Schedule: JH Phenotyping Symposium

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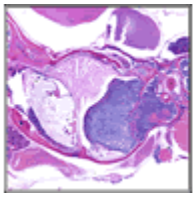
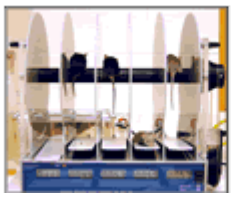
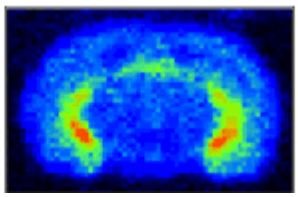
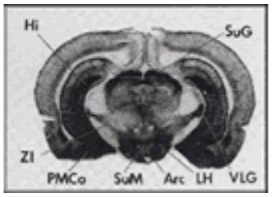
The 2006 Phenotyping symposium was a great success
with more than 270 registered attendees.
THANKS FOR COMING!

2006 Johns Hopkins Phenotyping Symposium:
Mice and Beyond

Wednesday March 22, 2006
PCTB Mountcastle Auditorium, SOM Campus, Baltimore, MD

PROGRAM

10-1005 Wecome to Johns Hopkins' First Phenotyping Symposium
Janice Clements, PhD; Director, Molecular and Comparative Pathobiology; Professor, Molecular and Comparative Pathobiology, Neurology, Pathology, Molecular Biology, Genetics; Director, Retrovirus Laboratory; Mary Wallace Stanton Professor of Faculty Affairs; Vice Dean of Faculty; JHU School of Medicine

1005-1015 Introduction to phenotyping and the phenotyping core
Cory Brayton, DVM, Dip ACLAM, ACVP; Associate Professor, Molecular and Comparative Pathobiology; Director, Phenotyping Core; JHU School of Medicine
Dr. Brayton received her DVM from Cornell University. During postdoctoral training at The Rockefeller University in the early 1990's, she became specifically interested in the pathology and characterization (phenotyping) of genetically engineered mice (GEM), and has continued to pursue this interest. In 2004 she moved to Johns Hopkins to develop a collaborative phenotyping core based in the Department of Molecular and Comparative Pathobiology. This presentation explains the role of phenotyping in functional genomics research, and introduces Johns Hopkins' Phenotyping Core.
Link to PDF of the powerpoint presentation.

1015-1045 Clinical phenotyping: Physical exam of the mouse
Julie Watson, VetMB, Dip ACLAM; Assistant Professor, Molecular and Comparative Pathobiology; JHU School of Medicine
Dr. Watson received her veterinary degree from the University of Cambridge (UK), and is a diplomate of the American college of laboratory animal medicine. She joined our faculty in 2002 and is in charge of rodent health programs at Johns Hopkins. Current research projects include investigation into eliminating Theilers mouse encephalomyelitis virus from mice using neonatal transfer, epidemiology of pinworm infestation and elimination methods, and clinical and behavioral phenotyping screens for genetically engineered mice. This presentation demonstrates and explains the different components of a mouse physical exam, which is a highly informative initial phenotyping evaluation.

1045-1115 Motor phenotyping
Ellen Hess, Associate Professor, Neurology, Neuroscience; JHU School of Medicine
Dr. Hess is an Associate Professor in the Departments of Neurology and Neuroscience at Johns Hopkins University. She received her B.A. in Psychobiology from Wellesley College and Ph.D. in Neuroscience from U.C.S.D. Before joining the faculty at Johns Hopkins University in 2000, she held academic appointments at Pennsylvania State University College of Medicine. Her research is a natural extension of her training in both behavioral pharmacology and molecular biology, focusing on the generation and analysis of mouse models of movement disorders, particularly dystonia, using both genetic and pharmacological approaches. This presentation focuses on motor phenotyping techniques that are important to her studies.

1130-1200 Emotional/cognitive /social phenotyping
Mikhail Pletnikov, MD, PhD; Assistant Professor, Psychiatry and Behavioral Sciences; JHU School of Medicine
Dr. Pletnikov received his MD from I.M. Sechenov Moscow Medical Institute, Moscow, Russia in 1986, and his PhD from P.K.Anokhin Institute of Normal Physiology, Moscow, Russia in 1989, joined Johns Hopkins in 1996 as a postdoctoral fellow, and has been on faculty since 1999. His primary research interests are the molecular, cellular and neuro-immune mechanisms of abnormal brain development with relevance to neurodevelopmental disorders such as autism and schizophrenia. He uses viral and genetic rat and mouse models to study brain dysfunction on the molecular, cellular and behavioral levels. This presentation focuses on some emotional, cognitive and social phenotyping techniques that are important to his studies.

12-1230pm Metabolic profiling: Oxymax and indirect calorimetry
Gabriele Ronnett, MD, PhD; Professor, Neuroscience; JHU School of Medicine
Dr. Ronnett is Professor of Neuroscience and Nerology at Johns Hopkins School of Medicine. Her

research interests include the study of mechanisms of neuronal regeneration using the olfactory system as a model, and mechanisms of neuronal energy balance and feeding behavior. This presentation focuses on some of the metabolic evaluations of mutant mouse models that have become important to her work to illustrate the utility of these approaches in phenotype characterization.

1-130 Small animal imaging

Martin Pomper, MD, PhD; Associate Professor, Departments of Radiology, Pharmacology and Oncology; Division of Neuroradiology; JHU School of Medicine

Dr. Pomper received his M.D. and Ph.D. at the University of Illinois at Urbana-Champaign. He joined Johns Hopkins in 1990 as a medical intern, and now is Associate Professor in the Departments of Radiology, Pharmacology and Oncology. His primary research interests involve In Vivo Molecular and Cellular Imaging; Radiopharmaceutical Development; Targeted Cancer Imaging and Therapy, and Functional Brain Imaging with an overall goal of developing new techniques and agents to study human disease through imaging. This presentation focuses on imaging technologies in the Small Animal Imaging Resource Program, and their application to phenotyping mouse models of cancer and central nervous system diseases.

130-2 Pulmonary phenotyping

Wayne Mitzner, PhD; Professor and Director, Division of Physiology; JH Bloomberg School of Public Health Dr. Mitzner received a MS in Electrical Engineering and PhD in Biomedical Engineering from Johns Hopkins University, and currently is Professor and Director, Division of Physiology in the Johns Hopkins' Bloomberg School of Public Health.

Clarke Tankersly, PhD; Associate Professor, Division of Physiology; JH Bloomberg School of Public Health Dr. Tankersly received a MS from Johns Hopkins University, PhD from Pennsylvania State University, and now is Associate Professor in the Division of Physiology in the Bloomberg School of Public Health.

Their primary research interests are in the control of ventilation and how genetic predisposition may contribute to individual susceptibility to air-borne toxins. Genetically homogeneous inbred mouse strains have been important tools in their studies, and their work illustrates the important roles of nature and nurture on phenotypes. This presentation focuses on phenotyping strategies that they have developed for assessing mouse pulmonary function.

215-245 Clinical pathology phenotyping

Dawn Ruben, DVM; Resident; Molecular and Comparative Pathobiology; JHU School of Medicine

Dr. Ruben received her veterinary degree from University of Missouri, and currently is a resident in Molecular and Comparative Pathobiology. While she has a great deal of expertise in experimental surgery, she also has been developing expertise in clinical pathology. This presentation focuses on clinical pathology capabilities currently in the core, some of the pitfalls of clinical pathology evaluations of very small animals and specimens, and some recommendations for obtaining valuable phenotype data from relatively simple and inexpensive tests.

245-315 Anatomic pathology phenotyping

Cory Brayton, DVM, Dip ACLAM, ACVP; Associate Professor, Molecular and Comparative Pathobiology; Director, Phenotyping Core; JHU School of Medicine

Dr. Brayton received her DVM from Cornell University. During postdoctoral training at The Rockefeller University in the early 1990's, she became specifically interested in the pathology and characterization (phenotyping) of genetically engineered mice (GEM), and has continued to pursue this interest. In 2004 she moved to Johns Hopkins to develop a collaborative phenotyping core based in the Department of Molecular and Comparative Pathobiology. This presentation discusses the critical role that anatomic pathology can play in the characterization of a wide variety of phenotypes, and illustrates some common 'spontaneous' phenotypes of mice that could contribute to or interfere with functional genomics efforts.

330-4 ES cell to mouse: Getting your genetic variant on the hoof

Roger Reeves, PhD; Professor, Physiology, McKusick-Nathans Institute for Genetic Medicine;

Faculty Director, Transgenic Core Facility JHU School of Medicine
Dr. Reeves received his Ph.D. from the University of Maryland, did his postdoctoral training at Johns Hopkins, and now is professor in the Department of Physiology and Faculty Director, JHUSOM Transgenic Core Facility. His primary research interest is in Trisomy 21 and in the development and characterization of mouse models to understand why and how gene dosage imbalance disrupts development in Down's syndrome. However this presentation focuses on the Transgenic core and its role in functional genomics initiatives at Johns Hopkins.

4-430 Why fish are better than mice
Andrew McCallion, PhD; Assistant Professor, McKusick-Nathans Institute for Genetic Medicine and Molecular and Comparative Pathobiology; JHU School of Medicine
Dr. McCallion received his PhD from the University of Glasgow, and came to Johns Hopkins in 2000, where he now holds a dual appointment in the Institute for Genetic Medicine and in Molecular and Comparative Pathobiology. His research combines comparative sequence analysis with transgenic paradigms, in mouse and zebrafish, to evaluate the biological relevance of putative regulatory sequences in critical developmental or disease genes and the variants that may compromise them. He concluded the symposium by explaining why he has defected from mice to fish in his quest.

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