ASHBi SEMINAR

Optogenetic interrogation of the attention network in primates

Lecturer: **Dr. Wim Vanduffel**

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Date: Friday, 27th September 2019
Time: 17:00–18:00
Venue: Seminar Room 107, Faculty of Medicine Bldg. D

I will discuss results of a combined opto-fMRI-electrophysiology study aimed to determine differences in top-down and bottom-up control of attention. Optogenetic inactivation of LIP in monkeys resulted in spatially selective and attention-dependent changes in single unit activity and behavioral performance. We also found surprisingly robust optogenetic-induced changes in fMRI activity throughout nodes of the attention network, as well as changes in task-driven functional connectivity. Our results show that ultra-short reversible inactivation of LIP only during the cue period can affect top-down and bottom-up driven covert spatial attention behavior, as well as local activity and network dynamics.

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