

Population-Based Rodent Resources for Environmental Health Sciences: Final Draft Agenda

Day 1- March 18, 2015

- 8:30 a.m. Welcoming Remarks
Linda Birnbaum
- 8:40 a.m. Introduction/Purpose/Background
Kim McAllister

Session I. Overview of Mouse/Rat Resources

Chair: Allan Balmain

- 9:00 a.m. The Collaborative Cross: What We've Learned from Randomized, Structured Populations
David Threadgill
- 9:45 a.m. Diversity Outbred
Gary Churchill
- 10:30 a.m. Hybrid Diversity Panel
Brian Parks (Jake Lulis' laboratory)
- 11:15 a.m. Recombinant Inbred Rats: Genetics, Transcriptomes, and Use for Identifying Phenotypic Determinants
Boris Tabakoff
- 12:00 p.m. Q&A
- 12:30 p.m. Lunch

Session II. Diverse Applications

Chair: Mathew Pletcher

- 1:30 p.m. "Fit-For-Purpose" Population Study Designs To Address Specific Hypotheses
Ivan Rusyn
- 2:00 p.m. Mouse Populations Enable Translational Pharmacogenomic Approaches for Understanding and Predicting Adverse Drug Events
Alison Harrill
- 2:30 p.m. Identifying G X E Interactions and Thresholds for Toxicity in Diversity Outbred Mice
Jef French
- 3:00 p.m. A Diversity Outbred ES Cell Platform for In Vitro Genetics
Ted Choi
- 3:30 p.m. Q&A

Session III. Poster Session

- 4:00 p.m. Poster Session
- 6:00 p.m. Adjourn for the Day

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Day 2- March 19, 2015

Session IV: Computational Tools and Analysis Approaches

Chair: Daniel Pomp

- 8:30 a.m. Advancing Risk Assessment with Population-Based Experimental Resources
Weihshueh Chiu
- 9:00 a.m. Mixed Model and Meta-Analysis Methods for G x E Analysis in Mouse Studies
Eleazar Eskin
- 9:30 A.M. Computational Mapping Tools
Dan Gatti
- 10:00 a.m. Q&A

Session V: Disease Applications

Chair: Cheryl Marks

- 10:30 a.m. Genetic Regulatory Variation and Environmental Response
David Aylor
- 11:00 a.m. Harnessing Diversity in the CC and DO Populations for the Study of Behavior
Elissa Chesler
- 11:30 a.m. Genetic Diversity in Ebola Response
Martin Ferris
- 12:00 p.m. Q&A
- 12:30 p.m. Lunch

Session VI: Breakout Groups Highlighting Experimental Designs/Test Cases: Challenges and Opportunities for Utilizing these Population-Based Rodent Resources

- 1:30 p.m. Initial Charge Lead by *Nigel Walker*
- 1:45 p.m. Breakouts (Note: Selected assignments below are attempting to distribute expertise among some of the invited speakers, chairs, and other confirmed researchers but all other participants are invited to join in and contribute as well!)

Breakout Group 1:

Co-Chairs: *Warren Casey, Terry Kavanagh*

Heather Patisaul

Igor Pogribny

William Valdar

Mathew Pletcher

David Threadgill

Ivan Rusyn

Eleazar Eskin

David Aylor

Notetaker/Scribe: *Rick Paules/Leroy Worth*

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Breakout Group 2:

Co-Chairs: *Fernando Pardo Manuel de Villena, Paul Foster*

Samir Kelada

Laura Saba

John Bucher

Gary Churchill

Allan Balmain

Cheryl Marks

Dan Gatti

Notetaker/Scribe: *June Dunnick/Sri Nadadur*

Breakout Group 3:

Co-Chairs: *Tim Wiltshire, Mike Devito*

Jessica Mayeux

Brian Bennett

Arun Pandiri

Daniel Pomp

Brian Parks

Elissa Chesler

Jef French

Notetaker/Scribe: *Dan Shaughnessy/Fred Tyson*

Breakout Group 4:

Co-Chairs: *Jonathan Pollock, David Dix*

Greg Crawford

Amelie Baud

Alison Harrill

Weihshueh Chiu

Byron Jones

Martin Ferris

Ted Choi

Boris Tabakoff

Notetaker/Scribe: *Keith Shockley/Jonathan Hollander*

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| 2:45 p.m. | Prepare Report-Back |
| 3:00 p.m. | Report-Backs by Co-Chairs of each Breakout Group (approx. 10-15 min each) |
| 4:00 p.m. | Final Wrap-Up/General Recommendations of Next Steps |
| 4:30 p.m. | Adjourn the Meeting |