Announcing the 2014 Keystone Symposia meeting on:

Alzheimer’s Disease: From Fundamental Insights to Light at the End of the Translational Tunnel

March 2–7, 2014
Keystone Resort, Keystone, Colorado, USA

Scientific Organizers: John Q. Trojanowski, Charles F. Albright and Hui Zheng

joint with the meeting on “Parkinson’s Disease: Genetics, Mechanisms and Therapeutics”

The conference will:

• Comprehensively examine fundamental insights into mechanisms of Alzheimer’s Disease;
• Investigate biomarkers and potential new therapeutic targets for treatment of Alzheimer’s Disease, including the potential for immune therapies to arrest the cell-to-cell spread of pathological species of tau and Abeta;
• Deepen our understanding of neurodegenerative diseases through the joint pairing with the meeting on “Parkinson’s Disease: Genetics, Mechanisms and Therapeutics,” Keystone Symposia’s first meeting on this topic.

For more information and to view the full program, visit www.keystonesymposia.org/14Q8
SUNDAY, MARCH 2
Arrival and Registration

MONDAY, MARCH 3
Keynote Address (Joint)
*John Q. Trojanowski*, University of Pennsylvania, USA
*Michel Goedert*, Medical Research Council, UK
Alzheimer’s Disease and Parkinson’s Disease Are Protein Misfolding Diseases

Phenotypic and Genotypic Complexity of AD and PD (Joint)
*Andrew B. Singleton*, NIA, National Institutes of Health, USA
Genetics of AD and PD
*Christian C. Raisi*, University of Twente, Netherlands
Short Talk: Morphological and Functional Heterogeneity of Lewy Body-Like Inclusions in a Cell Model System
*Tina L. Beckett*, University of Kentucky, USA
Short Talk: Cerebrovascular Pathology and Neuroinflammatory Changes in a Novel Mouse Model of Mixed Dementia
*Ryan J. Watts*, Denali Therapeutics Inc, USA
Overcoming Barriers in Alzheimer’s Drug Development

Genetics of AD (Q8)
*Virginia M. Y. Lee*, University of Pennsylvania School of Medicine, USA
Christine Van Broeckhoven, VIB, University of Antwerp, Belgium
Genetics of Early-Onset Alzheimer Disease: What Is Missing?
*Richard Mayeux*, Columbia University, USA
The Search for Functional Genetic Variants in Late-Onset Alzheimer’s Disease

Design and Methods (Q7)
*Philip L. De Jager*, University of Washington Medical Center, USA
Short Talk: Deconstructing the Epigenomic Architecture of the Cortex in Alzheimer’s Disease

Genome-Wide Association and PD (Q7)
*Andrew B. Singleton*, NIA, National Institutes of Health, USA
Thomas Gasser, University of Tübingen, Germany
GWA Studies in PD: New Pathways and Old Targets
*Vincent Plagnol*, University College London, Genetics Institute, UK
Fine-Mapping, Gene Expression and Splicing Analysis of the Disease Associated LRRK2 Locus

GEORGE T. KANNAKAT, Emory University School of Medicine, USA
Short Talk: The rs3128882 Single Nucleotide Polymorphism Alters MHC-II Expression and May Increase Susceptibility for Parkinson’s Disease by Modulating Immune Responses

HAYDEH PAYAMI, University of Alabama, Birmingham, USA
Interaction between Genes and Environment in PD

Post Session 1

TUESDAY, MARCH 4
Biomarkers of AD and PD (Joint)
*Clifford R. Jack*, Mayo Clinic, USA
Kenneth L. Marek, Institute for Neurodegenerative Disorders, USA
Parkinson’s Progression Marker Initiative: Developing a Translational Toolbox for Parkinson’s Disease
*Kaj Blennow*, University of Gothenburg, Sweden
CSF Biomarkers for AD: Approaching the End of the Long Road to Validated and Approved Biomarkers
Anna Cartier, ICB International, Inc., USA
Short Talk: A Novel Blood-Brain Barrier Permeable PET Ligand for Parkinson’s Disease

JULIJA KALININA, Merck & Co., USA
Short Talk: Highly Sensitive and Selective Amyloid Oligomer Biomarker Assay Differentiates Alzheimer’s from Non-AD Cerebrospinal Fluid (CSF) and Tissues

THOMAS J. MONTINE, University of Washington Medical Center, USA
Modifiable Factors Associated with Free Radical Injury in the Aging Brain

Alicia S. Chen-Plotkin, University of Pennsylvania School of Medicine, USA
Unbiased Approaches to Parkinson’s Disease Biomarker Discovery

Future Opportunities and Obstacles in PD Research (Q7)

Panel: Combo Therapy for AD (Q8)
*Dennis J. Selkoe*, Harvard Medical School, USA
Ryan J. Watts, Denali Therapeutics Inc, USA
Charles F. Albright, Editas Medicine, USA
Michael K. Ahlijanian, Bristol-Myers Squibb, USA
Pros and Cons of Combo Therapy from a Biopharma Drug Discovery and Development Perspective

Reisa A. Sperling, Brigham and Women’s Hospital, Harvard Medical School, USA
Pros and Cons of Combo Therapy from a Clinical Researcher and the Patient’s Perspective

AD Biomarkers (Q8)
*Thomas J. Montine*, University of Washington Medical Center, USA
Daniel M. Skovronsky, Eli Lilly and Company, USA
Amyloid Imaging

David M. Holtzman, Washington University, USA
Sleep and Circadian Rhythms: Potential Bidirectional Relationship with Alzheimer’s Disease

Clifford R. Jack, Mayo Clinic, USA
Alzheimer’s Disease Biomarkers

Wendy Wei Qiao Qiu, Boston University School of Medicine, USA
Short Talk: Amylin and its Analog: Potential Diagnostic Test and Therapeutic Drug for Alzheimer’s Disease

Mitochondrial Biology and the Pathology of PD (Q7)

*Mark R. Cookson, NIA, National Institutes of Health, USA
Role of PINK1 and Parkin on Mitochondria Quality Control in vitro and in vivo

Helene Marie Plun-Favreau, University College London Institute of Neurology, UK
Missing Pieces in the Mitophagy Puzzle

J. Wade Harper, Harvard Medical School / Biogen Idec
Short Talk: Parkin-Dependent Ubiquitin Chain Synthesis in vitro and in vivo

Alex J. Whitworth, University of Sheffield, UK
Drosophila Models of Parkinson’s Disease

Alzheimer’s Disease – From Fundamental Insights to Light at the End of the Translational Tunnel (Q8)

Scientific Organizers: John Q. Trojanowski, Charles F. Albright and Hui Zheng
Sponsored by AstraZeneca, Genentech, Inc., Pfizer Inc., Roche and Takeda Pharmaceutical Company Limited

Parkinson’s Disease: Genetics, Mechanisms and Therapeutics (Q7)

Scientific Organizers: Patrick A. Lewis, Thomas Gasser and Marcel P. van der Brug
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NIH Panel (Joint): New AD and PD Recommendations
Creighton Tony Phelps, NIA, National Institutes of Health, USA
Thomas J. Montine, University of Washington Medical Center, USA
Beth-Anne Sieber, NINDS, National Institutes of Health, USA

Transmission of Tau and Abeta (Q8)

*Michael K. Ahlijanian, Bristol-Myers Squibb, USA
John Q. Trojanowski, University of Pennsylvania, USA
Transmission of Tau Pathology: A New Model for the Progression of Tauopathies

Virginia M. Y. Lee, University of Pennsylvania School of Medicine, USA
Transmission of alpha-Synuclein in Parkinson’s Disease

Zeshan Ahmed, Eli Lilly and Company, UK
Short Talk: A Novel in vivo Model of Tau Propagation that Is Suitable for Evaluating the Efficacy of Tau-Based Therapeutic Strategies

Karen Duff, Columbia University, USA
Propagation of Pathology and Functional Decline in AD

Pluripotent Stem Cells and Inherited PD (Q7)

*Patrick A. Lewis, University of Reading, UK
Tilo Kunath, University of Edinburgh, UK
Alpha-Synuclein Dysfunction in Pluripotent Stem Cell Derived Neurons

Dimitri Krainc, Northwestern University, USA
Links between Lysosomal Dysfunction and Neurodegeneration

Birgitt Schuele, Parkinson’s Institute, USA
Short Talk: Mitochondrial Dysfunction in Patient-Derived LRRK2 Stem Cell Models

Jared Sterneckert, Max-Planck-Institut für Molekulare Biomedizin, Germany
Modeling Parkinson’s Disease Induced by Mutant LRRK2 Using Isogenic Human iPSCs

Poster Session 2

WEDNESDAY, MARCH 5

What Are the Toxic Species of Tau, Abeta and alpha-Synuclein (Joint)

Karen Hsiao Ashe, University of Minnesota, USA
Relevance of Quaternary Structure to the Functional Effects of beta-Amyloid Oligomers in the Brain

Dennis J. Selkoe, Harvard Medical School, USA
Protein Misfolding in AD and PD: New Mechanistic Insights

Danielle Mor, University of Pennsylvania, USA
Short Talk: The Role of Dopamine in Generating Toxic Oligomeric Conformers of Alpha-Synuclein

Vincent Raussens, Université Libre de Bruxelles, Belgium
Short Talk: Unraveling the Interaction between apoE and Amyloid beta Peptide Using Crosslinking and Mass Spectrometry

Vikram Khurana, Whitehead Institute for Biomedical Research and Massachusetts General Hospital, USA
A-Synuclein Toxicity: Phenotypic Screen from Yeast to Patient iPSc Cells

*Hui Zheng, Baylor College of Medicine, USA
Clearance of Toxic Tau Proteins and Rescue of Neurotoxicity by TFEB

Passive Immunization and Other Novel Therapies to Treat AD and PD (Joint)

*Ryan J. Watts, Denali Therapeutics Inc, USA
Eliezer Masliah, University of California, San Diego, USA
Passive Immunization Therapies for Parkinson’s Disease

Kurt R. Brunden, University of Pennsylvania, USA
Microtubule Stabilizing Drugs to Treat Axonal Transport Failure in AD and PD

Poster Session 3

THURSDAY, MARCH 6
Zdenek Berger, Pfizer, USA
Short Talk: Effects of Tool Compounds on Glucocerebrosidase Activity in Human and Mouse Brain Lysates

Eva Czirr, Alkahest, USA
Short Talk: Complement Receptor 3 Deficiency Reduces Alzheimer’s Disease Amyloid Pathology in Mice

Marc Mercken, Janssen R&D, Belgium
Translating Alzheimer’s Disease Science into Breakthrough Therapies

Michael K. Ahlijanian, Bristol-Myers Squibb, USA
Challenges Facing the Development of Disease Modifying Therapies for Alzheimer’s Disease

Reisa A. Sperling, Brigham and Women’s Hospital, Harvard Medical School, USA
Secondary Prevention Trials in Preclinical Alzheimer’s Disease

Leonard Petrucelli, Mayo Clinic Jacksonville, USA
Short Talk: HDAC6 Inhibition as a Treatment of Tauopathies

Mark S. Forman, Merck, USA
BACE1 Inhibitors for Alzheimer’s Disease

*John Q. Trojanowski, University of Pennsylvania, USA
Concluding Remarks

LRRK2 Biology and PD Therapeutics (Q7)

*Marcel P. van der Brug, Genentech, Inc., USA
Mark R. Cookson, NIA, National Institutes of Health, USA
A State-of-the-Protein View of LRRK2

Anthony A. Estrada, Genentech, Inc., USA
Discovery of LRRK2 Small Molecule Inhibitors for the Treatment of PD

Warren D. Hirst, Pfizer Neuroscience Research Unit, USA
Short Talk: Development of Assays to Measure LRRK2 Levels and Activity in Sporadic Parkinson’s Disease Brain

Arjan Kortholt, University of Groningen, Netherlands
Structural Studies on Roco Proteins and Implications for LRRK2

FRIDAY, MARCH 7

Departure