VANDERBILT PRIZE IN BIOMEDICAL SCIENCE LECTURE

HUDA Y. ZOGHBI, M.D.

THE STORY OF RETT SYNDROME AND THE INSIGHT IT PROVIDES INTO NEUROPSYCHIATRIC DISORDERS

APRIL 21, 2016
4:00 P.M.
208 LIGHT HALL

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Upcoming Discovery Lecture:

ERIC BETZIG, PH.D.
Nobel Prize in Chemistry, 2014

April 28, 2016
208 Light Hall / 4:00 P.M.
Dr. Huda Zoghbi is an Investigator with the Howard Hughes Medical Institute and is a Professor of Pediatrics, Neurology, Neuroscience, and Molecular and Human Genetics at Baylor College of Medicine. She is also the founding Director of the Jan and Dan Duncan Neurological Research Institute at Texas Children's Hospital. Dr. Zoghbi is interested in understanding healthy brain development and aging as well as what goes awry in specific neurological conditions. She uses genetics to unravel the root causes of various disorders. She has published seminal work on the genetic basis of the autism spectrum disorder Rett syndrome and on late-onset neurodegenerative diseases. Dr. Zoghbi serves as a board member for several professional organizations and educational institutions, including serving as the President of the Board for the McKnight Endowment Fund for Neuroscience, a trustee for Rice University, and a senior editor for the scientific journal eLife. She was elected to the Institute of Medicine in 2000 and to the National Academy of Sciences in 2004. Among Dr. Zoghbi’s honors are the IPSEN Prize in Neuronal Plasticity, the Vilcek Prize, the Gruber Prize in Neuroscience, the Dickson Prize in Medicine, the Pearl Meister Greengard Prize, the Skolnick Prize, the March of Dimes Prize in Developmental Biology, a Doctor of Medical Sciences Honorary Degree from Yale University, and the Mortimer D. Sackler, M.D. Prize for Distinguished Achievement in Developmental Psychobiology.

Rett Syndrome, a childhood neurological disorder that causes a broad range of severe neurological and behavioral disabilities, is fascinating in that its symptoms appear after a period of normal development and point to disturbances in most brain cells and regions. In 1999, the Zoghbi lab discovered the gene (MECP2) that causes Rett syndrome and before long it became clear that mutations in this same gene can also cause autism, bipolar disorder, and juvenile onset schizophrenia. The path from gene discovery to therapy, however, is not a straightforward one and requires deep understanding of the brain cells and networks that cause specific symptoms. Zoghbi and collaborators have pinpointed the neurons that mediate various neurological and psychiatric symptoms and, most recently, using a mouse model of Rett syndrome, they showed that deep brain stimulation of a specific neural network improved learning and memory.

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