UMass Chan Medical School

27th Annual Research Retreat

at the
Lincoln Campus Center & Hotel

UMass Amherst
1 Campus Center Way
Amherst, MA 01003

November 3-4, 2022
### Thursday, November 3, 2022

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>8:00 AM – 9:00 AM</td>
<td>Registration and Light Breakfast (Registration &amp; Breakfast: Concourse Area 1st Floor; Presentations: Campus Center Auditorium 1st Floor)</td>
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<tr>
<td>9:00 AM – 9:20 AM</td>
<td>~ Welcome and Opening Remarks ~</td>
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<tr>
<td></td>
<td>Terence R. Flotte, MD</td>
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<td>Celia and Isaac Haidak Professor of Medical Education</td>
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<td>Dean, Provost and Executive Deputy Chancellor</td>
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<td>and Chief Research Officer</td>
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<td>Michael F. Malone, PhD</td>
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<td></td>
<td>Vice Chancellor for Research and Engagement</td>
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<td></td>
<td>University of Massachusetts Amherst</td>
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<td>Katherine Luzuriaga, MD</td>
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<td>UMass Memorial Health Care Professor of Biomedical Research</td>
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<td>Professor, Molecular Medicine, Pediatrics, and Medicine</td>
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<td>Director, UMass Center for Clinical and Translational Science</td>
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<td>Vice Provost, Clinical and Translational Research</td>
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<tr>
<td>9:20 AM – 10:25 AM</td>
<td>Session 1: Special Session (Campus Center Auditorium 1st Floor)</td>
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<tr>
<td>9:20 am – 9:25 am</td>
<td>Introduction: Michael F. Collins, MD, FACP</td>
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<td>Chancellor and Senior Vice President for the Health Sciences</td>
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<td>Professor, Departments of Population and Quantitative Health Sciences and Medicine</td>
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<td>9:25 am – 10:25 am</td>
<td>Chancellor’s Medal for Distinguished Scholarship: Keynote Address</td>
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<td>A.J. Marian Walhout, PhD</td>
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<td>Maroun Semaan Chair in Biomedical Research</td>
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<td></td>
<td>Professor &amp; Chair - Department of Systems Biology</td>
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<tr>
<td></td>
<td>“Worms, Bugs and Drugs”</td>
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<tr>
<td>Time</td>
<td>Session Description</td>
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<tr>
<td>10:25 AM – 10:40 AM</td>
<td>BREAK</td>
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<tr>
<td>10:40 AM – 12:05 PM</td>
<td>SESSION 2: NEW FACULTY</td>
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</table>
| 10:40 am – 10:45 am | Moderator: Katherine A. Fitzgerald, PhD  
Worcester Foundation Chair in Biomedical Sciences  
Professor and Vice Chair, Department of Medicine,  
Director, Program in Innate Immunity |                                    |
| 10:45 am – 11:05 am | “Dendritic Cell Recognition of Bacterial Biofilms”  
Stefania Gallucci, MD  
Professor, Medicine |                                    |
| 11:05 am – 11:25 am | “Novel Triggers of Systemic Autoimmunity”  
Roberto Caricchio, MD  
Myles J. McDonough Chair in Rheumatology  
Professor, Medicine |                                    |
| 11:25 am – 11:45 am | “Exploiting Oncogenic Dependencies in Sarcoma”  
Matthew Hemming, MD, PhD  
Assistant Professor, Medicine |                                    |
| 11:45 am – 12:05 pm | “Therapeutic Modulation of STING”  
Fiachra Humphries, PhD  
Assistant Professor, Medicine |                                    |
| 12:05 PM – 1:20 PM | LUNCH                                                                               | (Concourse Area 1st Floor & Campus Center Auditorium 1st Floor) |
| 1:20 PM – 2:25 PM | SESSION 3: NEW FACULTY                                                             | (Campus Center Auditorium 1st floor) |
| 1:20 pm – 1:25 pm | Moderator: Dorothy Schafer, PhD  
Associate Professor, Neurobiology |                                    |
| 1:25 pm – 1:45 pm | “Applying Spatial Transcriptomics to Analyze Healthy and Cirrhotic Livers at the Single Cell Level”  
Alan Mullen, MD, PhD  
Mary C. DeFeudis Chair in Biomedical Research  
Professor, Medicine |                                    |
| 1:45 pm – 2:05 pm | “Metabolic Licensing of Pancreatic Beta Cell Survival and Inflammation”  
Accalia Fu, PhD  
Assistant Professor, Diabetes Center of Excellence |                                    |
| 2:05 pm – 2:25 pm | “Chromosome-Level Genetic Screens Reveal Drivers of Tumor Aneuploidy Patterns”  
Emma Watson, PhD  
Assistant Professor, Systems Biology |                                    |
| 2:25 PM – 3:15 PM | SESSION 4: STUDENT AND POST-DOC TALKS                                               | (Campus Center Auditorium 1st Floor) |
| 2:25 pm – 2:30 pm | Moderator: Mary Ellen Lane, PhD  
Donna M. and Robert J. Manning Chair in Biomedical Sciences, Professor, Neurobiology;  
Dean, Morningside Graduate School of Biomedical Sciences |                                    |
| 2:30 pm – 2:45 pm | “Chromatin Structure of Different Cell Types in Disease and Development”  
Sneha Gopalan, PhD  
Postdoctoral Fellow, Fazzio Lab |                                    |
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| 2:45 pm – 3:00 pm | “’Cause You’re Hot Then You’re Cold.’ A new Metabolic Switch Regulating Brown Fat Thermogenesis”  
Ekaterina Korobkina  
PhD Candidate, Guertin Lab |
| 3:00 pm – 3:15 pm | “Circatidal Rhythms of Activity in Parhyale Hawaiensis Require Bmal1”  
Erica Kwiatkowski  
MD/PhD Candidate, Emery Lab |
| 3:15 PM – 3:30 PM | BREAK  
(Concourse Area 1st Floor) |
| 3:30 PM – 4:20 PM | SESSION 5: STUDENT AND POST-DOC TALKS  
(Campus Center Auditorium 1st Floor) |
| 3:30 pm – 3:35 pm | Moderator: Mary Ellen Lane, PhD  
Donna M. and Robert J. Manning Chair in Biomedical Sciences, Professor, Neurobiology;  
Dean, Morningside Graduate School of Biomedical Sciences |
| 3:35 pm – 3:50 pm | “Mechanism of Sliding Clamp Loading During DNA Replication and Repair in Atomic Detail”  
Xingchen Liu  
PhD Candidate, Kelch Lab |
| 3:50 pm – 4:05 pm | “Dormancy Links Mouse and Human Leukemia-Initiating Cells with Chemotolerance in T-Cell Acute Lymphoblastic Leukemia”  
Kevin O’Connor  
MD-PhD Candidate, Kelliher Lab |
| 4:05 pm – 4:20 pm | “Identification of a Putative Mitochondrial Solute Transporter that Regulates Mitophagy”  
Lucas Restrepo  
PhD Candidate, Baehrecke Lab |
| 4:20 pm – 5:00 pm | Poster Session & Table Preparation |
| 5:00 PM – 7:00 PM | SESSION 6: POSTER SESSION AND RECEPTION  
(Concourse Area 1st Floor) |
| 7:00 PM – 8:30 PM | DINNER  
(Student Union Ballroom) |
| 8:30 PM – 10:30 PM | ENTERTAINMENT  
Moment’s Notice  
featuring Nathan Lawson,  
Professor, Molecular Cell, and Cancer Biology;  
Program in Molecular Medicine |
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| 8:00 AM – 9:00 AM  | BREAKFAST  
(Concourse Area 1<sup>st</sup> Floor & Campus Center Auditorium 1<sup>st</sup> Floor)  

*Presentation: The Dan Mullen Awards for Best Posters*  
**Mary Ellen Lane, PhD**  
Dean, Graduate School of Biomedical Sciences |
| 9:00 AM – 10:05 AM | SESSION 7: NEW FACULTY  
(Campus Center Auditorium 1<sup>st</sup> Floor)  
  **Moderator:** Katherine Luzuriaga, MD  
  *UMass Memorial Health Care Chair in Biomedical Research*  
  Professor, Molecular Medicine, Pediatrics, and Medicine  
  Director, UMass Center for Clinical and Translational Science  
  Vice Provost, Clinical and Translational Research |
| 9:00 am – 9:05 am  |  
“Data Science to Precision Digital Medicine”  
**Honghuang Lin, PhD**  
Professor, Medicine |
| 9:05 am – 9:25 am  |  
“Addressing Social Determinants in Health and Mental Health Intervention Research”  
**Alison Karasz, PhD**  
Professor, Family Medicine & Community Health |
| 9:25 am – 9:45 am  |  
“Viewing Inflammation from an Ocular Perspective”  
**Darren Lee, PhD**  
Associate Professor, Ophthalmology and Visual Sciences |
| 10:05 AM – 10:20 AM| BREAK  
(Concourse Area 1<sup>st</sup> Floor) |
| 10:20 AM – 11:25 AM| SESSION 8: NEW FACULTY  
(Campus Center Auditorium 1<sup>st</sup> Floor)  
  **Moderator:** Victor Ambros, PhD  
  Silverman Chair in Natural Sciences and Professor, *Program in Molecular Medicine* |
| 10:20 am – 10:25 am|  
“Space, Movement and Self-Awareness”  
**A.M. Barrett, MD**  
Professor & Chair, Department of Neurology |
| 10:25 am–10:45 am |  
“In Living Color: Whole-Nervous-System Cell IDs to Map Neural Communication and Fate In Vivo”  
**Eviatar Yemini, PhD**  
Assistant Professor, Neurobiology |
| 10:45 am – 11:05 am|  
“Transforming CNS Drug Delivery Through Engineering”  
**Rachael Sirianni, PhD**  
Professor, Neurological Surgery |
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<td>11:25 AM – 12:30 PM</td>
<td>SESSION 9: NEW FACULTY</td>
<td>(Campus Center Auditorium 1st Floor)</td>
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<td>11:25 am – 11:30 am</td>
<td>Moderator: Roger Davis, PhD</td>
<td>H. Arthur Smith Professor and Chair, Program in Molecular Medicine</td>
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<tr>
<td>11:30 am – 11:50 am</td>
<td>“Molecular Mechanisms of Cell Envelope Biogenesis and their Subversion by Antibiotics”</td>
<td>Josue Flores Kim, PhD Assistant Professor, Biochemistry and Molecular Biotechnology</td>
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<tr>
<td>11:50 am - 12:10 pm</td>
<td>“From Nucleotides to Neural Networks: Studying Gene Regulation in the Era of “Big Data””</td>
<td>Jill Moore, PhD Assistant Professor, RNA Therapeutics Institute</td>
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<td>12:10 pm - 12:30 pm</td>
<td>“Unlocking the Potential of the Mammalian Electron Transport Chain”</td>
<td>Jessica Spinelli, PhD Assistant Professor, Program in Molecular Medicine</td>
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<td>12:30 PM – 12:40 PM</td>
<td>~ CLOSING REMARKS ~</td>
<td>Terence R. Flotte, MD Celia and Isaac Haidak Professor of Medical Education</td>
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<tr>
<td>12:40 PM ADJOURN</td>
<td>LUNCH TO GO (Concourse Area 1st Floor)</td>
<td>BUS RETURNING TO THE WORCESTER CAMPUS</td>
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</table>

UMass Chan Medical School

27th Annual Research Retreat Program Committee Members

Victor R. Ambros, PhD
Melissa Brewer-Corash, MS
Roger J. Davis, PhD
Katherine A. Fitzgerald, PhD
Michael R. Green, MD, PhD
Mohona Gupta, PhD Candidate GSBS
Nathaniel S. Hafer, PhD
Anthony Imbalzano, PhD
Mary Ellen Lane, PhD
Katherine Luzuriaga, MD
Beth A. McCormick, PhD
Thoru Pederson, PhD
Dori Schafer, PhD

We hope you enjoyed our program this year. We look forward to seeing you next year!