

Zebrafish and Other Fish Models: Description of Extrinsic Environmental Factors for Rigorous Experiments and Reproducible Results

Workshop Agenda

MONDAY, SEPTEMBER 11, 2017

7:30 – 8:30: Registration

INTRODUCTION TO THE WORKSHOP

8:30 – 8:35: Welcome – Malgorzata M Klosek, Director DCI/ORIP/DPCPSI/OD/NIH

8:35 – 8:45: ORIP's Support for Animal Models and Animal Facilities - Infrastructure for Innovation – Franziska Grieder, Director ORIP/DPCPSI/OD/NIH

8:45 – 8:55: Rigor, Reproducibility, and Animal Model Research – Stephanie Murphy, Director DCM/ ORIP/DPCPSI/OD/NIH

8:55 – 9:05: Meeting Logistics – Malgorzata M Klosek

9:05 – 9:15: Goals and Expected Outcomes of the Workshop – Steering Committee: Stephen Ekker, Christian Lawrence, Zoltan Varga

PLENARY SESSION

9:15 – 10:05: Water Chemistry – Discussion Leader: George Sanders

Jim Burris, Stephen Ekker, Steven Ripp, & George Sanders:

9:15 – 9:35:	<i>Basic Information from Zebrafish Facilities Represented by the Water Chemistry Group</i>
9:35 – 9:50:	<i>Effects of Water Chemistry on Zebrafish and Research Endeavors</i>
9:50 – 10:05:	Q&As

10:05 – 10:20: Break

10:20 – 11:10: Physical Environment – Discussion Leader: Ronald Walter

10:20 – 10:30:	<u>Robert Gerlai:</u>	<i>Zebrafish Husbandry and Breeding Require Careful Consideration of Environmental Conditions: The Growing Need for Systematic Studies on a Large Number of Factors</i>
10:30 – 10:40:	<u>Christian Lawrence:</u>	<i>Physical Factors Impacting Zebrafish Experiments: What Are They and How Do You Measure Them?</i>
10:40 - 10:50:	<u>Mary Halloran:</u>	<i>Physical Environmental Parameters Affecting Experiments: Neural/Behavioral Studies as an Example</i>
10:50 – 11:00:	<u>Ronald Walter:</u>	<i>Establishment and Maintenance of Genetic Homeostasis: Light effects on Zebrafish Gene Expression</i>
11:00 – 11:10:	Q&As	

11:10 – 12:10: Nutrition – Discussion Leader: Lilianna Solnica-Krezel

- 11:10 – 11:20: Maurine Hobbs: *Standardization Feed SOPs - Food Delivery Methods and Feed Types Across Different Institutions*
- 11:20 – 11:30: Lauren Pandolfo: *Bcs and Larvae vs Adults Needs and Diets*
- 11:30 – 11:40: Stephen Watts: *Nutrition and What Is Done in Other Model Organisms*
- 11:40 – 11:50: Lilianna Solnica-Krezel: *What Data is or Should Be Collected?*
- 11:50 – 12:00: Mark Masino: *Chromium-contaminated Adult Zebrafish Diet Negatively Impacts the Viability of Larval Progeny*
- 12:00 – 12:10: Q&As

12:10 – 1:10: Lunch Break

1:10 – 2:10: Health Monitoring and Biosafety – Discussion Leader: Susan Farmer

- 1:10 – 1:20: Katrina Murray: *Biosecurity, Importation, and Exportation*
- 1:20 – 1:30: Susan Farmer: *Health Surveillance: How Often and What Is Available*
- 1:30 – 1:40: Joseph Schech: *Finding Meaning in Zebrafish Sick Reports*
- 1:40 – 1:50: Heather Shive: *Physical Appearance / Lesions: Identifying Sick Fish and Diseases*
- 1:50 – 2:00: Christopher Whipps: *Impacts of Diseases (such as Pseudoloma and Mycobacterial Diseases): Which Pathogens Should Be Reported?*
- 2:00 – 2:10: Q&As

2:10 – 3:10: Welfare and Behavior – Discussion Leader: Michael Kent

- 2:10 – 2:20: Marnie Halpern: *Behavioral Assays: Reproducibility and Rigor*
- 2:20 – 2:30: Brant Weinstein: *Egg Production and Fertility*
- 2:30 – 2:40: Brian Link: *Parameters Affecting Variation and Reproducibility when Using Zebrafish to Model Disease: Implications for Disease Modeling*
- 2:40 – 2:50: Michael Kent: *Effects of Sub-Clinical Infections*
- 2:50 – 3:00: Rebecca Van Beneden: *Accepting and Implementing Reporting Procedures*
- 3:00 – 3:10: Q&As

3:10 – 3:30: Break & Group Photo

3:30 – 5:30: Commercial Equipment and Data Formats – Discussion Leader: Stephen Ekker

- 3:30 – 3:50: Mark Francis: *Design for Success: 'Smart' Data Collection and Analysis*
- 3:50 – 4:10: Lance Squires: *Aquatic Systems: Technical Feasibility & Practicality*
- 4:10 – 4:30: Priscilla Shirley: *Lab Feeds*
- 4:30 – 4:50: Nick King: *Creating a Health Management Program for Aquatic Establishments*
- 4:50 – 5:10: Marcus Crim: *Health Monitoring and Health Status Reporting for Zebrafish Colonies*
- 5:10 – 5:30: David Weintraub: *Efficient and Effective Data Collection to Support and Connect the Zebrafish Research Community*

CONCLUSIONS AND SET-UP FOR THE NEXT DAY

5:30 – 5:45: Questions and Issues for the Break-out Groups, Part I:

Steering Committee, Discussion Leaders, and all other participants

TUESDAY, SEPTEMBER 12, 2017

PLENARY SESSION

8:30 – 8:35: Plans for the Day: MM Klosek

8:35 – 9:45: **Data Collection and Sharing** – Discussion Leader: Michael Hucka

8:35 – 8:45: Cory Brayton: *Current Status of Guidelines for Minimal Information Reporting*

8:45 – 8:55: Allan Kalueff: *A Neuroscientist's Perspective on Tools for Data Collection and Sharing: The Researchers Need*

8:55 – 9:05: Zoltan M Varga: *Husbandry Data Collection and Environmental Data Monitoring at the Zebrafish International Resource Center*

9:05 – 9:15: Timothy Mason: *Data Collection at the University of Oregon Zebrafish Facility*

9:15 – 9:35: Yuk Fai Leung & *Data Formats and Data Sharing: Minimal Information Model*

Michael Hucka: *and its Potential for Growth and Integration*

9:35 – 9:45: Q&As

9:45 – 10:15: **Dissemination Questions**: How to Engage Professional Organizations / Journals –
Input for the Break-out Group Sessions – Discussion Leader: Stephen Ekker

Gina Alvino: *Comments from an Editor of PLOS ONE*

Cory Brayton: *Comments from an Editor/EB/ERB member and reviewer*

Ida Chow: *Comments from a Director of the Society for Developmental Biology*

Dante D'India: *Zebrafish Husbandry Association: A Learning Community Focused on Advancing Standardization of Zebrafish Research*

Dustin Graham: *Comments from an editor of LabAnimal, Nature Research*

10:15 – 10:30: Break

10:30 – 10:45: Questions and Issues for the Break-out Groups, Part II:

Steering Committee, Discussion Leaders, and all other participants

10:45 – 10:50: Break-out Groups Set-up

BREAK-OUT GROUPS

10:50 – 12:30: Break-out Groups Discussions: Open Issues, Recommendations and Further Actions

12:30 – 1:30: Lunch Break

PLENARY SESSION

1:30 – 2:00: Reports from Break-out Groups: Discussion Leaders

2:00 – 2:30: White Paper: Steering Committee

2:30 – 3:00: Recommendations for ORIP: Steering Committee and Discussion Leaders

3:00 – 3:15: Dissemination of Outcomes, Feedback from the Research Community, and Future Actions:
All Participants

3:15 – 3:30: Wrap-up - Workshop adjourns