

## Speakers

### **Prof. Dr. Frank Bengel**

Dean of Research  
Hannover Medical School (MHH), Hannover

### **Prof. Dr. Alexander Dityatev**

Molecular Neuroplasticity  
German Center for Degenerative Diseases (DZNE), Magdeburg

### **Prof. Dr. Günter Högl**

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Hannover Medical School (MHH), Hannover

### **Prof. Dr. Yun Kyung Kim**

Brain Science Institute  
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### **Dr. Josephine Labus**

Institute of Neurophysiology  
Hannover Medical School (MHH), Hannover

### **Dr. Sungsu Lim**

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Korea Institute of Science and Technology (KIST), Seoul

### **Prof. Dr. Tiago Outeiro**

Department of Experimental Neurodegeneration  
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### **Prof. Dr. Ae Nim Pae**

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Korea Institute of Science and Technology (KIST), Seoul

### **Prof. Dr. Susanne Petri**

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### **Prof. Dr. Evgeni Ponimaskin**

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### **Prof. Dr. Franziska Richter Assencio**

Department of Pharmacology, Toxicology and Pharmacy  
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### **Tobias Schüning**

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Building J1, Level 1, Lecture Hall N



Medizinische Hochschule  
Hannover

German-Korean Workshop

## Mechanisms of Protein Aggregation in Neurodegenerative Diseases

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**DFG** Deutsche  
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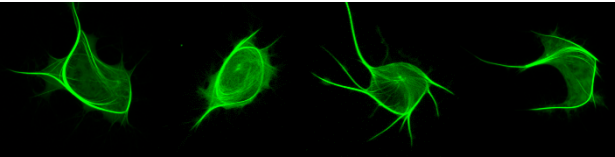
**NRF** National Research  
Foundation of Korea

**June 22<sup>nd</sup>, 2022**  
**Hannover Medical School**  
**Lecture Hall N**



Neurodegenerative diseases are a heterogeneous group of disorders that are characterized by a progressive neuronal loss and cognitive decline. The most prominent members of this class of diseases are Parkinson's disease, Alzheimer's disease and frontotemporal dementia. Although these disorders manifest in distinct symptoms, they all share one common neuropathological hallmark: the abnormal accumulation and deposition of specific proteins either inside or outside of neurons within certain brain areas. Consequences of protein aggregation are the loss of physiological protein function as well as the gain of cytotoxic properties inducing neuronal death. To date, the mechanisms that drive protein aggregation are not completely understood, and there is no effective therapy available that could stop or at least slow down the progressive course of neurodegenerative diseases.

*This workshop will highlight the molecular mechanisms underlying pathological protein aggregation leading to neurodegeneration and present current research on the development of novel therapeutic strategies in the treatment of neurodegenerative diseases.*



# Mechanisms of Protein Aggregation in Neurodegenerative Diseases

MHH, Lecture Hall N

10<sup>30</sup> – 10<sup>40</sup>

**Welcome**  
Frank Bengel

10<sup>40</sup> – 10<sup>45</sup>

**Introduction**  
Evgeni Ponimaskin

10<sup>45</sup> – 11<sup>20</sup>

**Tau-targeted therapeutics for the treatment of Alzheimer's disease**  
Ae Nim Pae

11<sup>20</sup> – 11<sup>45</sup>

**Targeting neural proteoglycans to control protein aggregation in ageing and neurodegenerative diseases**  
Alexander Dityatev

11<sup>45</sup> – 12<sup>10</sup>

**Tau-BiFC platform to visualize neurotoxic Tau species in the brain**  
Yun Kyung Kim

12<sup>10</sup> – 12<sup>35</sup>

**Targeting the serotonin receptor 7 ameliorates Tau pathology and memory deficits**  
Evgeni Ponimaskin

12<sup>35</sup> – 13<sup>45</sup>

**LUNCH BREAK**

13<sup>45</sup> – 14<sup>20</sup>

**Clinical trials in Synucleinopathies and Tauopathies**  
Günter Högl

14<sup>20</sup> – 14<sup>45</sup>

**Modulation of inflammation and glial activation as therapeutic strategy in amyotrophic lateral sclerosis**  
Susanne Petri

14<sup>45</sup> – 15<sup>10</sup>

**Tau acetylation induced by HDAC inhibitors**  
Sungsu Lim

15<sup>10</sup> – 15<sup>35</sup>

**The role of serotonin receptors in TDP-43 aggregation**  
Josephine Labus

15<sup>35</sup> – 16<sup>00</sup>

**COFFEE BREAK**

16<sup>00</sup> – 16<sup>35</sup>

**Super-resolution microscopy informs on the molecular architecture of alpha-synuclein inclusions in model systems and in the human brain**  
Tiago Outeiro

16<sup>35</sup> – 17<sup>00</sup>

**Novel therapeutics for Synucleinopathies, progress towards predictive validity of pre-clinical trials**  
Franziska Richter Assencio

17<sup>00</sup> – 17<sup>25</sup>

**Nuclear bodies and aggregates in SMA and ALS**  
Tobias Schüning

17<sup>25</sup> – 17<sup>30</sup>

**Concluding remarks**  
Evgeni Ponimaskin

18<sup>00</sup>

**COME-TOGETHER AND DINNER**