

28th Annual Short Course on Experimental Models of Human Cancer

August 15th – 24th, 2019 Bar Harbor, Maine

Thursday, August 15, 2019

Moderator: Karolina Palucka, M.D, Ph.D.

2:00 pm – 2:15 pm Course Evaluation Overview

Patricia Lech

University of Maine, Center for Research and Evaluation

2:15 pm - 3:00 pm Student Introductions

3:00 pm - 4:00 pm Inflammation and Cancer: Good Cells Behaving Badly

Lisa M. Coussens, Ph.D.

Professor and Chairwoman, Department of Cell, Developmental & Cancer Biology

Associate Director for Basic Research, Knight Cancer Institute

4:00 pm - 5:00 pm Exploiting Metabolic Stress in Cancer Treatments

Dr. Tak W. Mak, OC, PhD, DSc. (Hons), FRSC, FRS

Senior Scientist, Princess Margaret Cancer Centre, University Health Network

5:00 pm - 6:00 pm Introduction to Clinical Immuno-Oncology

Mario Sznol, M.D.

Professor of Medicine, Yale University

6:00pm Trolley From The Jackson Laboratory to Highseas

6:00 pm – 7:00 pm Happy Hour

7:00 pm Dinner

Highseas

Friday, August 16, 2019

Moderator: TBD

7:45 am – 8:30 am Faculty & Moderator Breakfast

Roscoe's

8:15 am Shuttle From Highseas to The Jackson Laboratory

8:30 am – 9:30 am Genomic Biology of Triple Negative Breast Cancer

Edison Liu, M.D.

President & CEO, The Jackson Laboratory

9:30 am - 10:30 am Disseminated Tumor Cell Dormancy and Therapeutic Resistance

Cyrus Ghajar, Ph.D.

Assistant Member, Fred Hutchinson Cancer Research Center

10:30 am - 11:00 am Break

11:00 am – 12:00 pm Role of Adult Stem Cell Niches and Primed Pluripotency Programs in Early DCC

Dormancy

Julio A. Aguirre-Ghiso, MSc, Ph.D.

Professor, Icahn School of Medicine at Mount Sinai

12:00 pm — 1:00 pm Lunch

Roscoe's

1:00 pm - 2:00 pm Tumor Exosomes and Exomeres Promote Metastasis and Systemic Disease

Haiying Zhang, Ph.D.

Assistant Professor of Cell and Developmental Biology in Pediatrics, Cornell

Medical College

2:00 pm - 3:00 pm **Q&A Session**

3:00 pm Shuttle From The Jackson Laboratory to Highseas

3:00 pm – 4:30 pm **Optional Workshop: Biomethods**

Kristin Cough, B.S., LVT, LATg

Animal Use Trainer, The Jackson Laboratory

4:30 pm Shuttle From The Jackson Laboratory to Highseas

6:00 pm Trolley from Highseas to The Bar Harbor Club

6:15 pm – 7:00 pm Happy Hour, Free, or Hike

7:00 pm – 9:00 pm Gala Dinner

Bar Harbor Club

9:00pm Trolley from The Bar Harbor Club to Highseas

Saturday, August 17, 2019

Moderator: Lucas Chang, Ph.D.

7:45 am – 8:30 am Faculty & Moderator Breakfast

Roscoe's

8:15 am Trolley from Highseas to The Jackson Laboratory 8:30 am - 9:30 am **Induction of Adaptive Immunity** Stephanie Eisenbarth, M.D., Ph.D. Associate Professor, Yale School of Medicine 9:30 am - 10:30 am Long Non-Coding RNA in the Immune System Adam Williams, Ph.D. Assistant Professor, The Jackson Laboratory 10:30 am - 11:00 am Break 11:00 am - 12:00 pm Integrative Biology and Omics of T Cell-Dendritic Cell Encounters Bernard Malissen, PhD Director of Center for Immunophenomics, CIML 12:00 pm - 1:00 pm Lunch Roscoe's 1:00 pm - 2:00 pm Imaging the Tumor Microenvironment – Many Colors, Lots of Information Chen Zhoa, M.D. National Heart, Lung, and Blood Institute 2:00 pm - 3:00 pm **Q&A Session** 3:00 pm Free Evening – Dinner on your own 3:30 pm Trolley from The Jackson Laboratory to Highseas and Village Green Sunday, August 18, 2019 Moderator: Jacques Banchereau, Ph.D. 7:45 am - 8:30 am Faculty & Moderator Breakfast Roscoe's 8:15 am Trolley from Highseas to The Jackson Laboratory 8:30 am - 9:30 am Myeloid Cell Determinants of Antitumor Immunity Miriam Merad, M.D., Ph.D. Professor, Oncological Services, Icahn School of Medicine at Mount Sinai 9:30 am - 10:30 am **Innate Lymphoid Cells in Biology**

Marco Colonna, M.D., Ph.D.

Professor of Pathology and Immunology, Washington University School of Medicine

10:30 am - 11:00 am Break

11:00 am – 12:00 pm	Immunologic Checkpoint Blockade: Dissecting Mechanisms and Next Steps Jedd Wolchock, M.D., Ph.D Chief, Melanoma and Immunotherapeutics Service, Lloyd J. Old Chair for Clinical Investigation, Memorial Sloan Kettering Cancer Center
12:00 pm – 1:00 pm	Lunch Roscoe's
1:00 pm – 2:00 pm	Mechanisms of Autoimmunity and Autoinflammation Virginia Pascual, M.D. Director, Gale and Ira Drukier Institute for Children's Health, Weill Cornell Medicine
2:00 pm – 3:00 pm	Influence of the Microbiota on Local and Systemic Immunity Dan R. Littman, M.D., Ph.D. Investigator, Howard Hughes Medical Institute; Kimmel Professor of Molecular Immunology; Skirball Institute of Biomolecular Medicine New York University School of Medicine
3:00 pm – 3:30 pm	Break
3:30 pm – 4:30 pm	Reverse Translational Studies to Guide Anti-PD-1 Cancer Combination Strategies in the Clinic Elaine Pinheiro, Ph.D. Principal Scientist, In Vivo Pharmacology, Merck
4:30 pm – 5:30 pm	Q&A Session
5:45 pm	Trolley from The Jackson Laboratory to Highseas
6:00 pm – 7:00 pm	Happy Hour
7:00 pm	Dinner Highseas

Monday, August 19, 2019

Moderator: Olga Anczukow, Ph.D.

7:45 am – 8:30 am Faculty & Moderator Breakfast

Roscoe's

8:15 am Shuttle from Highseas to The Jackson Laboratory

8:30 am – 9:30 am Fundamentals of Genomics and Immunogenics

Elaine R. Mardis, PhD, FAACR

Co-Executive Director, The Institute for Genomic Medicine

At Nationwide Children's Hospital

9:30 am – 10:30 am Alternative RNA Splicing Defects in Cancer: Molecular and Therapeutic Insights

From Model Systems Olga Anczukow, Ph.D.

Assistant Professor, The Jackson Laboratory

10:30 am – 11:00 am Break

11:00 am – 12:00 pm Understanding and Targeting Splice osomal Gene Mutations in Cancer

Omar Abdel-Wahab, M.D.

Associate Member, Memorial Sloan Kettering Cancer Center

12:00 pm – 1:00 pm Lunch

1:00 pm - 2:00 pm RNA Isoforms in Cancer Diagnosis and Therapy

Jacques Banchereau, Ph.D.

Professor and Director, Immunological Services, The Jackson Laboratory

2:00 pm - 3:00 pm Delineating Breast Tumor Evolution and Microenvironment with Single Cell

Genomics

Nicholas Navin, Ph.D.

Associate Professor, University of Texas MD Anderson Cancer Center

3:00 pm Shuttle from The Jackson Laboratory to Highseas

3:00 pm - 6:30 pm Optional Workshop: Single Cell (Advance Sign Up Required)

Paul Robson, Ph.D.

Associate Professor & Director, Single Cell Biology, The Jackson Laboratory

Nicholas Navin, Ph.D.

Associate Professor, University of Texas MD Anderson Cancer Center

6:30 pm Trolley from The Jackson Laboratory to The Bar Harbor Regency

6:45 pm Trolley from Highseas to The Bar Harbor Regency

7:00 pm – 9:00 pm Poster Session & Buffet Dinner

Regency

Tuesday, August 20, 2019

Moderator: Mingyang Lu, Ph.D.

7:45 am – 8:30 am Faculty & Moderator Breakfast

Roscoe's

8:15 am Shuttle from Highseas to The Jackson Laboratory

8:30 am – 9:30 am Clonal Hematopoiesis as a Predisposition Condition in Acute Myeloid Leukemia

Jennifer Trowbridge, Ph.D.

Assistant Professor, The Jackson Laboratory

9:30 am - 10:30 am Opposing Roles of Interferon and Pattern Recognition Receptor Signaling in

Cancer and Cancer Immunotherapy

Andy Minn, M.D., Ph.D.

Associate Professor of Radiation Oncology, University of Pennsylvania

10:30 am – 11:00 am Break

11:00 am - 12:00 pm Tumor Suppressor Functions of BRCA1 and BRCA2 at Stalled Replication Forks

Ralph Scully, Ph.D.

Professor, Medicine, Harvard Medical School

12:00 pm — 1:00 pm Lunch

Roscoe's

1:00 pm – 3:00 pm Optional Workshop: Xenografting Techniques (Subcutaneous and Kidney

Capsule) (Advance Sign Up Requried)

Bonnie Lyons, D.V.M.

Associate Veterinarian, The Jackson Laboratory

1:00 pm — 3:00 pm Optional Workshop: Data Analysis and Resources for Patient-Derived Cancer

Models (Advance Sign Up Requried)

Jeff Chuang, Ph.D.

Associate Professor, The Jackson Laboratory

3:00 pm – 3:30 pm Break

3:30pm – 5:30 pm Optional Workshop: cBioPortal for Cancer Genomics

Carol Bult, Ph.D.

Professor, Knowlton Family Chair, The Jackson Laboratory

5:45 pm Trolley from The Jackson Laboratory to The Bar Harbor Regency

6:00 pm – 7:00 pm Happy Hour

7:00 pm – 9:00 pm Maine Cancer Genomics Institute Dinner – *Regency*

The Maine Cancer Genomics Initiative—Moving the Needle in Community Genomic Medicine in a Rural State

Jens Rueter, MD

Associate Director for Regional Translational Partnerships, JAX Cancer Center

Audrey Antov

Program Director, Maine Cancer Genomics Initiative

9:00 pm Trolley from The Bar Harbor Regency to Highseas

Wednesday, August 21, 2019

Wednesday, August 21, 2019		
Moderator:	Gary Ren, Ph.D.	
7:45 am – 8:30 am	Faculty & Moderator Breakfast Roscoe's	
8:15 am	Shuttle from Highseas to The Jackson Laboratory	
8:30 am – 9:30 am	Modeling Anti-Cancer Immune Responses in Mice Marcus Bosenberg, M.D., Ph.D. Professor of Dermatology, Pathology, and Immunobiology, Yale	
9:30 am – 10:30 am	Imaging a World Beyond Checkpoint: Archetypes of Immunity Across Cancer Matthew Krummel, Ph.D. Professor, University of California, San Francisco	
10:30 am – 11:00 am	Break	
11:00 am – 12:00 pm	The Impact of Preclinical Models in our Understanding of the Biology and Treatment of Pediatric Cancers Ching Lau, M.D., Ph.D. Professor, The Jackson Laboratory	
12:00 pm – 1:00 pm	Lunch Roscoe's	
1:00 pm – 2:00 pm	Normal and Neoplastic Stem Cells Presented via Webex Irving Weissman, M.D. Director, Stanford Institute for Stem Cell Biology and Regenerative Medicine Director, Ludwig Center for Cancer Stem Cell Research; Professor of Pathology and of Developmental Biology, Stanford University	
2:00 pm – 3:00 pm	Unraveling the Complexity of Drug Resistance in Lung Cancer Katerina Politi, Ph.D. Associate Professor, Yale	
3:00 pm – 4:00 pm	Metabolic and Immune Control of Liver Tumorigenesis Michael Karin, Ph.D. Distinguished Professor of Pharmacology, University of California, San Diego	
4:15 pm	Shuttle from The Jackson Laboratory to Highseas	

4:30 pm - 5:30 pm Optional Workshop: Mouse Models of NASH-Related HCC (Advance Sign Up

Requried)

Michael Karin, Ph.D.

Distinguished Professor of Pharmacology, University of California, San Diego

6:15 pm Trolley from The Jackson Laboratory to Highseas

6:15 pm – 7:00 pm Happy Hour

7:00 pm Dinner

Highseas

Thursday, August 22, 2019

Moderator: Lenny Shultz, Ph.D.

7:45 am – 8:30 am Faculty & Moderator Breakfast

Roscoe's

8:15 am Shuttle from Highseas to The Jackson Laboratory

8:30 am – 9:30 am Modeling Cancer in the Mouse and its Therapeutic Implications

Pier Paolo Pandolfi, M.D., Ph.D.

Director, Cancer Center & Cancer Research Institute at Beth Israel Deaconess Medical Center & Professor of Medicine and Pathology, Harvard Medical School

9:30 am - 10:30 am Human Pancreatic Cancer insights from Model Systems

David Tuveson, M.D., Ph.D.

Professor, Cold Spring Harbor Laboratory

10:30 am — 11:00 am Break

11:00 am – 12:00 pm Q & A Models

12:00 pm – 1:00 pm Lunch

1:00 pm - 2:00 pm Emerging Models of Humanized Mice for Cancer Research

Lenny Shultz, Ph.D

Professor, The Jackson Laboratory

2:00 pm - 3:00 pm Modeling Human T Cell Selection and Type 1 Diabetes

Megan Sykes, M.D.

Professor & Director, Columbia Center for Translational Immunology (CCTI),

Columbia University

3:00 pm – 3:30 pm Break

3:30 pm – 4:30 pm Optional Workshop: Humanzied Mice

James Keck, Ph.D.

Senior Director, Innovation & Product Development, The Jackson Laboratory

4:30 pm Free Evening – Dinner on your own

4:30 pm Shuttle from The Jackson Laboratory to Highseas

Friday, August 23, 2019

Moderator: Karolina Palucka, Ph.D. & George Weinstock, Ph.D.

7:45 am – 8:30 am Faculty & Moderator Breakfast

Roscoe's

8:15 am Shuttle from Highseas to The Jackson Laboratory

8:30 am - 9:30 am Reprogramming the Tumor Microenvironment to Enhance Cancer Treatment:

Bench to Bedside

Rakesh K. Jain, Ph.D.

A. W. Cook Professor of Radiation Oncology (Tumor Biology), Harvard Medical

School

Director, E.L. Steele Laboratories, Massachusetts General Hospital

9:30 am – 10:30 am The Anatomy of the Anti-Tumor Immune Response

Amanda Lund, Ph.D.

Assistant Professor, Department of Cell, Developmental & Cancer Biology, Knight

Cancer Institute, Oregon Health & Science University

10:30 am - 11:00 am Break

11:00 am - 12:00 pm Structure and Function of Mammalian SWI/SNF Chromatin Remodeling

Complexes in Human Cancer

Cigall Kadoch, Ph.D.

Principal Investigator, Harvard Medical School, Dana-Farber Cancer Institute,

Broad Institute

12:00 pm – 1:00 pm Lunch

1:00 pm – 2:00 pm The Microbiome, Inflammation and Cancer

Julia Oh, Ph.D.

Assistant Professor, The Jackson Laboratory

2:00 pm - 3:30 pm Optional Workshop: Data Analysis Strategies for Microbiome Profiling

Mark Adams, Ph.D.

Director of Microbial Genomic Services, The Jackson Laboratory

2:00 pm - 5:00 pm Optional Workshop: Necropsy (Advance Sign Up Required)

James Miller

Necropsy Technologist II, The Jackson Laboratory

3:30pm – 4:30 pm Q&A – **George Weinstock, Ph.D.**

Professor, Evnin Family Chair & Director, Microbial Genomics, The Jackson

Laboratory

4:30 pm - 5:00 pm CIPHE Contribution to Genomic and Immunophenomic World-wide Coordinated

Programs

Ana Zarubica, Ph.D.

Chief Operating Officer/Directrice des operations

Centre d'Immunophenomique

5:00 pm Shuttle from The Jackson Laboratory to Highseas

6:45 pm Trolley from Highseas to Lobster Bake (stopping @ The Regency)

6:50 p m Trolly from The Bar Harbor Regency to Lobster Bake

7:00 pm – 9:00 pm Lobster Bake

Bar Harbor Lobster Bakes

9:00 pm Trolley from Lobster Bake to The Bar Harbor Regency and Highseas

Saturday, August 24, 2019

Moderator: Karolina Palucka, Ph.D.

7:45 am – 8:30 am Faculty & Moderator Breakfast

Roscoe's

8:15 am Trolley from Highseas to The Jackson Laboratory

8:30 am – 9:30 am Zebrafish Models of Human Cancer for Drug Discovery and Chemical Biology

A Thomas Look, MD

Dept of Pediatric Oncology, Dana-Farber Cancer Institute

Professor of Pediatrics, Harvard Medical School

9:30 am - 10:30 am Use of Animal Models to Design Strategies to Overcome Resistance to Immune

Checkpoint Blockade Taha Merghoub, Ph.D.

10:30 am - 11:00 am Break

11:00 am – 12:00 pm Genetically Diverse Mice and Cancer Model Development

Laura Reinholdt, Ph.D.

Associate Professor, JAX Genetic Resource Science

The Jackson Laboratory

12:00 pm – 1:00 pm Lunch

Roscoe's

1:00 pm – 2:00 pm Poster Prize

2:00 pm Adjourn

2:00 pm Trolley from The Jackson Laboratory to Highseas