

**Research engineer or postdoctoral position in Biostatistics or bioinformatics
in Paris.
Institut Pasteur. Inserm. Univ. Saint Quentin en Yvelines. FR**

We are currently seeking to recruit a research engineer or post-doctoral researcher at the Institut Pasteur Unit “Epidemiology and Modeling of bacterial Evasion to Antibacterials” (director, Didier Guillemot) which is also the “Anti-infective Evasion and Pharmacoepidemiology” Team of the Inserm CESP research center (Centre de Recherche en Epidémiologie et Santé des Populations, Villejuif, France).

The global aim of the project, funded by the French Ministry of Solidarity and Health, is to study the impact and medico-economic consequences at 12 months of the covid-19 pandemic on sepsis and lower respiratory infections in patients hospitalized in France at a national level using data from French health databases (SNDS).

Applicants should have a master, engineer degree or PhD in Biostatistics or Epidemiology or bioinformatics. The research topic will revolve around health care pathways (HCP) through state sequence analysis (SSA). Initially used in social science, SSA was more recently applied in the study of HCP. This method can describe the temporal dimension of healthcare consumption and allows the identification of different care patterns and patient profiles. State sequence analysis describes longitudinal data through the analysis of sequential dataset (sets of sequences). Each sequence is divided in temporal units and for each unit, states are considered. After SSA analysis, the sequences are grouped in different clusters using clustering methods. In the literature, there are several methods for studying the similarity/dissimilarity of sequences and for performing clustering. The aim is to compare the different methods using extensive simulations and study the impact of number of states and the intra- and inter-patient variability but also the impact of an absorbent state in the sequence. Indeed, currently all states are assumed to be temporary, but this is not true when mortality is considered as a state.

The selected candidate will work in close collaboration with scientists having expertise in epidemiology, biostatistics, and infectious diseases. The position includes leading statistical analysis and manuscript writing in collaboration with the research team. The selected candidate will be encouraged to present the findings of the project at scientific conferences as well as to administrative authorities.

The earliest start date is as soon as possible. The duration of the position is of 12months, and it will be located at Institut Pasteur, Paris.

Salary will be based on qualifications and experience according to the Inserm salary grid.

Applications will be considered until the position is filled. Applicants are encouraged to submit their CV, a short research statement, a preferred start date, one manuscript (published or unpublished), and the names of at least one reference person.