

Bridging Knowledge Sessions FENS Forum 2016

Host: H. Lundbeck A/S

Alpha-synuclein prion like forms as target for therapy in Parkinson's disease and other synucleinopathies

**Tuesday, 5 July 2016
18:45 - 22:00**

Contact person (organizer): Pekka Kallunki

Short description of the purpose and topics: Lewy body pathology is one of the neuropathological hallmarks in Parkinson's disease, and other synucleinopathies. Alpha-synuclein is the key protein component in Lewy bodies. A large body of evidence suggests that α -synuclein accumulation, aggregation and possibly propagation between cells play an important role in pathogenesis of these diseases. Targeting α -synuclein and its aggregation and spread may block the disease onset and slow down/halt the disease progression. The Purpose of the session is to introduce to the biology of α -synuclein aggregation, seeding and prion like spreading from periphery to brain and between different brain regions. We will discuss different approaches for therapeutic interventions targeting the different steps in the process and the different models for preclinical testing of therapies, both small molecules and antibodies. This session will provide an opportunity to scientists to exchange ideas on this topic.

Detailed programme information for the session:

Sandwiches with soft drinks will be available

Chairman: Pekka Kallunki, H. Lundbeck A/S

18.45-19.00

Introduction – current approaches for therapies for alpha-synucleinopathies, Pekka Kallunki, H. Lundbeck A/S, Denmark

Speakers (15 min presentation and 5 min for discussion):

19.00-19.20

Modeling cellular dysfunction in patient iPSC-derived dopamine neurons, Richard Wade-Martins, University of Oxford, UK

19.20-19.40

Sequence and structural determinants of alpha-synuclein aggregation and toxicity: from novel tools to disease mechanisms and therapies, Hilal A. Lashuel, Ecole Polytechnique Fédérale de Lausanne (EPFL)

19.40-20.00

Posttranslational modifications in alpha-synuclein toxicity, Tiago Outeiro, University of Göttingen, Germany

20.00-20.20. *Break for 20 minutes for refreshments*

20.20-20.40

Synucleinopathy in the enteric nervous system, Olaf Riess, University of Tübingen, Germany

20.40-21.00

Bidirectional propagation of alpha-synuclein in neurons. Jia-Yi Li, Lund University, Sweden

21.00-21.20

Impact of small molecule modulators and antibodies on alpha-synuclein aggregation – Daniel Otzen, Aarhus University, Denmark

21.20-21.30

Summary – final question round to all speakers
