

**Keynote Speaker**

Dr Wade Walke

Lexicon Genetics

***Functional Mammalian Genomics and Drug Discovery: How Gene Knockouts are Accelerating Drug Discovery***

Abstract: Access to the completed sequence of the mouse and human genomes has opened up new possibilities for discovering mammalian gene function. Coupled with the molecular biological tools for mutant mouse production, scientists are now able to study gene function on an unprecedented scale. The international mouse genomics community has recently announced an initiative to produce knockout alleles for all mouse genes and to develop a system for open access to data and reagents for the broader scientific community. In addition to these efforts, companies such as Lexicon Genetics are using gene knockout (KO) mice to identify novel drug targets or biotherapeutic proteins for the treatment of a wide variety of diseases. An overview will be presented illustrating the process used by Lexicon Genetics to generate and phenotype 5000 knockout mice as part of an integrated drug discovery program.

D. Wade Walke, Ph.D. is Associate Director of Mining and Curation in the Department of Genetics at Lexicon Genetics Incorporated, a biopharmaceutical company located in The Woodlands, TX. Dr. Walke oversees a research group that has identified more than 5000 genes encoding the most pharmaceutically tractable proteins in the mouse and human genomes and that has cataloged the phenotypes of mice in which these genes have been disrupted. This effort has enabled Lexicon to determine the physiological function of these genes and to validate drug targets for treating human disease. Dr. Walke received his B.S. degree in Biochemistry from Brigham Young University and his Ph.D. degree in Biochemistry from the University of Michigan. He served as a postdoctoral fellow in the Department of Neurobiology at The Scripps Research Institute under the direction of Nobel Laureate Dr. Gerald Edelman, where he studied the regulation of gene expression during neuronal development. He also served as a postdoctoral fellow in the Department of Developmental Neurobiology at St. Jude Children's Research Hospital, where he investigated the molecular mechanisms of apoptosis.