



31st Annual Short Course on Experimental Models of Human Cancer

Farmington, Connecticut
August 14 - 26, 2022

Registered Attendees will receive access to our Virtual event portal (Canvas LMS) approximately one week in advance of the course. Course content will remain accessible to attendees until November 30, 2022. All times are shown in U.S. Eastern Daylight Time.

Organizing Committee

Karolina Palucka, M.D., Ph.D.

Director, JAX Cancer Center
Professor, Edison T. Liu Endowed Chair in Cancer Research
The Jackson Laboratory for Genomic Medicine

Brent Berwin, Ph.D.

Director, Courses & Workshops
The Jackson Laboratory

Marcus Bosenberg, M.D., Ph.D.

Professor; Co-Leader, Cancer Immunology, Yale Cancer Center
Director, Yale Center for Immuno-Oncology; Director, Yale SPORE in Skin Cancer

Carol Bult, Ph.D.

Professor, Knowlton Family Chair
The Jackson Laboratory

Lisa Coussens, Ph.D.

Professor and Chairwoman, Dept of Cell, Developmental, and Cancer Biology
Oregon Health & Science University

Matthew Krummel, Ph.D.

Professor
University of California, San Francisco

A. Thomas Look, M.D.

Professor of Pediatrics
Dana-Farber Cancer Institute

Schedule of Activities

Sunday, August 14

1:45 pm	<i>Shuttle Departs Delamar Hotel to The Jackson Laboratory</i>
2:00 pm - 3:00 pm	<i>Registration & COVID-19 on-arrival testing</i>
3:00 pm - 3:30 pm	Opening Remarks Karolina Palucka, M.D., Ph.D., The Jackson Laboratory
3:30 pm - 4:15 pm	New Insights in the Human Genome from Long Read DNA Sequencing Analysis Charles Lee, Ph.D., The Jackson Laboratory
4:15 pm - 5:45 pm	Inflammation and Cancer: Good Cells Behaving Badly Lisa Coussens, Ph.D., Oregon Health & Science University (Virtual)
6:00 pm - 7:00 pm	<i>Welcome Reception</i>
7:00 pm	<i>Shuttle Departs The Jackson Laboratory to the Delamar Hotel</i>

Monday, August 15

7:45 am	<i>Shuttle Departs Delamar Hotel to The Jackson Laboratory</i>
7:45 am - 8:45 am	<i>Registration & COVID-19 on-arrival testing</i>
9:00 am - 9:45 am	Modeling Oral Cancer: Genomic Landscape and Tumor Ecosystem Fiona Watt, Ph.D., Kings College London (Virtual)
9:45 am - 10:30 am	Cancer Metabolism: Back to the Future Tak Mak, Ph.D., UHN Toronto (Virtual)
10:30 am - 11:00 am	<i>Break</i>
11:00 am - 11:45 am	Resident Macrophages in Models of Peritoneal Metastatic Disease Gwendalyn Randolph, Ph.D., Washington University in St. Louis (Virtual)
11:45 am - 12:30 am	The Mechanistic Basis of Cancer Immunotherapy Ira Mellman, Ph.D., Genentech (Virtual)
12:30 pm - 1:30 pm	<i>Lunch</i>
1:30 pm - 2:15 pm	Normalizing the Tumor Microenvironment to Improve Cancer Immunotherapy: Bench to Bedside Rakesh Jain, Ph.D., Harvard University (Virtual)
2:15 pm - 3:00 pm	Innate Immunity Inflammation and Cancer: Double Edged Swords Alberto Mantovani, M.D., Humanitas University (Virtual)
3:00 pm - 3:30 pm	<i>Break</i>
3:30 pm - 4:15 pm	The Cancer Concept through the Centuries Edison T. Liu, M.D., The Jackson Laboratory
4:15 pm - 5:00 pm	Panel Discussion: Current key questions in cancer biology and therapy

Moderated by Karolina Palucka, M.D., Ph.D., The Jackson Laboratory

5:00 pm

Shuttle Departs The Jackson Laboratory to the Delamar Hotel

Tuesday, August 16

8:30 am

Shuttle Departs Delamar Hotel to The Jackson Laboratory

9:00 am - 9:45 am

APOBEC Mutagenesis in Tumor Progression

James Alvarez, Ph.D., Fred Hutchinson Cancer Research Center

9:45 am - 10:30 am

Biology of Minimal Residual Disease

Maria Sosa, Ph.D., Icahn School of Medicine at Mount Sinai

10:30 am - 10:45 am

Break

10:45 am - 11:30 am

Mechanisms of Brain Metastasis

Eva Hernando-Monge, Ph.D., New York University

11:30 am - 12:00 pm

Break

12:00 pm - 12:45 pm

Tracking Metastatic Tumor Cells *in vivo* at High Spatiotemporal Resolution

J. Javier Bravo-Cordero, Ph.D., Icahn School of Medicine at Mount Sinai

12:45 pm - 1:15 pm

Lunch

1:15 pm - 2:00 pm

Tumor Exosomes and Exomeres Promote Organotropic Metastasis and Systemic Disease | David Lyden, M.D., Ph.D., Cornell University

2:00 pm - 3:00 pm

Panel Discussion: Mechanisms of Metastatic Disease

Moderated by Francesca Menghi, Ph.D., The Jackson Laboratory (Virtual),
M. Soledad Sosa, Ph.D., Icahn School of Medicine at Mount Sinai

3:00 pm - 5:00 pm

Optional Mouse Workshops at UConn Health Center

3:00 pm

Shuttle Departs The Jackson Laboratory to the Delamar Hotel

Wednesday, August 17

8:30 am

Shuttle Departs Delamar Hotel to The Jackson Laboratory

9:00 am - 9:45 am

Advanced Dynamic and Static Optical Imaging Methods for Exploration of Tumor-Immune System Interactions

Ronald Germain, M.D., Ph.D., National Institutes of Health (Virtual)

9:45 am - 10:30 am

Innate Lymphoid Cells in Biology

Marco Colonna, Ph.D., Washington University in St. Louis (Virtual)

10:30 am - 10:45 am

Break

10:45 am - 11:30 am

Modeling Cancer: Immune System Interactions in Humanized Mice

Anthony Rongvaux, Ph.D., Fred Hutchinson Cancer Center (Virtual)

11:30 am - 11:45 am	<i>Break</i>
11:45 am - 12:30 pm	Tools for T Cells Infection and Cancer Mark Davis, Ph.D., Stanford University
12:30 pm - 1:30 pm	<i>Lunch</i>
1:30 pm - 3:00 pm	Single Cell Technologies & Application in Cancer Research Paul Robson, Ph.D., The Jackson Laboratory
3:00 pm - 3:45 pm	Age Against the Machine: How Aging Disrupts the Homeostasis of Cancer Ashani Weeraratna, Ph.D., Johns Hopkins University
3:45 pm - 4:15 pm	<i>Break</i>
4:15 pm - 5:45 pm	Panel Discussion: Inflammation Moderated by Jan Martinek, Ph.D., The Jackson Laboratory
5:45 pm - 7:30 pm	<i>Group Dinner – Butchers & Bakers (270 Farmington Ave, Farmington)</i>
7:30 pm	<i>Shuttle Departs Butchers & Bakers to the Delamar Hotel</i>

Thursday, August 18

8:15 am	<i>Shuttle Departs Delamar Hotel to The Jackson Laboratory</i>
8:30 am - 9:30 am	<i>COVID-19 testing</i>
9:45 am - 10:30 am	Clinical Cancer Immunotherapy: An Introduction Mario Sznol, M.D, Yale University
10:30 am - 10:45 am	<i>Break</i>
10:45 am - 11:30 am	Anchoring Therapeutics in Tumors for Safe and Effective Cancer Immunotherapy Darrell Irvine, Ph.D., Massachusetts Institute of Technology (Virtual)
11:30 am - 11:45 am	<i>Break</i>
11:45 am - 1:00 pm	Rising Stars – Flash Talks Session I Moderated by Djamel Nehar-Belaid, Ph.D., The Jackson Laboratory
	Understanding How Premalignant Breast Cancer Cells Disseminate and Form Metastasis Carolina Rodriguez Tirado, Icahn School of Medicine at Mount Sinai
	Single-cell Analysis of Endometriosis Reveals a Coordinated Transcriptional Programme Driving Immunotolerance and Angiogenesis Across Eutopic and Ectopic Tissues Elise Courtois, The Jackson Laboratory
	T cell Egress via Lymphatic Vessels Limits the Intertumoral T cell Repertoire in Melanoma Maria Steele, NYU Langone Health
	Identifying Spatial Organization at the Intersection of the Tumor and Wound Healing Kenneth Hu, University of California San Francisco

1:00 pm - 2:00 pm	<i>Lunch</i>
2:00 pm - 2:45 pm	Autoimmunity and Cancer Immunology: Informing Each Other through Patient-Oriented Studies Virginia Pascual, M.D., Cornell University
2:45 pm - 3:30 pm	How Does the Gut Microbiota Influence Host Immune Functions Dan Littman, M.D., Ph.D., New York University
3:30 pm - 4:00 pm	<i>Break</i>
4:00 pm - 4:45 pm	Selective Autophagy: From Understanding Mechanism to Its Multifaceted Role in Cancer Esperanza Arias-Perez, Ph.D., Albert Einstein College of Medicine
4:45 pm - 5:30 pm	Type 1 Regulatory T Cells in Cancer Immunotherapy and Beyond Alma-Martina Cepika, M.D., Ph.D., Stanford School of Medicine
5:30 pm	<i>Shuttle Departs The Jackson Laboratory to the Delamar Hotel</i>

Friday, August 19

8:45 am	<i>Shuttle Departs Delamar Hotel to The Jackson Laboratory</i>
9:15 am - 10:00 am	Role of Cancer Neoantigens in Naturally-occurring and the Therapeutically-induced Immune Responses to Cancer Robert Schreiber, Ph.D., Washington University STL (Virtual)
10:00 am - 10:30 am	<i>Break</i>
10:30 am - 11:15 am	Neopeptides of Cancers: The Awesome Powers of Weakness and Scarcity Pramod K. Srivastava, Ph.D., M.D., UConn Health Center
11:15 am - 11:45 am	<i>Break</i>
11:45 am - 12:30 pm	The Immunobiology of the Ovarian Tumor Microenvironment Pam Ohashi, Ph.D., F.R.S.C., UHN Toronto (Virtual)
12:30 pm - 2:00 pm	<i>Lunch</i>
2:00 pm - 3:30 pm	Genome Technologies Workshop Chia-Lin Wei, Ph.D. and Chee Hong Wong, M.S., The Jackson Laboratory
3:30 pm - 3:45 pm	<i>Break</i>
3:45 - 4:30 pm	Molecular Biomarkers of Response and Resistance to Checkpoint Blockade in Clinical Settings Romain Banchereau, Ph.D., Genentech
4:30 am - 5:45 pm	Panel Discussion: Immunotherapy Djamel Nehar-Belaid, Ph.D., The Jackson Laboratory, Ryan Englander, The Jackson Laboratory
5:45 pm	<i>Shuttle Departs The Jackson Laboratory to The North House</i>
6:00 pm - 7:30 pm	<i>Group Dinner – The North House (1 Nod Road, Avon, CT.)</i>

7:30 pm *Shuttle Departs The North House to The Jackson Laboratory and Delamar*

Saturday, August 20

8:30 am *Shuttle Departs Delamar Hotel to The Jackson Laboratory*

9:00 am - 9:45 am **Alternative RNA splicing defects in cancer: molecular and therapeutic insights from model systems**
Olga Anczuków, Ph.D., The Jackson Laboratory

9:45 am - 10:30 am **Decoding and Recoding the Opposing Roles of Interferon Signaling in Cancer Immunotherapy**
Andy Minn, M.D., Ph.D., University of Pennsylvania (Virtual)

10:30 am - 11:00 am *Break*

11:00 am - 11:45 am **mRNA – Beyond the Genetic Code**
Christine Mayr, Ph.D., Memorial Sloan Kettering Cancer Center (Virtual)

11:45 am - 1:00 pm *Lunch*

1:00 pm - 3:00 pm **Workshop**
Damien Chaussabel, Ph.D., The Jackson Laboratory

3:00 pm - 4:30 pm **Panel Discussion: Transcriptomics**
Damien Chaussabel, Ph.D., The Jackson Laboratory
Andy Minn, M.D., Ph.D., University of Pennsylvania

4:30 pm *Shuttle Departs The Jackson Laboratory to the Delamar Hotel*

On-Demand Content: **RNA Splicing in Tumorigenesis** | Robert Bradley, Ph.D., Fred Hutchinson Cancer Research Center (pre-recorded)

Sunday, August 21

2:30 pm *Shuttle Departs Delamar Hotel to The Jackson Laboratory*

3:00 pm - 3:45 pm **Cancer Genomics and Immunogenomics**
Elaine Mardis, Ph.D., Nationwide Children's Hospital (Virtual)

4:00 pm - 6:00 pm *Poster Session & BBQ Dinner*

6:00 pm *Shuttle Departs The Jackson Laboratory to the Delamar Hotel*

Monday, August 22

7:45 am *Shuttle Departs Delamar Hotel to The Jackson Laboratory*

8:00 am - 9:00 am *COVID-19 testing*

9:00 am - 9:45 am **The Role of Extrachromosomal DNA in Cancer**
Roel Verhaak, Ph.D., The Jackson Laboratory (Virtual)

9:45 am - 10:30 am	Epigenetic Evolution and Heterogeneity in Acute Myeloid Leukemia Sheng Li, Ph.D., The Jackson Laboratory
10:30 am - 11:00 am	<i>Break</i>
11:00 am - 11:45 am	Repeats and Genomic Instability: From Retrotransposition to Recombination Christine Beck, Ph.D., The Jackson Laboratory & UConn
11:45 am - 12:00 pm	<i>Break</i>
12:00 pm - 12:45 pm	Chromosome Instability and Cancer Lilian Kabeche, Ph.D., Yale School of Medicine
12:45 pm - 2:00 pm	<i>Lunch</i>
2:00 pm - 3:30 pm	Workshop Carol Bult, Ph.D., The Jackson Laboratory
3:30 pm - 4:00 pm	<i>Break</i>
4:00 pm - 5:30 pm	Panel Discussion: Genomics Moderated by Christine Beck, Ph.D., The Jackson Laboratory
5:30 pm	<i>Shuttle Departs The Jackson Laboratory to Delamar Hotel</i>

Tuesday, August 23

8:45 am	<i>Shuttle Departs Delamar Hotel to The Jackson Laboratory</i>
9:15 am - 10:00 am	Sexual Dimorphism in Immune System Aging Duygu Ucar, Ph.D., The Jackson Laboratory (Virtual)
10:00 am - 10:30 am	<i>Break</i>
10:30 am - 11:15 am	Microenvironmental Regulation of Myeloid Malignancies Jennifer Trowbridge, Ph.D., The Jackson Laboratory (Virtual)
11:15 am - 12:00 pm	Impact of Immunological Age on Breast Cancer Progression and Therapeutic Response Sandra S. McAllister, Ph.D., Brigham And Women's Hospital
12:00 pm - 2:00 pm	<i>Lunch</i>
2:00 pm - 2:45 pm	Somatic Mutations in Normal Epithelia Phil Jones, Ph.D., Wellcome Sanger Institute (Virtual)
2:45 pm - 3:30 pm	Getting Old Stinks: Age-Related Changes in the Tumor Microenvironment Sheila Stewart, Ph.D., Washington Univ. in St. Louis
3:30 pm - 3:45 pm	<i>Break</i>
3:45 pm - 4:30 pm	Normal and Neoplastic Stem Cells Irving Weissman, M.D., Stanford University (Virtual)

4:30 pm - 5:15 pm	Panel Discussion: Aging Moderated by Sandra McAllister, Ph.D., Brigham And Women's Hospital
5:15 pm - 5:30 pm	<i>Break</i>
5:30 pm - 6:15 pm	Maine Cancer Genomics Initiative & Ethics in Cancer Research Jens Rueter, M.D., The Jackson Laboratory (Virtual)
6:15 pm	<i>Shuttle Departs The Jackson Laboratory to Delamar Hotel</i>
6:30 pm	<i>Group Dinner – Artisan (located at Delamar Hotel; 1 Memorial Drive, West Hartford)</i>

Wednesday, August 24

8:30 am	<i>Shuttle Departs Delamar Hotel to The Jackson Laboratory</i>
9:00 am - 9:45 am	Modeling Anti-Cancer Immune Responses in Mice Marcus Bosenberg, M.D., Ph.D., Yale School of Medicine
9:45 am - 10:30 am	Tumor Progression and Drug Resistance in Lung Cancer Katerina Politi, Ph.D., Yale University
10:30 am - 10:45 am	<i>Break</i>
10:45 am - 11:30 am	Archetypes of Immunity in Cancers Matthew Krummel, Ph.D., University of California San Francisco (Virtual)
11:30 am - 11:45 am	<i>Break</i>
11:45 am - 1:00 pm	Rising Stars – Flash Talks Session II Defining Aging-associated RNA Splicing as an Oncogenic Factor in Breast Cancer Brittany Angarola, The Jackson Laboratory TBD Milos Spasic, Harvard University Primary Human-derived Ex Vivo Systems Enabling Studies on the Modulation of Human Lung Innate and Adaptive Immunity to Respiratory Viruses Diana Cadena, The Jackson Laboratory Role of FAT1 in Oral Cancer Priyanka Bhosale, Kings College, London
1:00 pm - 2:00 pm	<i>Lunch</i>
2:00 pm - 2:45 pm	Immunity and Metabolism in Control of Liver and Pancreatic Cancer Growth Michael Karin, Ph.D., University of California San Diego
2:45 pm - 3:30 pm	<i>Break</i>
3:30 pm - 4:15 pm	TBA Taha Merghoub, Ph.D., Memorial Sloan Kettering Cancer Center
4:15 pm - 5:45 pm	Panel Discussion: Models Katerina Politi, Ph.D., Yale University

5:45 pm

Shuttle Departs The Jackson Laboratory to Delamar Hotel

Thursday, August 25

7:45 am

Shuttle Departs Delamar Hotel to The Jackson Laboratory

8:00 am - 9:00 am

COVID-19 testing

9:00 am - 9:45 am

Human Pancreatic Cancer Insights from Model Systems

David Tuveson, M.D., Ph.D., Cold Spring Harbor Laboratory

9:45 am - 10:30 am

Modeling Immunotherapeutic Resistant Cancers

David DeNardo, Ph.D., Washington University in St. Louis

10:30 am - 11:00 am

Break

11:00 am - 11:45 am

The Dynamics of Intratumoral CD8 T cell Retention, Survival, and Exit

Amanda Lund, Ph.D., New York University

11:45 am - 12:00 pm

Break

12:00 pm - 12:45 pm

Myeloid Cells in Regulation of Immune Responses in Cancer

Dmitry Gabilovich, M.D., Ph.D., AstraZeneca

12:45 pm - 2:00 pm

Lunch

2:00 pm - 3:30 pm

Workshop: Data Analysis & Resources for Patient-Derived Cancer

Models | Jeff Chuang, Ph.D. & Mike Lloyd, Ph.D., The Jackson Laboratory

3:30 pm - 4:00 pm

Break

4:00 pm - 5:00 pm

Panel Discussion: *in vivo* Cancer Models

Moderated by David DeNardo, Ph.D., Washington University in St. Louis

5:00 pm - 6:00 pm

Zebrafish Models of Human Cancer: Dissection of Mechanisms of Cancer Cell Dependencies Using Genetic and Chemical Approaches

A. Thomas Look, M.D, Harvard Medical School/Dana-Farber Cancer Institute (Virtual)

6:00 pm

Shuttle Departs The Jackson Laboratory to The Pond House

6:30 pm - 8:00 pm

Group Dinner – The Pond House (1555 Asylum Ave, West Hartford)

8:00 pm

Shuttle Departs The Pond House to The Jackson Laboratory and Delamar

Friday, August 26

8:00 am

Shuttle Departs Delamar Hotel to The Jackson Laboratory

8:30 am - 8:45 am

Classifying Cancers from Images and Sequence Data

Jeff Chuang, Ph.D., The Jackson Laboratory

8:45 am - 9:30 am	Spatial Transcriptomic Analysis Guo-Cheng Yuan, Ph.D., Icahn School of Medicine at Mount Sinai
9:30 am - 9:45 am	Reconstructing niche context for single cell transcriptomics via integration with spatial sequencing using ENVI Doron Haviv, M.S., Weill Cornell Medical School, Memorial Sloan Kettering Cancer Center & Rockefeller University
9:45 am - 10:00 am	Towards Robust and Interpretable Deep Learning for Cancer Image Analysis Avi Foroughi pour, Ph.D., The Jackson Laboratory
10:00 am - 10:30 am	<i>Break</i>
10:30 am - 11:15 am	Single-Cell Biology in a Software 2.0 World David van Valen, Ph.D., California Institute of Technology (Virtual)
11:15 am - 12:30 pm	Panel Discussion: Computational Science Moderated by Jeff Chuang, Ph.D., The Jackson Laboratory
12:30 pm - 1:00 pm	<i>Lunch</i>
1:00 pm - 2:00 pm	Title TBD Lon Cardon, Ph.D., FMedSci, The Jackson Laboratory
2:00 pm	<i>Meeting Adjourn</i> <i>Shuttle Departs The Jackson Laboratory to the Delamar</i>