

# 19<sup>th</sup> Annual Virtual Workshop on the Pathology of Mouse Models for Human Disease 27 Sept-1 Oct 2021

Lectures will be made available on-demand in advance of the scheduled course dates. Each day of the course will include 2 hours of live virtual sessions including Q&A with speakers, Case Presentations, Panel Discussions and Featured Lectures. Live sessions will be updated as confirmed.

## On-Demand Content (Made Available September 1)

Welcome and general introduction to this virtual workshop on mouse pathology. *John Sundberg, The Jackson Laboratory and Department of Dermatology, Vanderbilt University Medical Center*

Matthew Kaufman Memorial Stem Cell Lectureship: Skin epithelial stem cell dynamics in adult tissue homeostasis and injury repair. *Tudorita Tumber, Cornell University*

### General Information and Resources

1. Concepts on Mouse Models for Human Diseases and an Overview of Mouse Genetic Nomenclature. *John Sundberg, The Jackson Laboratory*
2. Mouse Genome Informatics (MGI) and Mouse Tumor Biology Databases. *Dale Begley, The Jackson Laboratory*
3. Access to Genetically Engineered Mouse Resources – What You Need to Know! and What You Need to Know About NIH - a Short Overview and Guide for Trainees. *Franziska Grieder, NIH*
4. New and Emerging Genetic Engineering Technologies. *Bill Buaas, The Jackson Laboratory*

### Methodologies

1. The Humanized Mouse. *Leonard D. Shultz, The Jackson Laboratory*
2. *In vivo* Phenotyping of the Laboratory Mouse; The Jackson Laboratory's Center for Biometric Analysis. *Jacqui White, The Jackson Laboratory*
3. Tissue scoring in investigational studies. *David Meyerholz, Univ. Iowa*
4. Advancements in imaging technologies – FLIM for improving image-based pathology and high-resolution 3D microscopy. *Philipp Henrich, The Jackson Laboratory.*
5. Connecting Pathology to Stem Cell Research, Single Cell RNA, and 3D Imaging. *Alexander Yu. Nikitin, Cornell University.*
6. Pathology informatics; excavating your data. *Paul Schofield, University of Cambridge and The Jackson Laboratory (adjunct Professor)*

### Pathology of the mouse by organ system

1. Pathology of the Female Reproductive System. *Darlene Dixon, NIEHS*
2. Mouse Models of Human Reproductive Tract Disorders. *Darlene Dixon, NIEHS*
3. Modeling Ovarian and Endometrial Cancer. *Alexander Yu. Nikitin, Cornell University*
4. Neuropathology. *Jerrold M. Ward, Global VetPathology*

5. **Neuromuscular Disease Phenotyping and Models.** *Peter Vogel, St. Jude Children's Research Hospital*
6. **Mouse Models of Breast (Mammary) and Prostate cancer.** *Alexander Borowsky, UC Davis*
7. **The Mouse Lung for Translational Studies.** *David Meyerholz, Univ. Iowa*
8. **Utilizing Mouse Models of SARS CoV2.** *Dave Meyerholz, Univ. Iowa*
9. **Why We Need More Than One Mouse Model for Covid-19 and How We Will Achieve It.** *Xavier Montagutelli, Institut Pasteur*
10. **Biorepository for Mouse Models for SARS CoV2 research.** *Cat Lutz, The Jackson Laboratory*
11. **Integrating Imaging Technologies into the Study of Eye Diseases.** *Jesus Ruberte, Universitat Autònoma de Barcelona*
12. **Eye Disease Models.** *Peter Vogel, St. Jude Children's Research Hospital*
13. **Pathology of the Liver and Mouse Models of Liver Disease.** *Jerrold M. Ward, Global VetPathology*
14. **Lymphoid Tissues: Development and Aging Changes.** *Harm Hogenesch, Purdue Univ.*
15. **Recognition of Aberrant Immune Cell Proliferations in Immunocompromised Mice Receiving Human Cells.** *Laura Janke, St. Jude Children's Research Hospital*
16. **Innate Lymphoid Cells: Their Role in Inflammatory Diseases.** *Harm Hogenesch, Purdue Univ.*
17. **Ciliopathies.** *Peter Vogel, St. Jude Children's Research Hospital*
18. **Complex Genetics of Susceptibility to Infections: Tuberculosis.** *Gillian Beamer, Tufts Univ.*
19. **Skin, Hair, and Nail Disease Models.** *John P. Sundberg, The Jackson Laboratory and Dept. Dermatology, Vanderbilt University Medical Center*

## Live online options

**Meet with the pathologists:** We will have one day set up for participants to interact with the pathologists and faculty that are available to ask questions and discuss our programs and pathology practice.

**Case presentations:** Digital images can be uploaded to the JAX meeting website for all participants interested to look at in advance and then we set up a time to discuss the cases. This approach would provide everyone the opportunity to evaluate the cases in advance and look up any documentation that might be useful for the discussion.