

**BIOMARKERS AND THERAPY**

**SESSION CHAIR: Chee-Yeun Chung, Ph.D.—Yumanity Therapeutics**

- 2:15 p.m. Katie Kopil, Ph.D. – The Michael J. Fox Foundation for Parkinson's Research, USA  
*Alpha-synuclein as a disease biomarker*
- 2:45 p.m. Chester Mathis, Ph.D. – University of Pittsburgh, USA  
*Alpha-synuclein imaging ligands*
- 3:15 p.m. Break
- 3:40 p.m. DataBlitz IV  
Vivek K. Unni, M.D., Ph.D. – Oregon Health & Science University, USA  
*In vivo imaging demonstrates progressive aggregation of alpha-synuclein and selective degeneration of Lewy inclusion-bearing neurons in a mouse model of Parkinsonism*
- 3:50 p.m. Richard Fisher, Ph.D. – NeuroPhage Pharmaceuticals, Inc., USA  
*Novel strategies to target misfolded alpha-synuclein*
- 4:20 p.m. Eliezer Masliah, M.D. – University of California, San Diego, USA  
*Alpha-synuclein immunotherapy*
- 4:50 p.m. Discussion
- 5:05 p.m. Closing Remarks

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# GRAND CHALLENGES IN PARKINSON'S DISEASE

THE ROLE OF ALPHA-SYNUCLEIN | VAN ANDEL RESEARCH INSTITUTE

September 30–October 1, 2015



## Wednesday, September 30, 2015

- 7:30 a.m. Continental Breakfast
- 8:30 a.m. Introduction of Keynote Speakers  
Peter Jones, Ph.D., D.Sc. – Van Andel Research Institute, USA
- 8:40 a.m. Maria Grazia Spillantini, Ph.D., FMedSci, FRS – University of Cambridge, UK  
Jay Van Andel Award for Outstanding Achievement in Parkinson's Disease Research  
*Alpha-synuclein and its dysfunction in Parkinson's disease*
- 9:15 a.m. Robert Nussbaum, M.D., FACP, FACMG – University of California, San Francisco, USA  
Jay Van Andel Award for Outstanding Achievement in Parkinson's Disease Research  
*Parkinson's disease is a systematic illness: A new, emerging paradigm*
- 9:45 a.m. Discussion
- 9:55 a.m. Break

### ALPHA-SYNUCLEIN CONFORMATION AND FUNCTION

**SESSION CHAIR: Jiyang Ma, Ph.D.—Van Andel Research Institute**

- 10:20 a.m. Sreeranga Chandra, Ph.D. – Yale School of Medicine, USA  
*Normal alpha-synuclein function*
- 10:50 a.m. Ronald Melki, Ph.D – Neuroscience Paris-Saclay Institute, France  
*Biophysical characteristics and factors influencing alpha-synuclein aggregation*
- 11:20 a.m. Discussion
- 11:35 a.m. DataBlitz I  
Daniel Ysselstein – Purdue University  
*Impaired alpha-synuclein membrane interaction promotes aggregation and neurotoxicity in Parkinson's disease*
- 11:45 a.m. Lunch (Patient Discussion 12:00–12:45 p.m.)

### PATHOBIOLOGY I

**SESSION CHAIR: Sreeranga Chandra, Ph.D.—Yale School of Medicine**

- 1:00 p.m. Andrew Singleton, Ph.D. – National Institutes of Health, USA  
*Alpha-synuclein genetics and disease*
- 1:30 p.m. Dennis Dickson, M.D. – Mayo Clinic, USA  
*Neuropathology in alpha-synucleinopathies*
- 2:00 p.m. Tom Beach, M.D., Ph.D. – Banner Sun Health Research Institute, USA  
*Alpha-synuclein aggregation in peripheral tissues*
- 2:30 p.m. Discussion
- 2:45 p.m. Break

### PATHOBIOLOGY II

**SESSION CHAIR: Darren Moore, Ph.D. — Van Andel Research Institute**

- 3:10 p.m. Hilal Lashuel, Ph.D. – École Polytechnique Fédérale de Lausanne, Switzerland  
Qatar Biomedical Research Institute, Qatar  
*Posttranslational modifications of alpha-synuclein*

- 3:40 p.m. Michael Lee, Ph.D. – University of Minnesota, USA  
*The role of intracellular processing in the toxicity of alpha-synuclein*
- 4:10 p.m. David Klenerman, Ph.D., FRS – University of Cambridge, UK  
*Conformational changes associated with toxicity and alpha-synuclein*
- 4:40 p.m. DataBlitz II  
Evangelia Emmanouilidou, Ph.D. – Biomedical Research Foundation of the Academy of Athens  
*Gaba transmission via sur1-katp channels regulates alpha-synuclein secretion in mouse striatum*
- 4:50 p.m. Discussion
- 5:15 p.m. Poster Session

## Thursday, October 1, 2015

- 7:30 a.m. Continental Breakfast

### PATHOBIOLOGY III

**SESSION CHAIR: John Q. Trojanowski, M.D., Ph.D.—University of Pennsylvania**

- 8:30 a.m. Dennis J. Selkoe, M.D. – Harvard Medical School; Brigham and Women's Hospital, USA  
*A new mechanism of alpha-synuclein-induced neurotoxicity: Tetramer-to-monomer conversion*
- 9:00 a.m. Chee-Yeun Chung, Ph.D. – Yumanity Therapeutics, USA  
*Genetic and physical landscape of alpha-synuclein toxicity*
- 9:30 a.m. Ana-Maria Cuervo, M.D., Ph.D. – Albert Einstein College of Medicine of Yeshiva University, USA  
*Alpha-synuclein degradation*
- 10:00 a.m. Discussion
- 10:15 a.m. Break

### PATHOBIOLOGY IV

**SESSION CHAIR: Jeffrey Kordower, Ph.D.—Rush University Medical Center**

- 10:40 a.m. Dimitri Krainc, M.D. – Northwestern University, USA  
*Interactions between alpha-synuclein and other genes associated with Parkinson's disease*
- 11:10 a.m. Virginia Lee, Ph.D. – University of Pennsylvania, USA  
*Alpha-synuclein cell-to-cell transfer*
- 11:40 a.m. Patrik Brundin, M.D., Ph.D. – Van Andel Research Institute, USA  
*Cell and animal models to study the prion-like behavior of alpha-synuclein*
- 12:10 p.m. DataBlitz III  
Amanda L. Woerman, Ph.D. – University of California, San Francisco  
*Identification of alpha-synuclein prions in multiple system atrophy*
- 12:20 p.m. Discussion
- 12:35 p.m. Lunch (Patient Discussion 12:45–1:30 p.m.)
- 1:45 p.m. Report from Rallying to the Challenge  
*Applying the right measure to the right person in the right situation*