

UT-Houston Graduate School of Biomedical Sciences

**Topics in Neurobiology of Disease-GS140021**

***Genetic Basis for Brain Diseases***

Co-Directors

John H. Byrne, Ph.D.

Teresa Santiago-Sim, Ph.D.

***Course Description***

The topic for Fall, 2010 will be the “Genetic Basis for Brain Diseases” and will be an integrated approach to understanding inherited brain diseases. This course will explore 1) methods for identifying genes that predispose individuals to brain diseases, 2) characterization of genes that have been identified, 3) how identification of these genes contributes to our understanding of underlying disease mechanisms, development of treatment strategies and improvement of clinical care. Diseases that will be discussed are cerebrovascular diseases, neurodevelopmental disorders, neurodegenerative diseases and brain tumors.

This course is open to graduate students, medical students, and postdoctoral fellows.

***Lecture Time and Location***

Wednesdays, 12:00 p.m. – 1:00 p.m.

University of Texas Medical School Building, Rm. 7.037

***Course Requirements***

Attendance

Completion of final exam

***Course Contact***

Teresa Santiago-Sim, Ph.D.

Assistant Professor

Department of Neurosurgery

The University of Texas Medical School at Houston

6431 Fannin St., MSB 7.142B

Houston, TX 77030

Phone: 713-500-6131

[teresa.santiagosim@uth.tmc.edu](mailto:teresa.santiagosim@uth.tmc.edu)

***NRC Contact***

Margaret R. Clarke, Ph.D.

MSB 7.168A

713-500-5538

[Margaret.clarke@uth.tmc.edu](mailto:Margaret.clarke@uth.tmc.edu)

*Genetic Basis for Brain Diseases*  
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|     | <b>Date</b>        | <b>Title</b>  | <b>Speaker</b>   |
|-----|--------------------|---|--|
| 1.  | September 1, 2010  | Introduction - The Importance of Genetic Research in Changing Clinical Care Paradigms   | Sarah Colosimo, M.S.<br>Genetic Counselor, Department of Neurosurgery, UTMS-H  |
| 2.  | September 8, 2010  | Genetics of Stroke  | Myriam Fornage, Ph.D.<br>Associate Professor, Center for Human Genetics, UTHSC-IMM   |
| 3.  | September 15, 2010 | The Search for Intracranial Aneurysm Genes  | Teresa Santiago-Sim, Ph.D.<br>Assistant Professor, Department of Neurosurgery, UTMS-H  |
| 4.  | September 22, 2010 | Moyamoya Disease and Intracranial Aneurysms: Insight into the Pathogenesis from Genetic Studies on Aortic Aneurysms and Dissections | Dianna Milewicz, M.D., Ph.D.<br>Professor, Department of Internal Medicine, UTMS-H   |
| 5.  | September 29, 2010 | Phenotype And Search for the Genetic Basis of Aicardi Syndrome  | Ignatia B. Van den Veyver, M.D.<br>Associate Professor, Department of Molecular and Human Genetics, BCM                          |
| 6.  | October 6, 2010    | In Pursuit of the Pathogenic Mechanisms Underlying Brain Degenerative Disorders: Lessons from Huntington's Disease                  | Sheng Zhang, Ph.D.<br>Assistant Professor, Center for Neurodegenerative Diseases, UTHSC-IMM                                      |
| 7.  | October 13, 2010   | Introduction to Alzheimer's Disease and Research  | Jack Waymire, Ph.D.<br>Professor, Department of Neurobiology & Anatomy, UTMS-H   |
| 8.  | October 20, 2010   | Roles of Protein Misfolding in Alzheimer's disease and Therapeutic Strategies   | Claudio Soto, Ph.D.<br>Professor, Department of Neurology, Director of the Mitchell Center for Alzheimer's disease, UTMS-H       |
| 9.  | October 27, 2010   | Molecular Epidemiology of Glioma  | Melissa Bondy, Ph.D.<br>Professor, Department of Epidemiology, UTMDACC   |
| 10  | November 3, 2010   | Stroke Causes, Risk Factors and Outcome   | Jaroslaw Aronowski, Ph.D.<br>Professor, Department of Neurology, UTMS-H  |
| 11. | November 10, 2010  | Tuberous Sclerosis Complex: From Bench to Bedside and Back Again  | Hope Northrup, M.D.<br>Professor, Department of Pediatrics, UTMSH  |
| 12. | November 17, 2010  | <i>No Class – SfN</i>   |  |
| 13. | November 24, 2010  | <i>Wednesday before Thanksgiving</i>  |  |
| 14. | December 1, 2010   | Modeling, Understanding and Treating Tuberous Sclerosis Complex in the Mouse  | Michael Gambello, M.D., Ph.D.<br>Associate Professor, Department of Pediatrics, UTMS-H   |
| 15. | December 8, 2010   | Copy Number Variation, Neural Development, and Disorders of Cortical Connectivity: Lessons from DiGeorge/22q11 Deletion Syndrome    | Anthony LaMantia, Ph.D.<br>Professor, Department of Pharmacology and Physiology, George Washington University School of Medicine |
| 16. | December 15, 2010  | <b>Final Exam</b>   |  |