

## Why do we need a Graduate School dedicated to Emerging Infectious Diseases?

To equip the upcoming generation of scientists, healthcare professionals, and policymakers to address the significant challenges posed by (re)emerging infectious diseases (EIDs), we need:

- ❖ Excellence in research and education
- ❖ Implementation of a “One-Health” approach
- ❖ International collaboration and communication across multiple disciplines
- ❖ Public-private partnerships

The Graduate School 1H-EID provides high-level, research-based multidisciplinary training to build a community of scientists, health-care professionals and policy-makers, sharing the same vocabulary, network and understanding of health, societal, economic and communication challenges represented by EIDs.

## 5 complementary objectives: for a high-level training on emerging infectious diseases, with a One Health approach

### 1. Masters

- **International** and **multidisciplinary** training programs at M1 and M2 level
- Targeting students in life sciences, healthcare, veterinary sciences and from engineering schools
- Personalized internships in a unique, multidisciplinary and internationally renowned research environment
- Incoming and outgoing **international mobility** grants

### 2. PhD

- Wide range of trainings in the disciplines covered by the Graduate School 1H-EID
- Partnership with 6 Doctoral Schools (BioSPC, MTCI, Pierre Louis de Santé Publique, Science des sociétés, ABIES and CdV)
- Funding of targeted, inter-partner, interdisciplinary or international doctoral contracts
- Funding of thesis extensions, **international mobility** grants and congress fees

### 3. Continuous Education

- Targeting professionals, researchers, policy-makers (public and private sectors) using **MOOCs**, **DUs** and tailored options
- Validation of professional experience (**VAP**) or validation of acquired experience (**VAE**)
- Training of non-scientific audiences on biology, infectious diseases and crisis management

### 4. Innovative educational tools

- MOOCs, virtual reality tools, serious games, iGEM challenge
- **Summer Schools**
- **Career Workshops**
- Partnership with **international networks**: Institut Pasteur Network, CircleU, ERASMUS, IDEAL+

### 5. Industrial Partnerships

- Co-construction of targeted training sessions for industrial partners
- Organization of joint events between public and private sector
- **CIFRE PhD scholarships**
- “**Job Shadowing**” internships for Masters and PhD students in partner industries

### Contacts

Project Manager: **Anvita Bhargava**: [gradschool.1health-eid@u-paris.fr](mailto:gradschool.1health-eid@u-paris.fr)

Program Heads: **Isabelle Martin-Verstraete** - **Solen Kernéis**





## An Emerging Infectious Diseases (EID) track of the Molecular and Cellular Biology Master (BMC)

### Master 1

The EID cursus is available within the Molecular and Cellular Biology Master at UP Cité. It includes new courses (Computational Biology, One Health, Biostatistics, Ecology) and promotes internships on EID related topics in laboratories associated to the Graduate School.

### Master 2

A multidisciplinary M2 course with options to create your own tailored program.

## Master 2

### Common Module – 3 ECTS

Get a global vision of the One Health approach and an integrated, multidisciplinary understanding of emerging infectious diseases.

### 1 Major (9 ECTS) among 2 options

#### Biology of emerging pathogens

Understand the mechanisms of pathogen emergence (viruses and bacteria) from biological, economic, and sociological perspectives.

#### Epidemiology and biostatistics

Discover the tools of clinical epidemiology and data modeling/management and learn from physicians, statisticians, decision-makers.

### 1 Minor (6 ECTS) among 5 options

#### Animal, Environment and Human Interfaces

Understand the diversity of mechanisms by which humans, animals and their environment interact as well as the ecological and health consequences of these interactions.

#### Humanities & social sciences

Learn about how political and societal processes impact healthcare and humanitarian assistance globally, as well as how human activities affect the balance of the biosphere.

#### Evolutionary dynamics

Learn the principles of population genetics and of evolutionary dynamics, consolidating your knowledge in taxonomy, phylogeny and more, and acquire the tools to study microbial evolution and its impact on public health.

#### Biology of emerging pathogens

#### Epidemiology and Biostatistics

### Optional courses (12 ECTS) in 5 disciplines

### Internship in research laboratories (30 ECTS)

Project Manager: **Anvita Bhargava**: [gradschool.1health-eid@u-paris.fr](mailto:gradschool.1health-eid@u-paris.fr)

MSc Heads: **India Leclercq** – **Sandie Munier** – **Naïm Ouldali** – **Hélène Péré** – **Jean-Emmanuel Hugonnet**

