

## Neuroscience Seminar Series

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**Friday, November 22nd, 2013 at 11:30 am**

Salle des Thèses (5th floor Jacob building)  
Centre Universitaire des Saints-Pères  
45 rue des Saints-Pères, 75006 Paris

### **Mattijs Verhage Vrije**

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### ***Trafficking and fusion of neuropeptide- containing dense core vesicles in mammalian CNS neurons***

The regulated secretion of chemical signals in the brain occurs principally from two organelles, synaptic vesicles and dense core vesicles (DCVs). DCVs contain a diverse collection of cargo, including many neuropeptides that trigger a multitude of modulatory effects with quite robust impact, for instance on memory, mood, pain, appetite or social behavior. However, many fundamental questions remain open on DCV trafficking and secretion. My lab has established new photonic approaches to quantitatively characterize DCV-trafficking and fusion of many cargo types in living mammalian CNS neurons with single vesicle resolution. In this lecture I will present our most recent findings using these approaches on DCV trafficking and secretion, the molecular factors involved and the cellular locations where DCV fusion occurs.