The NO-Age and NO-AD Seminar Series 030

'Complement signaling and lipid metabolism in neuroinflammation and Alzheimer's disease'

by

Hui Zheng, Ph.D.
Huffington Center on Aging, Baylor College of Medicine, USA

at

14:00-15:00 (CET), Monday, 26th April 2021

Register in advance for this webinar:

https://uio.zoom.us/webinar/register/WN_Aqa09WLVRHKUVO35fshuHw

Organizers:
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Speaker: Hui Zheng

Title: Complement signaling and lipid metabolism in neuroinflammation and Alzheimer's disease

Abstract:
Besides the pathological hallmarks of β-amyloid plaques and neurofibrillary tangles, Alzheimer's disease (AD) is accompanied by prominent neuroinflammation manifested by the chronic activation of microglia and astrocytes. Emerging genetic evidence provide strong support for a functional role of innate immunity and neuroinflammation in late-onset AD. We identified a complement C3 and C3a receptor signaling axis that governs neuron-immune signaling in the context of aging and AD. In addition, we uncovered a novel epoxy lipid metabolic pathway that becomes dysregulated in AD and show that targeting this pathway by small molecule inhibitors lead to potent anti-inflammatory and neuroprotective effects in AD mouse models, supporting the potential of these inhibitors as AD therapy.

Biography:
Dr. Zheng obtained her Ph.D. degree from Baylor College of Medicine in 1990. After a brief postdoctoral training at Baylor, she joined Merck & Co. where she began her research on Alzheimer's disease. She returned to Baylor as a faculty in 1999 and is currently the Director and Professor of the Huffington Center on Aging and Huffington Foundation Endowed Chair. Dr. Zheng's expertise is mouse genetics and she is a pioneer in utilizing sophisticated mouse models to probe the biology and pathophysiology of Alzheimer's disease. Dr. Zheng's current research is focused on the investigation of the autophagy-lysosomal pathway and neuron-immune interaction in AD and related disorders. Dr. Zheng has published over 100 papers. She is a recipient of the New Scholar Award from the Ellison Medical Foundation and the Zenith Award from the Alzheimer's Association.