

Fully-funded PhD position in behavioral neuroscience & optogenetics at the Vision Institute, Sorbonne University, Paris, France

About the position

Applications are invited for a fully-funded 3-year PhD position to study the impact of age on behavioral flexibility in a mouse model of healthy aging. Aging is known to negatively affect flexible behavior and brain networks supporting it, in particular the prefrontal cortex and the mesocortical dopaminergic pathway. The doctoral project focuses on the role of glutamatergic and dopaminergic projections from the ventral tegmental area to the prefrontal cortex in the age-related cognitive decline. To that aim it will (i) characterize age-related differences in behavioral performance between adult and aged mice in a visuospatial decision-making task; (ii) use optogenetic techniques to elucidate the specific role of these projections and to test whether cell-specific stimulation of mesocortical inputs can improve performance of cognitively impaired aged mice in this task. The optogenetic part of the project will be conducted in collaboration with the ICM Institute for Brain and Spinal Cord (<https://institutducerveau-icm.org/en/>).

Requirements and eligibility criteria

The ideal candidate has a background in behavioral neuroscience and experience in experiments with rodents. Prior experience in optogenetics is a strong plus. Applicants must have completed a MSc's degree (or equivalent qualification in terms of credits). Proficiency in oral and written English is required.

The successful candidate is expected to be willing to work collaboratively in an interdisciplinary team of neuroscientists and engineers. He or she is also expected to be highly motivated to conduct animal research, to be able to work independently and to communicate in scientific terms.

How to apply

Applications should be sent to Denis Sheynikhovich (denis.sheynikhovich@sorbonne-universite.fr) and Angelo Arleo (angelo.arleo@inserm.fr). The Vision Institute is an equal opportunity employer and women are encouraged to apply.

Please, submit the following documents in a single pdf file:

- An up-to-date resume, including under-review and under-preparation publications
- A motivation letter
- Letters of support from two referees (or at least the names and email addresses of two referees)

The application documents must be in English.

Benefits & Working Conditions

The position corresponds to a 3-year full-time contract with competitive salary and working conditions. The PhD candidate will be physically based at the Vision Institute, one of the top international centers for integrated research on vision and eye diseases. The Institute (www.institut-vision.org) is located at the heart of Paris, on the campus of the National Hospital of Ophthalmology of the Quinze-Vingts. It includes more than 20 multidisciplinary research laboratories, which share cutting-edge several platforms for both human and animal experimentation. The Institute also harbors a Clinical Investigation Center, which fosters translational research. All activities of the Vision Institute are coordinated by the [Foundation Voir & Entendre](http://www.fondationvoir-et-entendre.org), in conjunction with its three supervisory public bodies: Sorbonne University, INSERM, and CNRS.



Vision Institute, 17 rue Moreau, 75012 Paris.



Sorbonne University, Paris.

The PhD candidate will join the Aging in Vision and Action laboratory (www.aging-vision-action.org), whose research focuses on the impact of healthy and pathological aging on visual and cognitive functions. Both clinical and fundamental research activities aim at better understanding the relationship between cellular and functional age-related changes. The goal is to develop diagnostic and rehabilitation solutions to counter autonomy loss and improve the quality of life in the older adults. The Aging in Vision and Action lab offers a stimulating international environment, with strong cooperative work dynamics.

The successful candidate will be admitted to the PhD program of the Sorbonne University (www.sorbonne-universite.fr/en), which offers great opportunities to learn cross-disciplinary skills and attend international workshops and conferences in the fields related to the doctoral project. The successful candidate will also benefit from great training opportunities in interpersonal skills relevant to his or her next career stages (e.g., communication, research management, public speaking, etc.).

Sorbonne University offers exciting academic and cross-disciplinary research programs. With more than 54,000 students (10,000 international), 4,700 doctoral students and 3,600 researchers, Sorbonne University is one of the main French universities. It is involved in numerous international partnership agreements and has the largest scientific library and infrastructure in France bringing together the best talents in a wide range of these disciplines. With 8,500 publications per year (approximately 10% of all publications in France), Sorbonne University is a major player in the international knowledge and innovation economy, offering transversal academic and research programs.