Laboratoire/Entreprise : CNRS UMR 8256

Durée : 2 years
Contact : christian.neri@inserm.fr
Date limite de publication : 30/11/2024

Postdoctoral Position - Systems Biology of Neuronal Vulnerability in Neurodegenerative Diseases, Paris, France

Host lab:
Brain-C Lab, Institute of Biology Paris-Seine (IBPS), Paris
see http://www.ibps.upmc.fr/en/research/biological-adaptation-and-ageing/brainc)

Project: A 2-year position is immediately available in the Brain-C Lab in Paris to address outstanding questions about the temporal and molecular dynamic of neurodegenerative disorders and define new therapeutic rationales for early-stage intervention in these disorders. The successful applicant will will use the machine learning methods available in BioGemix —our machine learning platform for biological precision in leveraging complex omics data— to analyze complex omics data obtained in models of amyotrophic lateral sclerosis (ALS) and compare resulting models to computational models of neurodegenerative disorders such as Huntington's disease (HD). In collaboration with mathematicians and bioinformaticians inside and outside the team, The successful applicant will also have the possibility to develop innovative machine-learning approaches for modelling and simulating gene regulatory networks and for optimal target selection. This position is a unique opportunity to further develop expertise and skills in a multidisciplinary team and network of direct collaborators that cover systems modeling, cellular neurobiology and preclinical/clinical research.

Profile: The candidates are expected to be highly-qualified and to have strong collaborative skills and commitment to team work along with strong ability to work independently, and to have track record of expertise & writing papers as demonstrated by publications and pre-prints. The position is full time and on site, and candidates should have less than 5 years of postdoctoral experience and a strong interest for research.

Training and required skills:
Candidates should hold a Ph.D. in Informatics/Bioinformatics or Mathematics or Probability & Statistics or Physics. Candidates that hold a diploma from high-profile Engineer Schools (e.g. Ecole Polytechnique, Supelec, Centrale, EPFL, ETZ) are welcome to apply.
- Demonstrated experience and autonomy in probability and statistics for the analysis of complex datasets (probabilistic models, R)
- Data modeling skills, *e.g.* application of optimal transport and network inference concepts to omics data analysis.
- Good autonomy in machine programming (at least one of the following languages: Python, C/C++, Java).
- Skills in database management or web technologies (javascript, Php) are desirable but not mandatory.
- Knowledge of genome sciences and omics technologies will be a plus.

Application: interested candidates should send a letter of motivation, a full CV and the names and emails of two-three references to christian.neri@inserm.fr and lucile.megret@sorbonne-universite.fr

Employment address:
IBPS, Campus de Jussieu
9 Quai St Bernard
75005 Paris – France

Laboratoire/Entreprise : CNRS UMR 8256

Durée : 2 years
Contact : christian.neri@inserm.fr
Date limite de publication : 31/03/2024

Study Engineer Position – Bioinformatics & systems modeling for neurodegenerative disease research, Paris, France

Host lab:
Brain-C Lab, Institute of Biology Paris-Seine (IBPS), Paris
see http://www.ibps.upmc.fr/en/research/biological-adaptation-and-ageing/brainc)

Project: A two-year position is immediately available in the Brain-C Lab in Paris for a bioinformatician at the Study Engineer (IE) level (post-master position). The selected candidate will work with a team of mathematicians, bioinformaticians, and neurobiologists on modeling time- and cell-resolved omics data to built computational models of molecular pathogenesis in neurodegenerative diseases such as amyotrophic lateral sclerosis (ALS), integrate data from other diseases such as Huntington's disease (HD) and disseminate data via online platforms. The selected candidate will use BioGemix, our post-omics machine learning platform and related databases. This position is a unique opportunity to further develop expertise and skills in a multidisciplinary team and network of direct collaborators that cover systems modeling, database development, and cellular neurobiology for breakthrough in neurodegenerative disease research.

Profile: The candidates should hold a Master in Statistics or a Master in Informatics and they should have no more than 3-4 years of post-master experience. The position is full time, on site, and candidates should have strong collaborative skills and commitment to team work along with strong ability to work independently in addition to strong interest for research.

- **Training and required skills:**
  Experience working with NGS data and performing respective bioinformatic pipelines in order to process sequencing data.
- Programming autonomy on at least one of the following languages: python, R, C / C ++.
- Good knowledge of basic web technologies: PHP, MySQL, JavaScript, jQuery.
- Fluency on at least 2 of the following 3 platforms: Ubuntu, macOS, Windows 10.
- Knowledge in statistics and machine learning
- Hands-on experience with in house server maintenance (Backup, shared space, and webserver).
- Scientific English essential

Application: Interested candidates should apply immediately by sending a letter of motivation, a full CV, and the names and emails of two-three references to christian.neri@inserm.fr and lucile.megret@sorbonne-universite.fr