de Barcelona

N°borse: 1 Mesi: 6

www.uab.es

MSc in Advanced Genetics
MSc in Bioinformatics
MSc in Advanced Immunology
MSc in Applied Microbiology
MSc in Biochemistry, Molecular Biology and Biomedicine
MSc in Bioinformatics
MSc in Biological Anthropology
MSc in Biology and Plant Biotechnology
MSc in Cytogenetics and Reproductive Biology
MSc in Neurosciences

Goteborgs Universitet

N° borse: 2 Mesi: 5

www.gu.se

MSc in Biology
MSc in Genomics and Systems Biology
MSc in Marine Science
MSc in Molecular Biology

Uppsala Universitet

N° borse: 2 Mesi: 5

www.uu.se

- MSc in Applied Biotechnology
- MSc in Bioinformatics
- MSc in Biology
- MSc in Molecular Biotechnology
- MSc in Biomedicine
- Msc in Infection Biology

UNIVERSITÀ DEGLI STUDI DI TRIESTE

DIPARTIMENTO DI SCIENZE DELLA VITA

UNIVERSITY OF EASTERN FINLAND

University of Eastern Finland - Kuopio

N°borse: 1 Mesi: 5

www.uef.fi/en/etusivu

Biomedicine (BioMed)
Biology of Environmental Change