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Institute of Psychiatry and Neuroscience of Paris

Université Paris Cité

Psychiatry and Neuroscience Seminar Series 2026



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(Host H Rebholz)

Heparan sulfate biosynthetic enzymes in selective neuronal vulnerability to pathology: insights from Alzheimer's disease

Friday, December 11th, 2026, noon

Room D. Levy, 102 rue de la santé - 75014 Paris

Selective neuronal vulnerability is a hallmark of Alzheimer's disease, yet the molecular mechanisms that predispose particular neuronal populations to tau pathology remain poorly understood. Heparan sulfate, a component of cell-surface and extracellular matrix proteoglycans, displays structural diversity that can influence its interactions with proteins, modulate specific signaling events, and participate selectively in distinct cellular processes. In this context, our work suggests that specific heparan sulfate-modifying enzymes may contribute to neuronal vulnerability to tau pathology. This seminar will present evidence linking specific heparan sulfate structures to pathological changes in tau, drawing on observations in human brain tissue and experimental models. We will discuss how these findings advance our understanding of selective neuronal vulnerability and open perspectives for therapeutic strategies targeting the molecular environment that favors tau pathology.

Stay tuned!