

Master 2

Development of Drugs and Health Products

+ Initial training

université
PARIS-SACLAY

GRADUATE SCHOOL

Health and
Drug Sciences

Prerequisites & Public

- + **M1 D²HP**, M1 in Global Health domains (Pharmacy, Biology, Chemistry or Biotechnology)
 - + PharmD, MD, continuing education
 - English proficiency:** TOEFL, IELTS, Cambridge English Certificate or equivalent
 - + International students
 - + French students
- Selection by admission jury

Application process

- Application online at:
- www.universite-paris-saclay.fr/formation/master
- + Select Graduate School: « Health and Drug Sciences »
 - + Master: « Health and Drug Sciences »
 - + Master's path: « Development of Drug and Health Products (D²HP) »

APPLICATION DEADLINE : MAY 1st 2022

Objectives

The M2 offers training in research and development of innovative medicines, drawing on the expertise of Paris-Saclay's researchers, and professionals:

- + 1- Development of biotechnology and innovative therapies for major diseases
- + 2- Design and production strategies for drug delivery systems applied to challenging small active pharmaceutical compounds and biomacromolecules
- + 3- Development of pharmaco-toxicological and analytical methods for evaluation of new therapeutic approaches and prediction of environmental issues

Course objectives

Students will be trained in drug and health product development with advanced courses on:

- + 1- Current and upcoming therapies for the major pathologies
- + 2- Updates in biotechnology, pharmaceutical engineering and medicinal chemistry (including nanomedicine and biomaterials)
- + 3- In-depth knowledge and applications of methods used in pharmacology, toxicology, analytical sciences, biomolecular modeling and bioinformatics

Professional skills

The M2 provides students with specific skills to promote their employability:

- + Identification of the major pathology issues to implement treatments and preventive measures
- + Determination of the structure of chemical compounds and implementation of technical processes for the development of new drugs
- + Application of experimental protocols according to good laboratory practice and ethical rules
- + Analysis and solving of complex scientific and technical problems
- + Organization, project management and communication
- + Personal development

Organization

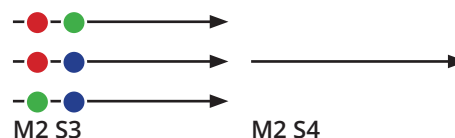
The M2 includes core and optional courses, group works, case studies, research specialization and a symposium.

The program is split into 3 axes:

- **Axis 1:** Current issues in the major pathologies
- **Axis 2:** Pharmacy and biotechnology
- **Axis 3:** Transversal pharmaceutical disciplines

The students choose 2 axes out of the 3 proposed:

1. **Axis 1 + Axis 2**
2. **Axis 1 + Axis 3**
3. **Axis 2 + Axis 3**



PROGRAM	ECTS
Core courses M2S3, 2 axes out of 3	
<ul style="list-style-type: none"> • 105 Anti-infectious therapies • 106 Therapies of major function dysregulations • 107 Therapies of immune and haemostasis dysregulations • 108 Therapies in neurodegenerative diseases • 109 Therapies in oncology • 204 Pharmaceutical engineering 2 • 205 The medicinal chemist's toolbox 2 • 206 Biotechnology 2 • 304 Analytical sciences and data evaluation 2 / Environment 2 • 305 Pharmacology 2 / Toxicology 2 • 306 Biomolecular modeling / Bioinformatics 	22
Research specialization course 2, M1S2	
<ul style="list-style-type: none"> • 004 Research specialization 	2
3 optional courses M2S3	
<ul style="list-style-type: none"> • 105a Vaccinology • 105b Infections and immunosuppression • 204a Nanomedicine • 204b Biomaterials and applications • 205a Natural product chemodiversity • 206a Biotechnology PW3: Viral and non viral gene transfer comparison • 206b Biotechnology PW4: EPO production and purification • 304a Generate, organize, analyse and extract relevant information from experimental data • 304b Emerging analytical techniques • 325 Marketing 2 	6
Research internship M2S4	
<ul style="list-style-type: none"> • 005 Laboratory internship + symposium 	30

Perspectives

- + PhD training and academic career
- + Drug evaluation in governmental / international agencies
- + Project manager in the following fields: pharmaceuticals, cosmetics, biotechnology, biomedical, regulatory, R&D, quality assurance and quality control
- + Clinical research investigator
- + Research engineer

Informations

Heads

Dr. Dorine BONTE

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Secretary

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Main teaching location

Faculté de Pharmacie - Université Paris-Saclay - Orsay, France

More information:

<http://www.master-d2hp.universite-paris-saclay.fr/>