CONTRIBUTIONS OF POST-MORTEM TISSUE TO THE STUDY OF DEVELOPMENTAL DISORDERS

20th Anniversary of the NICHD Brain and Tissue Bank for Developmental Disorders

July 16–17, 2012

Neuroscience Center Building • 6001 Executive Boulevard • Rockville, MD 20852

AGENDA

DAY 1 — MONDAY, JULY 16, 2012

8:30 A.M. REGISTRATION AND CONTINENTAL BREAKFAST

9:00 A.M. **Overview of the National Institute of Child Health and Human Development (NICHD) Brain and Tissue Bank and this Workshop**
H. Ronald Zielke, Ph.D. — The Eunice Kennedy Shriver NICHD Brain and Tissue Bank for Developmental Disorders, University of Maryland

Session I: **Contributions of Post-Mortem Tissue to the Study of Human Developmental Changes and Diseases**
Moderator: *Joel Kleinman, M.D., Ph.D.* — National Institute of Mental Health (NIMH), National Institutes of Health (NIH)

9:30 A.M. **Evolution, Development and Disorders of Neural Circuits of the Human Cerebral Cortex**
Nenad Sestan, Ph.D. — Yale University

10:00 A.M. **Epigenome Mapping in Developing and Diseased Prefrontal Cortex. A Post-Mortem Study Across the Life Span of the Human Brain**
Schahram Akbarian, M.D., Ph.D. — Mount Sinai School of Medicine

10:30 A.M. **Human Brain Development and Risk for Schizophrenia**
Joel Kleinman, M.D., Ph.D. — NIMH, NIH

11:00 A.M. **Somatic Mutation and Genetic Diversity in the Human Cerebral Cortex**
Christopher Walsh, M.D., Ph.D. — Children's Hospital Boston

11:30 A.M. **Roundtable I: Significance of Developmental Studies with Post-Mortem Tissue**

12:00 NOON LUNCH (PROVIDED BY UNIVERSITY OF MARYLAND)

Session II: **Defining Underlying Biological Alterations in Autism Spectrum Disorder (ASD) at the Cellular and Neurochemical Level**
Moderator: *Gene J. Blatt, Ph.D.* — Boston University School of Medicine

1:00 P.M. **The Importance of ASD Phenotyping in Post-Mortem Research**
Audrey Thurm, Ph.D. — NIMH, NIH

1:30 P.M. **Fragile X Mental Retardation Protein (FMRP) and Gamma-Amino Butyric Acid (GABA) Signaling in Autism**
S. *Hossein Fatemi, M.D., Ph.D.* — University of Minnesota

2:00 P.M. **GABAergic Abnormalities in the Autism Brain: Emerging Ideas from Post-Mortem Studies**
Gene J. Blatt, Ph.D. — Boston University School of Medicine

2:30 P.M. **BREAK**

2:45 P.M. **Developmental Cortical Patterning Abnormalities and Pathological Age-Related Changes in Autism**
Eric Courchesne, M.D. — Children's Hospital Health Center

3:15 P.M. **Results of Application of New Methods of Tissue Handling, Distribution, and Sharing for Research on Autism**
Jerzy Wegiel, V.M.D., Ph.D. — New York State Institute for Basic Research

3:45 P.M. **Post-Mortem Brain Resources are Critical for Understanding the Gene-Environment-Epigenetic Interface in Autism-Spectrum Disorders**
Janine M. LaSalle, Ph.D. — University of California School of Medicine

4:15 P.M. **Roundtable II: Autism – Integrating Results**

5:15 P.M. **ADJOURN**

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DAY 2 — TUESDAY, JULY 17, 2012

8:00 A.M. **REGISTRATION AND CONTINENTAL BREAKFAST**

8:30 A.M. **Human Neurobiobank: A Platform for 21st Century Translational Research**
A. Roger Little, Ph.D. — NIMH, NIH

Session III: **The Contribution of Human Post-Mortem Tissue for the Study of Multiple Developmental Disorders**
Moderator: *P.J. Brooks, Ph.D.* — National Institute on Alcohol Abuse and Alcoholism (NIAAA) and Office of Rare Diseases Research (ORDR), National Center for Advancing Translational Sciences (NCATS), NIH

8:40 A.M. **Quantitative Trait Loci Mapping in the Human Brain**
Bryan Traynor, M.D. — National Institute on Aging (NIA), NIH

9:05 A.M. **Mitochondrial Disorders**
Michio Hirano, M.D. — Columbia University Medical Center

9:30 A.M. **X-linked Adrenoleukodystrophy: From Post-Mortem Tissue to Pathomechanism**
Florian Eichler, M.D. — Massachusetts General Hospital

9:55 A.M. **BREAK**

10:10 A.M. **The Study of Down Syndrome Using Post-Mortem Tissue**
Jonathan Pevsner, Ph.D. — Johns Hopkins Medicine

10:35 A.M. **Studies of Neurologic Disease in Hereditary DNA Repair Disorders: Xeroderma Pigmentosum, Ataxia Telangiectasia, and Cockayne Syndrome**
P.J. Brooks, Ph.D. — NIAAA, NIH

11:00 A.M. **Mapping Gene Expression and Connections in the Central Nervous System (CNS): Tools and Data from the Allen Institute for Brain Science**
Allan Jones, Ph.D. — Allen Institute for Brain Science

11:25 A.M. **Roundtable III: Issues and Applicability of Post-Mortem Tissue for the Study of Developmental Disorders**

12:00 NOON **Challenges for a Brain and Tissue Bank**
H. Ronald Zielke, Ph.D. — NICHD Brain and Tissue Bank for Developmental Disorders, University of Maryland

12:10 P.M. **CLOSING REMARKS**

12:30 P.M. **ADJOURN**