

Postdoc - Testa Group - EU project NEUROCOV

APPLICATION CLOSING DATE: February 10th 2023

Human Technopole (HT) is a new interdisciplinary life science research institute, created and supported by the Italian Government, with the aim of developing innovative strategies to improve human health. HT is composed of five Centres: Neurogenomics, Computational Biology, Structural Biology, Genomics, and Health Data Science. The Centers work together to enable interdisciplinary research and to create an open, collaborative environment that will help promote life science research both nationally and internationally.

The laboratory of Prof. Giuseppe Testa at the Human Technopole (HT) in Milan is looking for a Postdoctoral Researcher funded by the new EU project NEUROCOV ([link](#)).

The Testa lab at Human Technopole is a vibrant, interdisciplinary research community spearheading stem cell modelling to study the pathophysiological mechanisms underlying brain diseases across both genetic and environmental causes (Villa et al. *Cell Reports*, 2022; Caporale et al. *Science*, 2022; Adamo et al. *Nature Genetics*, 2015; Mihailovich et al. *bioRxiv*, 2022; Lopez-Tobon et al. *bioRxiv*, 2022). At the forefront of human experimental modelling, especially brain organoid technology, the group has been contributing to standard setting benchmarks of the field (Germain et al. *Stem Cell Reports*, 2017; Pasca et al. *Nature*, 2022, Lopez-Tobon et al. *Stem Cell Reports*, 2019; Cheroni et al. *Translational Psychiatry* in press, 2022), straddling multiple scales of analysis from single cell multi-omics to functional profiling and in vivo validation.

The successful candidate will be part of the NeuroCOV project, a newly established major interdisciplinary research network focused on the neurological and psychiatric consequences of COVID-19, interrogating the host/virus interplay in the human brain at single cell resolution and integrating brain organoid modelling, artificial intelligence and epidemiology to deconvolute personalized trajectories of NeuroCOVID vulnerability and their population impact.

The successful candidate will develop and harness highly innovative experimental model systems to elucidate mechanisms and actionable targets of NeuroCOVID pathogenesis, benefitting from collaborations with a cutting-edge team of experts from Germany, Italy, Belgium, the Netherlands, Finland, Sweden and Israel. Specifically, they will lead the experimental pipelines (including experimental design, implementation and integrative analysis) to deconvolute personalized trajectories of NeuroCOVID vulnerability in patient-derived brain organoids from longitudinally phenotyped cohorts, combining viral assays, gene editing, single cell multiomic profiling and advanced imaging. To this end, they will harness the state-of-the-art facilities of Human Technopole (Automated Stem Cell and Organoid, Genomics, Light Imaging and Flow Cytometry), and Scientific Support Units (Software Development and Data Curation, Cell Reference Brain Atlas, Tissue Processing, Advanced Cell Culture and Electrophysiology).

Finally, the successful candidate will be responsible for coordinating the computational analysis of the complex datasets produced in the NEUROCOV consortium, performing analysis and/or closely collaborating with the bioinformaticians from the Testa lab and partners, with the aim of integrating molecular and clinical phenotyping and implementing predictive modelling of NeuroCOVID vulnerability.

Job requirements

We are looking for a passionate scientist, eager to apply their critical thinking and creativity to make the difference for one of the most unmet emerging medical needs of our times.

Essential requirements:

- PhD or MD in a relevant subject area (neuroscience, developmental neurobiology, neuroimmunology, virology, biochemistry, cell biology, stem cell biology and related fields).
- Fluency in English – HT is an international research institute.

Relevant skills:

- Profound knowledge and research experience in the fields of human molecular neurobiology, neuroimmunology, neurodegeneration, disease modelling with human stem cells and neuronal experimental models.
- Advanced cell culture experience with human pluripotent stem cell lines and neuronal differentiation, including brain organoids and/or primary neural cell cultures.
- Solid expertise in gene/epigene editing perturbation approaches.
- Experience in tissue processing and histology.
- Experience in closely collaborating with data scientists and bioinformaticians, ability to perform basic data analysis/programming to be considered as a plus.
- Ability to manage competing priorities in a fast-paced environment and to work independently.
- Proven strong interpersonal skills, ability to lead and gain the assistance and cooperation of others in a team endeavour.
- Ability to build a trusted work environment through operating with transparency and creating an open and positive environment.
- Ability to work in a multi-cultural, multi-ethnic environment, with sensitivity and respect for diversity.

Special consideration will be given to candidates who are part of the protected categories list, according to L. 68/99.

Application Instructions

To apply, please send the following:

- a CV.
- a motivation letter in English relating your track record to the specifics of the call.
- names and contacts of 2 referees.

For any informal inquiry about the position, please feel free to contact Giuseppe Testa at giuseppe.testa@humantechnopole1.recruitee.com (this email address should not be used to send applications)

**Additional information**

HT offers a highly collaborative, international culture to foster top quality, interdisciplinary research by promoting a vibrant environment consisting of independent research groups with access to outstanding graduate students, postdoctoral fellows and core facilities.

HT is an inclusive employer that fosters diversity and engages systematically to ensure that equal employment opportunities are provided without regard to age, race, creed, religion, sex, disability, medical condition, sexual orientation, gender identity or expression, national or ethnic origin or any other legally recognized status entitled to protection under applicable laws.

HT offers attractive conditions and benefits appropriate to a leading, internationally competitive, research organization that promotes a collegial and open atmosphere.

Number of positions offered: 1

Contract offered: CCNL Chimico Farmaceutico, Employee level, fixed-term

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