

Candidature bourse de voyage

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CV au format PDF

https://cfatg.org/wp-content/uploads/2024/05/VictoriaBlanchet_CV_Jan2024.pdf

Page web du congrès

<https://fensforum.org/>

Programme au format PDF

<https://cfatg.org/wp-content/uploads/2024/05/FENS-programme.pdf>

Résumé des travaux présentés lors du congrès

A NOVEL ROLE FOR AUTOPHAGY PROTEIN WIPI2 IN COGNITIVE FITNESS

The brain, particularly the hippocampus, is sensitive to age-related cellular changes, leading to cognitive deficits. Recent work by our laboratory has demonstrated that autophagy, a catabolic lysosomal-dependant process, is reduced in aged hippocampal neurons, and that restoring autophagy levels is sufficient to improve age-related memory impairment. Nonetheless, the regulatory mechanisms involved in neuronal autophagy decline during aging remain largely unknown. Exploring this question, we found that WD repeat domain phosphoinositide-interacting protein 2 (WIPI2), an important driver of autophagosome biogenesis, is significantly reduced in the hippocampus of aged mice. Employing a viral-based strategy to selectively downregulate WIPI2 in mature hippocampal neurons in vivo, we revealed that WIPI2 plays a key role in regulating autophagy-dependent control of learning and memory. Furthermore, the cognitive phenotype of WIPI2 downregulated mice is unbiased by anxiety-like behaviours. Moreover, using gain and loss of function models, we found that WIPI2 could mediate the induction of autophagy by systemic factors involved in the maintenance of neuronal homeostasis. Taken together, our results reveal the importance of WIPI2 in autophagy-dependent regulation of cognitive fitness, and as a mediator of the impact of systemic factors on neuronal homeostasis, opening the possibility for new therapies for age-related cognitive deficits.

Lettre de motivation

Dear Board Members of the CFATG,

I have recently been selected to deliver a poster presentation at the FENS conference in Vienna from June 25th to 29th, 2024. I am very enthusiastic about this opportunity as it will be the first conference of my PhD for which I will have the chance to present my research. It represents an exciting opportunity to share my results about autophagy in the brain with a wide network of researchers in the field of neuroscience.

At this conference I will present the latest results of my thesis project entitled “The Role of the Primary-Cilium Autophagy Axis for Neuronal Homeostasis and Brain Aging”. The results obtained in the last few months represent a significant advancement in our understanding of the influence of autophagy on cognition. Indeed, during my poster presentation I would like to highlight the study of autophagy protein WIPI2, which is rather understudied in the context of neuronal homeostasis and brain aging, particularly in vivo. I’m highly motivated to attend this conference to promote autophagy-related research as I believe that it is fundamental to maintain neuronal homeostasis in the aging brain.

I am particularly excited about attending scientific symposia that will cover topics related to the role of autophagy in neurodevelopmental disorders and neuronal mechanisms that drive cognition. Furthermore, I am extremely motivated to participate in discussions led by the European Brain Council about bringing neuroscience to society and informing policy, and to advocate for the progress and inclusion of autophagy-related brain research.

I’m eager to present my results about autophagy at a large-scale conference with many opportunities for discussion and networking. I am looking forward to attending the FENS conference and asking that the board members look favourably on my application for a travel grant. Finally, I would like to extend my sincerest thanks to the board members for their consideration of my application for the CFATG travel grant to present my autophagy-related work at the FENS conference.

Sincerest regards,
Victoria Blanchet

Simulation financière au format PDF

<https://cfatg.org/wp-content/uploads/2024/05/Financial-simulation.pdf>

Présentation orale

Non

Présentation par affiche

Oui

Meeting sur l'autophagie

Non