

Post-doctoral position at Institut Pasteur Paris:
**Mathematical modelling of virus-bacteria interactions and impact of
vaccinations on antibiotic resistance**

A 3-year post-doctoral position in mathematical modelling is available at Institut Pasteur Paris, France, in the “Epidemiology and Modelling of evasion to antibacterials” unit (EMEA, ex Phemi) to work on the interaction between respiratory viruses and bacteria and optimization of public health measures to reduce their burden in the community.

The post-holder will analyse jointly datasets of disease surveillance and drug consumption from different settings and build mathematical models to analyse interactions between pathogens, estimate their burden and investigate how optimization of vaccination and antibiotic campaigns can help reducing the incidence of severe infections, especially with antibiotic resistant bacteria.

The different tasks will include conducting data analysis, building and analysing dynamic models and estimating model parameters from empirical data. The researcher will work in close collaboration with researchers from different fields (epidemiology, public health (National Reference Centers and Santé Publique France), mathematical modelling, and microbiology).

Applicants should have a PhD in infectious disease epidemiology, mathematical modelling, computational biology, quantitative ecology or relevant quantitative subject (e.g. mathematics, statistics, physics, etc). Applicants should have strong background in computer programming, modelling or related methodological development and excellent communication skills (both oral and writing). Some experience in epidemiology and/or health care related research would be an advantage. Exposure to large datasets would be an advantage.

The appointment is for three years starting beginning 2020.

Interested candidates should send their application (CV, list of publications, motivation letter and names and two reference letters) to Lulla Opatowski (lulla.opatowski@pasteur.fr) for informal discussion about the position or application. Applications will be evaluated continuously until the position is filled.