



# Making and Genetically Manipulating Mouse Embryos

May 16 -19, 2022

The Jackson Laboratory in Bar Harbor, Maine.

*This schedule is subject to change.*

## Sunday, May 15, 2022

4:00-6:00            **Registration & Check-In** (Highseas)

6:00                 **Dinner** (Highseas)

## Monday, May 16, 2022

7:00-8:00           **Breakfast** (Highseas)

8:00-8:30           **Course Overview and Introductions** (Highseas Conference Room, 3<sup>rd</sup> floor)  
Robert Taft, Ph.D. and Jennifer Corrigan, M.S., The Jackson Laboratory

8:30-9:30           **Using Assisted Reproductive Technologies (ARTs) to Generate Zygotes and Preserve Embryos** (Highseas Conference Room, 3<sup>rd</sup> floor)  
Robert Taft, Ph.D., The Jackson Laboratory

9:30-10:30         **Cryobiology** (Highseas Conference Room, 3<sup>rd</sup> floor)  
Robert Taft, Ph.D., The Jackson Laboratory

10:30-10:45        **Break**

10:45-11:15        **Male and Female Reproductive Anatomy** (Highseas Conference Room, 3<sup>rd</sup> floor)  
Robert Taft, Ph.D., The Jackson Laboratory

11:15-11:30        *Transportation from Highseas to Roscoe's*

11:30-12:30        **Lunch** - (Roscoe's)

12:30-1:45         **Male and Female Anatomy: Demonstration and Practical** (Lab, GRB 3245)  
Jennifer Corrigan, M.S., Leanne Miceli, A.S., RALAT, The Jackson Laboratory

1:45-2:00           **Break**

2:00-3:00           **Anesthesia, Analgesia and Aseptic Surgery Methods** (B18 1010 Auditorium)  
Rebecca LaFleur, D.V.M., The Jackson Laboratory

3:00-4:30 **Biomethods** (Lab, GRB 3245)  
Kristin Cough, B.S., L.V.T., and Angela Begin, LVT, MBA, The Jackson Laboratory

4:30 *Transportation from GRB Training Lab to Highseas*

6:00-7:00 **Dinner** (Highseas)

**Tuesday, May 17, 2022**

7:00-8:00 **Breakfast** (Highseas)

8:00 – 8:15 *Transportation from Highseas to Bld 64, B115*

8:15-9:00 **Liquid Nitrogen Safety, Dry Shippers, Biobank** (Bld 64, B115)  
Michelle Burns and Bree Means, MBA, The Jackson Laboratory

9:00-9:15 **Walk to GRB Training Laboratory** (GRB 3245)  
Michelle Burns and Bree Means, MBA, The Jackson Laboratory

9:15-11:15 **Concurrent Electives: Demos and Hands-on** (Lab, GRB 3245)

- **Microcapillary Transfer Pipetting**
- **Pulling Microcapillary Transfer Pipettes**
- **Flushing Embryos produced from Natural Matings**
- **Selecting Mice in Estrus for the Generation of Pseudopregnant Females**  
Bree Means, MBA, Rachael Pelletier, B.S., Leanne Miceli, A.S., RALAT,  
and Jennifer Corrigan, M.S., The Jackson Laboratory

11:30-12:30 ***In-Vitro* Fertilization: Strain Selection, Superovulation, Project Planning and Trouble Shooting** (B18 1010 Auditorium)  
Robert Taft, Ph.D., The Jackson Laboratory

12:30-1:30 **Lunch** (Roscoe's)

1:30-3:30 **Non-Surgical Embryo Transfer (NSET)** (Lab, GRB 3245)  
Barbara Stone, Ph.D., Paratechs

3:30 *Transportation from GRB Training Lab to Highseas*

6:00-7:00 **Dinner** (Highseas)

**Wednesday, May 18, 2022**

7:00-8:00 **Breakfast** (Highseas)

8:00-8:15 *Transportation from Highseas to GRB Training Lab*

- 8:15-9:45            ***In-Vitro Fertilization Using Fresh Sperm*** (Lab, GRB 3245)  
Leanne Miceli, A.S., RALAT, Jennifer Corrigan, M.S., Jane Farley and Bree Means, MBA and The Jackson Laboratory
- 9:45-10:00           **Break**
- 10:00-11:00          **How to Generate New Mouse Models Using CRISPR Technology** (B18 1010 Auditorium)  
Rebecca Boumil, Ph.D., The Jackson Laboratory
- 11:00 -12:15          **CRISPR Reagent Delivery via Electroporation of Mouse Zygotes** (Lab, GRB 3245)  
Peter Kutny. B.S., The Jackson Laboratory
- 12:15-1:15           **Lunch** – (Roscoe’s)
- 1:15-1:45            ***In Vitro Fertilization Change-Over*** (Lab, GRB 3245)  
Leanne Miceli, A.S., RALAT, Jennifer Corrigan, M.S., Bree Means, MBA, and Jane Farley, The Jackson Laboratory
- 1:45-2:00            **Break**
- 2:00-4:00            **Surgical Procedures: Vasectomy and Embryo Transfer** (Lab, GRB 3245):  
Jennifer Corrigan, M.S., Bree Means, MBA and Leanne Miceli, A.S., RALAT, The Jackson Laboratory.
- 4:00                    *Transportation from GRB Training Lab to Highseas*
- 6:00-7:00            **Dinner** (Highseas)

**Thursday, May 19, 2022**

- 7:00-8:00            **Breakfast** (Highseas)
- 8:00                    *Transportation from Highseas to GRB Training Lab*
- 8:15-8:45            **Count/Evaluate Embryos from IVF** (Lab, GRB 3245)  
Leanne Miceli, A.S., RALAT, Jennifer Corrigan, M.S., and Bree Means, MBA, The Jackson Laboratory
- 8:45-9:45            **Evaluate Electroporated Zygotes and Q&A** (Lab, GRB 3245)  
Peter Kutny. B.S., The Jackson Laboratory
- 9:45-10:00           **Break**
- 10:00-10:45          **Introduction to Embryo Cryopreservation: Controlled rate & Vitrification** (B33 2205 NRB Conference Room)  
Robert Taft, Ph.D., The Jackson Laboratory

- 10:45-12:00      **Embryo Cryopreservation: Controlled Rate Freeze Method** (Lab, GRB 3245)  
Bree Means, MBA, Leanne Miceli, A.S., RALAT and Jennifer Corrigan, M.S.,  
The Jackson Laboratory
- 12:00-1:00      **Lunch** – (Roscoe’s)
- 1:00-2:00      **Embryo Cryopreservation: Vitrification Method** (Lab, GRB 3245)  
Barbara Stone, Ph.D., Paratechs
- 2:00-3:00      **Thawing Embryos: Demonstration & Hands-on** (Lab, GRB 3245)
- **Controlled Rate Method**  
Bree Means, MBA, and Leanne Miceli, A.S., RALAT The Jackson  
Laboratory
  - **Vitrification Method**  
Barbara Stone, Ph.D., Paratechs
- 3:00              *Transportation from GRB Training Lab to Highseas*
- 6:00-7:00      **Dinner** (Highseas)

**Friday, May 20, 2022**

- 7:00-9:00      **To-Go Breakfast & Check Out**  
Participants may remain on the 1<sup>st</sup> floor until 12:00 pm if needed