

## Parcours Physiology, epigenetics, differentiation and cancer 2e année

### Présentation

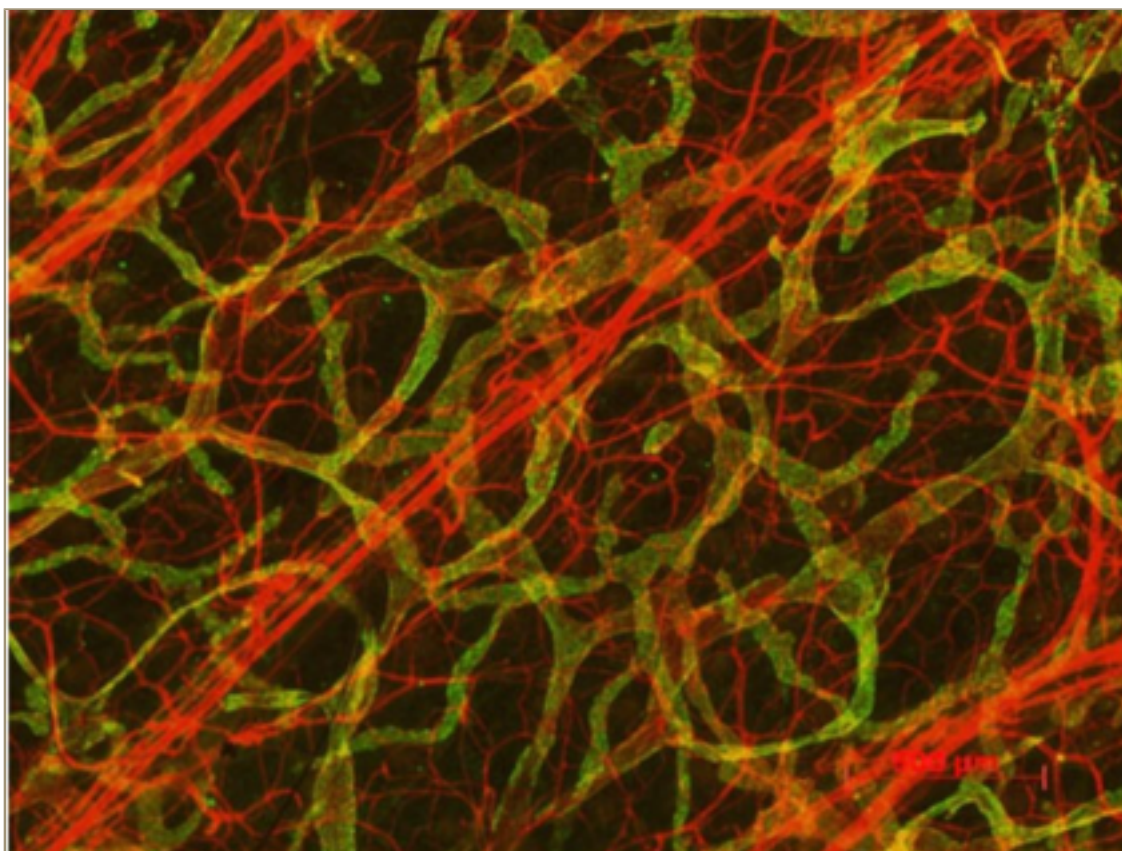
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After having completed the first year of the master in Biology program at Université Grenoble Alpes ([Molecular and cellular biology program](#) or an equivalent 1st year program in another university), the students will have to apply for admission in 2nd year PhEDC program.

The first semester of the 1st year program is meant to complete the general scientific background of the enrolled students in various fields of biology (physiology, cell biology, genetics, biochemistry...) while the second semester introduces the students to their specific 2nd year's program by offering them specialized courses and a 2-month internship in a laboratory.

The 2nd year Physiology, epigenetics, differentiation and cancer is divided in two semesters. The PhEDC first semester includes 3 types of classes :

- 1 . Classes aiming at providing general knowledge or skills that are necessary to researchers (handling of a research project, entrepreneurship, English)
- 2 . Specialized classes directly related to the topics of the 2nd year's PhEDC program (Physiology, epigenetics, development, differentiation, cancer...)
- 3 . Optional classes proposing an initiation to other fields of biological sciences (neurosciences, biostatistics, high throughput biology..). The PhEDC second semester is entirely constituted of a 6-month research internship in a laboratory.



The blood and lymphatic circulation networks in the mouse ear: a model for studying the development of blood vessels.

Laboratoire de Biologie du Cancer et de l'Infection, INSERM U1036, CEA Grenoble, Université Grenoble Alpes.

At the end of this year of master 2nd year program, the enrolled students should be able to master the theoretical knowledge and the technical expertise in the fields of physiology, epigenetics, development, differentiation and/or cancer, be fluent in English (oral communication and writing skills for the preparation of research projects and scientific reports), have acquired an expertise in synthesizing bibliographic data, be able to autonomously propose a research project and develop it using the most advanced technological equipment.

## Admission

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Second year of the master's degree in Biology : to be eligible to apply, you should have completed (or you should be enrolled in) a first year of a master's degree in Sciences *i.e.* you should have validated 60 ETCS of a master's degree in Sciences by the end of your current academic year.

Public continuing education : You are in charge of continuing education :

- if you resume your studies after 2 years of interruption of studies
- or if you followed training under the continuous training regime one of the previous 2 years
- or if you are an employee, job seeker, self-employed

If you do not have the diploma required to integrate the training, you can undertake a [validation of personal and professional achievements \(VAPP\)](#)

If you want to apply and register, you must know that the procedure is different depending on the diploma you are seeking, the diploma that you have obtained, or your country. To know more, follow the [link](#)

- 2 application campaigns are organized for the 2nd year of the master in Biology

- Campaign 1 : On the application "e-candidat" for students having completed a 1st year's master in France from March 1st to March 19th / On the application "Portail des études en France" for students having completed a 1st year in a foreign country from March 1th to March 19th
- Campaign 2 : On the application "e-candidat" for students having completed a 1st year's master in France from April 26th to May 14th / On the application "Portail des études en France" for students having completed a 1st year's master in a foreign country from April 26th to May 14th

## Poursuite d'études

Graduating from a master degree in Physiology, epigenetics, differentiation and cancer (PhEDC) leads to a career as a research engineer in academic or private laboratories. For the students interested in a career as a research scientist in academic institutions or in private pharmaceutical industries : consecutively to a master degree in Physiology, epigenetics, differentiation and cancer (PhEDC), the students may choose to continue with a PhD program offered by a french Doctoral school or foreign universities, and related to the aforementioned fields of biology. After the obtaining of their PhD, the young researchers usually undertake one or two post-doctoral trainings of 2-3 years each, in France or foreign countries, in order to diversify their expertise. They can then apply to permanent positions as:

- Full time researchers at the national French organizations of research ("CNRS", "INSERM", "INRA", "IRD" etc)
- Project managers in R&D laboratories from private biotech companies
- Researchers-teachers in French or foreign universities

## Infos pratiques :

- > Composante : UFR Chimie-Biologie
- > Niveau : Bac +5
- > Durée : 1 an
- > Type de formation : Formation initiale / continue
- > Lieu : Grenoble - Domaine universitaire

## Contacts

### Responsable pédagogique

Faury Gilles  
 gilles.faury@univ-grenoble-alpes.fr

### Contact administratif

Service Formation Chimie-Biologie  
 ufrchimiebiologie-formation@univ-grenoble-alpes.fr

## Programme

Program under construction - awaiting CFVU vote

### Master 2e année

Semestre 9

UE Research project 6 ECTS

3 option(s) au choix parmi 4

UE Ageing and longevity 6 ECTS

UE Epigenetics and cell differentiation 6 ECTS

UE Cardiovascular physiology and integrated metabolism 6 ECTS

UE Evolution and development of Eukaryotes 6 ECTS

1 option(s) au choix parmi 10

UE Ageing and longevity 6 ECTS

<b>UE Evolution and development of Eukaryotes</b>	6 ECTS
<b>UE Epigenetics and cell differentiation</b>	6 ECTS
<b>UE Cardiovascular physiology and integrated metabolism</b>	6 ECTS
<b>UE High throughput in biology</b>	6 ECTS
<b>UE Biostatistics, Bioinformatics, Modeling , Part II</b>	6 ECTS
<b>UE Cancer disease : experimental and therapeutical approaches</b>	6 ECTS
<b>UE Neurophysiology</b>	6 ECTS
<b>UE Neurodegeneration and repair</b>	6 ECTS
<b>UE Plasticity of the adult nervous system</b>	6 ECTS

## Semestre 10

<b>UE Communication in scientific english (part II)</b>	3 ECTS
<b>UE Business plan of your start-up (entrepreneurship and science)</b>	3 ECTS
<b>UE Laboratory internship PhEDD (part II)</b>	24 ECTS