



Making and Genetically Manipulating Mouse Embryos

November 2 - 5, 2021

The Jackson Laboratory in Bar Harbor, Maine.

This schedule is subject to change.

Monday, November 1, 2021

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

6:00 **Dinner** (Highseas Conference Room)

Tuesday, November 2, 2021

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

8:00-8:30 **Course Overview and Introductions** (Highseas Conference Room)
Robert Taft, Ph.D., Jennifer Corrigan, M.S. and Leanne Miceli, A.S., RALAT,
The Jackson Laboratory

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

9:30-10:30 **Cryobiology** (Highseas Conference Room)
Robert Taft, Ph.D., The Jackson Laboratory

10:30-10:45 **Break**

10:45-11:15 **Male and Female Reproductive Anatomy** (Highseas Conference Room)
Robert Taft, Ph.D., The Jackson Laboratory

11:15-12:00 **Lunch** - (Highseas)

12:00-12:15 *Transportation from Highseas to GRB 3245 Training Lab*

12:15-1:45 **Male and Female Anatomy: Demonstration and Practical** (Lab, GRB 3245)
Jennifer Corrigan, M.S., Leanne Miceli, A.S., RALAT and Alison Kieffer, MBA,
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)

Wednesday, November 3, 2021

- 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, B.C.S., The Jackson Laboratory
- 9:00-9:15 **Walk to GRB Training Laboratory** (GRB 3245)
Michelle Burns and Bree Means, B.C.S., 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, B.C.S., Rachael Pelletier, B.S., and Leanne Miceli, A.S.,
RALAT, The Jackson Laboratory
- 11:15-11:30 *Transportation from GRB Training Lab to Highseas*
- 11:30-12:30 ***In-Vitro* Fertilization: Strain Selection, Superovulation, Project Planning and
Trouble Shooting** (Highseas)
Bree Means, B.C.S., The Jackson Laboratory
- 12:30-1:15 **Lunch** (Highseas)
- 1:15-1:30 *Transportation from Highseas to GRB Training Lab*
- 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)

Thursday, November 4, 2021

- 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)
Jennifer Corrigan, M.S., Jane Farley, Bree Means, B.C.S. and Leanne Miceli, A.S.,
RALAT, 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 -12:00 **CRISPR Reagent Delivery via Electroporation of Mouse Zygotes** (Lab, GRB 3245)
Peter Kutny. B.S., The Jackson Laboratory
- 12:00-12:15 *Transportation from GRB Training Lab to Highseas*
- 12:15-1:00 **Lunch** – (Highseas)
- 1:00-1:15 *Transportation from Highseas to GRB Training Lab*
- 1:15-1:45 ***In Vitro Fertilization Change-Over*** (Lab, GRB 3245)
Jennifer Corrigan, M.S., Bree Means, B.C.S., Leanne Miceli, A.S., RALAT, 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, B.C.S. and Leanne Miceli, A.S., RALAT,
The Jackson Laboratory. Surgical Prep: Alison Kieffer, MBA, The Jackson
Laboratory
- 4:00 *Transportation from GRB Training Lab to Highseas*
- 6:00-7:00 **Dinner** (Highseas)

Friday, November 5, 2021

- 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)**
Jennifer Corrigan, M.S., Bree Means, B.C.S., Leanne Miceli, A.S., RALAT, 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 (B18 1010 Auditorium)**
Robert Taft, Ph.D., The Jackson Laboratory
- 10:45-12:00 **Embryo Cryopreservation: Controlled Rate Freeze Method (Lab, GRB 3245)**
Bree Means, B.C.S., Leanne Miceli, A.S., RALAT and Jennifer Corrigan, M.S., The Jackson Laboratory
- 12:00-12:15 *Transportation from GRB Training Lab to Highseas*
- 12:15-1:00 **Lunch** – (Highseas)
- 1:00-1:15 *Transportation from Highseas to GRB Training Lab*
- 1:15-2:00 **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, B.C.S. 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)

Saturday, November 6, 2021

- 7:00-9:00 **To-Go Breakfast & Check Out**