



**21<sup>st</sup> ANNUAL RESEARCH RETREAT**  
**October 27 – October 28, 2016**

*Lincoln Campus Center & Hotel  
(located on the Amherst campus)  
Amherst, Massachusetts*

**Thursday, October 27, 2016**

<b>8:00 AM – 9:00 AM</b>	<b>Registration and Light Breakfast (Concourse – first floor) Conference Room – Campus Center Auditorium – 1<sup>st</sup> Floor</b>
9:00 AM – 9:20 AM	<p align="center"><i>~ Welcome and Opening Remarks ~</i></p> <p align="center"><b>Jean A. King, PhD</b> <i>Professor, Psychiatry, Radiology and Neurology Associate Provost for Biomedical Science Research Director, Center for Comparative NeuroImaging (CCNI)</i></p> <p align="center"><b>Terence R. Flotte, MD</b> <i>Celia and Isaac Haidak Professor of Medical Education Dean, Provost and Executive Deputy Chancellor and Chief Research Officer</i></p> <p align="center"><b>Brendan O’Leary, PhD</b> <i>Executive Vice Chancellor Innovation and Business Development</i></p> <p align="center"><b>Michael F. Malone, PhD</b> <i>Vice Chancellor for Research and Engagement University of Massachusetts Amherst</i></p>
<b>9:20 AM – 10:25 AM</b> <i>(6 @ 15 min. each/Q&amp;A 5 min.)</i>	<b>Session 1: New Faculty</b> <i>(Campus Center Auditorium- 1<sup>st</sup> floor)</i>
9:20 AM – 9:25 AM	<p align="center"><b>Moderator: Thoru Pederson, PhD</b> <i>Professor, Biochemistry and Molecular Pharmacology Associate Vice Provost for Research</i></p>
9:25 AM – 9:45 AM	<p><i>“A hacker’s approach to Biology – uncovering Achilles’ heels in cell signaling and regulatory networks”</i></p> <p align="center"><b>Amir Mitchell, PhD</b> <i>Assistant Professor, Program in Systems Biology &amp; Molecular Medicine</i></p>

9:45 AM – 10:05 AM	<p><i>“Novel transcriptional regulation, brain-gut communication, and systems biology: worm insights into host defense against infection”</i></p> <p><b>Javier E. Irazoqui, PhD</b> Associate Professor, Microbiology and Physiological Systems</p>
10:05 AM – 10:25 AM	<p><i>“Mechanisms of axon regeneration in the aging nervous system”</i></p> <p><b>Alexandra Byrne, PhD</b> Assistant Professor, Neurobiology</p>
<b>10:25 AM – 10:35 AM</b>	<p><b>Break</b> (Concourse- 1<sup>st</sup> floor)</p>
<b>10:35 AM – 11:40 PM</b>	<p><b>Session 2: New Faculty</b> (Campus Center Auditorium- 1<sup>st</sup> floor)</p>
10:35 AM – 10:40 AM	<p><b>Moderator: Michael P. Czech, PhD</b> Chair and Professor, Molecular Medicine</p>
10:40 AM – 11:00AM	<p><i>“Silencing disease genes using chemically modified oligonucleotides”</i></p> <p><b>Jonathan Watts, PhD</b> Associate Professor, RNA Therapeutics Institute</p>
11:00 AM – 11:20 AM	<p><i>“Adaptations to mitochondrial dysfunction via a mito-UPR”</i></p> <p><b>Cole Haynes, PhD</b> Associate Professor, Molecular, Cell and Cancer Biology</p>
11:20 AM – 11:40 PM	<p><i>“The sleep-promoting parafacial zone in mice”</i></p> <p><b>Christelle Anaclet, PhD</b> Assistant Professor, Neurobiology</p>
<b>11:50 PM – 1:00 PM</b>	<p><b>Lunch</b> (Student Union Ballroom – 1<sup>st</sup> floor)</p>
<b>1:10 PM – 2:10 PM</b> (5 min Intro, 50 min talk, 5 min. Q&A)	<p><b>Session 3: Chancellor’s Medal for Distinguished Research-Keynote Address</b> (Campus Center Auditorium – 1<sup>st</sup> Floor)</p>
1:10 PM – 2:10 PM	<p><b>Chancellor’s Medal for Distinguished Research-Keynote Address</b> <b>Introduction: Michael F. Collins, MD, FACP</b> Senior Vice President for the Health Sciences, University of Massachusetts Chancellor, University of Massachusetts Medical School</p> <p><i>“Neurobiology of monarch butterfly migration”</i> <b>Steven M. Reppert, MD</b> Professor, Neurobiology</p>
<b>2:10 PM – 3:15 PM</b> (4 @12min./3 min. Q&A)	<p><b>Session 4: Student Talks</b> (Campus Center Auditorium – 1<sup>st</sup> Floor)</p>
2:10 PM – 2:15 PM	<p><b>Moderator: Anthony Carruthers, PhD</b> Dean Graduate School of Biomedical Science</p>

2:15 PM – 2:30 PM	<p><i>"Identifying novel regulators of an axon death program"</i>  <b>Tom Burdett</b> (Neuroscience)  Mentor: Marc Freeman</p>
2:30 PM – 2:45 PM	<p><i>"Molecular determinants of synaptic connectivity: a single neuron analysis"</i>  <b>Alison Philbrook</b> (Neuroscience)  Mentor: Michael Francis</p>
2:45 PM – 3:00 PM	<p><i>"Immuno-modulatory effects of the ABC-transporters during pulmonary infection"</i>  <b>Andrew Zukauskas</b> (Molecular Genetics &amp; Microbiology)  Mentor: Beth McCormick</p>
3:00 PM – 3:15 PM	<p><i>"YAP/TAZ: molecular gatekeepers of the gastrointestinal mesenchyme"</i>  <b>Jennifer Cotton</b> (Cancer Biology)  Mentor: Junhao Mao</p>
<b>3:15 PM – 3:25 PM</b>	<p><b>Break</b>  (Concourse- 1<sup>st</sup> floor)</p>
<b>3:25 PM – 4:45 PM</b> (3 @20 min./5 min. Q&A)	<p><b>Session 5: Neuroscience</b>  (Campus Center Auditorium – 1<sup>st</sup> Floor)</p>
3:25 PM – 3:30 PM	<p><b>Moderator: Jeanne B. Lawrence, PhD</b>  Interim Chair and Professor, Cell and Developmental Biology</p>
3:30 PM – 3:55 PM	<p><i>"Molecular and neuronal mechanisms of complex behaviors"</i>  <b>Mark Alkema, PhD</b>  Associate Professor, Neurobiology</p>
3:55 PM – 4:20 PM	<p><i>"Unexpected role of immune system in regulating social brain functions"</i>  <b>Vladimir Litvak, PhD</b>  Assistant Professor, Microbiology and Physiological Systems</p>
4:20 PM – 4:45 PM	<p><i>"The DARC side of Arc: transcellular mRNA transport during synaptic plasticity"</i>  <b>Vivian Budnik, PhD</b>  Chair and Professor, Neurobiology</p>
<b>4:45 PM – 5:00 PM</b> 	<p><b>Sponsor's Remarks</b>  Voyager Therapeutics, Inc.</p>
<b>5:00 PM – 7:00 PM</b>	<p><b>Session 6: Poster Session and Reception</b>  (Concourse – 1<sup>st</sup> floor )</p>
<b>7:00 PM – 8:30 PM</b>	<p><b>Dinner</b>  (Student Union Ballroom- 1<sup>st</sup> floor)</p>
	<p><b>Presentation: The Dan Mullen Awards for Best Posters</b>  <b>Anthony Carruthers, PhD, Dean GSBS;</b>  <b>Kendall Knight, PhD Associate Dean, GSBS</b></p>
<b>8:30 PM – 10:30 PM</b>	<p><b>Jam Session</b>  <b>Entertainment by: Backyard Swagger</b>  UMass Faculty and Students  <b>Julie Jonassen, PhD</b>  Microbiology and Physiological Systems</p>

**Friday, October 28, 2016**

<b>7:30 AM – 8:30 AM</b>	<b>Breakfast</b> (Student Union Ballroom- 1 <sup>st</sup> floor)
<b>8:30 AM – 9:25 AM</b> (2 @20 min./5 min. Q&A)	<b>Session 7: Precision Medicine</b> (Student Union Ballroom- 1 <sup>st</sup> floor)
8:30 AM – 8:35 AM	<b>Moderator: Michael R. Green, MD, PhD</b> Chair and Professor Molecular, Cell and Cancer Biology
8:35 AM – 9:00 AM	<i>“Altering the virus-host dynamic to prevent disease”</i> <b>Katherine Luzuriaga, MD</b> Professor, Molecular Medicine, Pediatrics and Medicine Director, UMass Center for Clinical and Translational Science (UMCCTS) and Office of Global Health; Vice Provost, Clinical and Translational Research
9:00 AM – 9:25 AM	<i>“RNA and precision medicine: reflecting the dynamic nature of gene expression in health and disease”</i> <b>Jane E. Freedman, MD</b> Professor, Medicine
<b>9:25 AM – 10:45 AM</b> (3 @20 min./5 min. Q&A)	<b>Session 8: RNA</b> (Student Union Ballroom- 1 <sup>st</sup> floor)
9:25 AM – 9:30 AM	<b>Moderator: Victor R. Ambros, PhD</b> Professor, Molecular Medicine
9:30 AM – 9:55 AM	<i>“New imaging modalities and analysis approaches for life sciences”</i> <b>David Grunwald, PhD</b> Assistant Professor, RNA Therapeutics Institute
9:55 AM – 10:20 AM	<i>“Expanding chemical diversity of therapeutic oligonucleotides”</i> <b>Anastasia Khvorova, PhD</b> Professor, RNA Therapeutics Institute
10:20 AM – 10:45 AM	<i>“Daddy issues: paternal effects on offspring phenotype in mammals”</i> <b>Oliver J. Rando, MD, PhD</b> Professor, Biochemistry and Molecular Pharmacology
<b>10:45 AM – 10:55 AM</b>	<b>Break</b> (Student Union Ballroom- 1 <sup>st</sup> floor)
<b>10:55 AM – 11:25 AM</b> (1 @ 20 min./5 min. Q&A)	<b>Session 9: "A locus of protein dynamics at UMass Amherst"</b> (Student Union Ballroom- 1 <sup>st</sup> floor)
10:55 AM – 11:00 AM	<b>Moderator: Robert C. Matthews, PhD</b> Chair and Professor Biochemistry and Molecular Pharmacology
11:00 AM – 11:25 AM	<i>“The tunability of Hsp70 molecular chaperone allosteric landscapes: therapeutic opportunities”</i> <b>Lila Gierasch, PhD</b>

	<i>Professor, Biochemistry and Molecular Biology</i>
<b>11:25 AM – 12:45 PM</b> <i>(3 @ 20 min. each/5 min. Q&amp;A)</i>	<b>Session 10: Host-Pathogen Interactions</b> <i>(Student Union Ballroom- 1<sup>st</sup> floor)</i>
11:25 AM – 11:30 AM	<b>Moderator: Ken L. Rock, MD</b> <i>Chair and Professor, Pathology</i>
11:30 AM – 11:55AM	<i>“Genetic screens identify flavivirus host factors”</i> <b>Abraham Louis Brass, MD, PhD</b> <i>Assistant Professor, Microbiology and Physiological Systems</i>
11:55 AM – 12:20 PM	<i>“MassBiologics of UMMS: a century of discovery, development and manufacturing licensed public health medicines”</i> <b>Mark S. Klempner, MD</b> <i>Professor, Medicine; Executive Vice Chancellor, MassBiologics</i>
12:20 PM – 12:45 PM	<i>“Molecular regulation of necroptosis in host response against viral diseases”</i> <b>Francis Ka Ming Chan, PhD</b> <i>Associate Professor, Pathology</i>
<b>12:45 PM – 12:50 PM</b>	<b>Closing Remarks</b> <b>Jean King, PhD</b> <i>Associate Provost for Biomedical Science Research Professor, Psychiatry, Radiology and Neurology Director, Center for Comparative NeuroImaging (CCNI)</i>
<b>Adjourn</b> <b>1:00 PM</b>	<b>SNACK to go</b> <b>Bus Returning to the Worcester Campus</b>