



BioMolecular Science Gateway Student Orientation 2021

Monday, August 23, 2021

1410 Biomedical and Physical Sciences Building

Zoom: <https://msu.zoom.us/j/97284684085>

Passcode: 270284

- 9:30 – 10:00 AM** **BMS Introductions – Dr. John LaPres**
- 10:00 – 10:10 AM** **Biochemistry and Molecular Biology - Dr. David Arnosti**
10:10 – 10:20 AM **Cell and Molecular Biology - Dr. Peggy Petroff**
10:20 – 10:30 AM **Molecular, Cellular, and Integrative Physiology - Dr. Andrea Doseff**
10:30 – 10:40 AM **Microbiology and Molecular Biology - Dr. Robert Abramovitch (ZOOM)**
10:40 – 10:50 AM **Pharmacology and Toxicology - Dr. Karen Liby**
10:50 – 11:00 AM **Genetics and Genome Sciences Program - Dr. Susanne Hoffmann Benning**
- 11:00 – 11:15 AM** **Break**
- 11:15 – 11:25 AM** **Environmental Sciences and Policy Program - Dr. Sean Lawrie**
11:25 – 11:35 AM **Institute for Integrative Toxicology Program - Dr. John LaPres**
11:35 – 11:45 AM **Molecular Plant Sciences - Dr. Brad Day**
11:45 AM – 12:00 PM **Ecology, Evolutionary Biology, and Behavior Program - Dr. Elise Zipkin (ZOOM)**
- 12:00 – 12:15 PM** **Reproductive and Developmental Sciences Program - Dr. Keith Latham**
12:15 – 12:30 PM **Integrative Pharmacological Sciences Training Program - Dr. Anne Dorrance**
- 12:30 PM** **Lunch provided for all new BMS Students, Atrium**
Hosted by Graduate Recruitment Initiative Team (GRIT) (Laurisa Ankley, Kaylee Wilburn, and Natasha George)
- 1:30 – 2:00 PM** **Student Panel Discussion – How to Select Rotations**
Hosted by Graduate Recruitment Initiative Team (GRIT) (Laurisa Ankley, Kaylee Wilburn, and Natasha George)
- 2:00 – 4:00 PM** **Faculty Research Talks**

Monday, August 23, 2021

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| Monday August 23 | | 1410 Biomedical and Physical Sciences Building |
| Faculty Talks <i>Drug Discovery/Molecular Basis of Disease/Neurophysiology</i> | | |
| 2:00 | Anne Dorrance | Identification of the mechanisms by which hypertension increases the risk of dementia development. |
| 2:15 | Stephanie Watts | Cardiovascular dysfunctions are at the heart of major diseases (cancer, hypertension, obesity, cognitive decline). We develop new therapies to reduce vascular disease, thus reducing major diseases. thewattslab.com. |
| 2:30 | Eran Andrechek | Our lab studies cancer development and metastasis. |
| 2:45 | Jim Luyendyk | Hemostasis and thrombosis in the context of liver injury and tissue regeneration. |
| 3:00 | Nathan Tykocki | We research lower urinary tract physiology, pharmacology, and function -- so we finally can know why we need to go! |
| 3:15 | End | |

Tuesday, August 24, 2021

| Tuesday August 24 | | 1410 Biomedical and Physical Sciences Building |
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| Morning Mandatory Student Resources and Information Afternoon Optional Faculty Talks <i>Plant Molecular Biology/Microbiome</i> | | |
| 8:30 | Greg Swain | Responsible Conduct of Research |
| 9:30 | Julie Rojewski | BEST Broadening Experience in Scientific Training (BEST) Program |
| 10:00 | Chris Adami | BEACON Center for the Study of Evolution in Action |
| 10:30 | Lindy Smith (ZOOM) | Payroll Information |
| 11:00 | Susan Kendall | Biology Library Resources |
| 11:15 | BMS Staff | Pictures of New Students |
| 11:30 | <i>GEU Lunch</i> | <i>Optional lunch with the Graduate Employees Union</i> |
| 1:00 | Berkley Walker | Resolving photosynthetic fluxes in a changing world. |
| 1:15 | Hideki Takahashi | Molecular genetics and genomics of macronutrient assimilation and signaling in plants. |
| 1:30 | Peter Lundquist | The Lundquist Lab seeks to bridge basic and translational research by unravelling the relationship of chloroplast lipid droplets (plastoglobules) to plant (a)biotic stress response and nutritional quality. |
| 1:45 | Bjoern Hamberger | Our team is elucidating pathways to specialized metabolites in medicinal plants. With those in hand we engineer biotechnological hosts for sustainable production. |
| 2:00 | Sarah Lebeis | Plant microbiome assembly and function. |
| 2:15 | David Kramer | The energy storing reactions of photosynthesis, from biophysics to plants in the real world. |
| 2:30 | Josh Vermaas | Molecular simulation of plant systems to tackle climate and energy challenges. |
| 2:45 | Robert Quinn | The Quinn lab studies the dynamics of human and animal microbiomes. |
| 3:00 | Elizabeth Heath-Heckman | The Heath-Heckman lab studies the mechanisms by which bacterial symbionts interact with host cell biology and development. |
| 3:15 | Eric Hegg | Enzymology of environmentally important reactions including microbial nitrogen cycling, plastic degradation, and biofuel production. |
| 3:30 | End | |

Wednesday, August 25, 2021

| Wednesday August 25 | | 1410 Biomedical and Physical Sciences Building |
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| <p>Mandatory</p> <p style="margin-left: 100px;">Student Organizations</p> <p style="margin-left: 100px;">Environmental Health & Safety Training</p> <p>Optional</p> <p style="margin-left: 100px;">Faculty Talks</p> <p style="margin-left: 100px;">Microbial Metabolism and Physiology; Macromolecular Structure, Function, and Design</p> | | |
| 8:30 | Chastity Stokes (ZOOM) | Council of Graduate Students (COGS) |
| 9:00 - 12:00 | Rebecca Ceru- Jannausch, Brian Smith, Patrick Wright | Biological Safety Training & Environmental Health & Safety (EHS) |
| 12:00 | Lunch | Provided |
| 1:15 | Kelly Kim | Visualizing and dissecting the mechanism of membrane protein transport by cryo-EM. |
| 1:30 | Ben Orlando | Our lab uses cryo-EM to study the structure and dynamics of membrane embedded transporters, receptors, and enzymes. |
| 1:45 | Charles Hoogstraten | Biophysics of noncoding RNA function using NMR spectroscopy, functional probing, and advanced computation. |
| 2:00 | Jian Hu (ZOOM) | Structure, mechanism and regulation of metal transporters. |
| 2:15 | Kefei Yu | DNA recombination and repair in lymphocytes in the immune system. |
| 2:30 | Chris Waters | The Waters laboratory studies how chemical signaling regulates environmental adaptation in bacteria. |
| 2:45 | Neal Hammer | We study Staphylococcus aureus pathogenesis and antibiotic resistance from a metabolic perspective. |
| 3:00 | Robert Abramovitch (ZOOM) | Mycobacterium tuberculosis pathogenesis and drug discovery. |
| 3:15 | Aritro Sen | Sen laboratory focuses on basic mechanism of steroid hormone signaling and its association with disease development. A primary emphasis is on studies involving women's health, specifically on ovarian physiology in the context of female fertility and liver metabolism related to non-alcoholic fatty liver disease. |
| 3:30 | End | |

Thursday, August 26, 2021

| Thursday August 26 | 1410 Biomedical and Physical Sciences Building Student Moderator | |
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| Two Sessions of Faculty Talks | | |
| 8:30 | Sachi Horibata (ZOOM) | Cancer drug-resistance mechanisms and identification of therapeutic targets for personalized cancer treatments. |
| 8:45 | Bin Chen (ZOOM) | Use big data (EMR and OMICS) and AI to discover new therapeutics. |
| 9:00 | Neera Tewari-Singh (ZOOM) | Mechanisms of toxicity and inflammation from exposure to toxic chemical/environmental agents to identify targeted therapies. |
| 9:15 | Yuan Wang | Germ cell lineage specification from pluripotent stem cells; mitochondrial regulation in spermatogenesis. |
| 9:30 | Jae-Wook Jeong (ZOOM) | Molecular mechanisms and pathophysiology of metastatic and recurrent endometrial cancer. |
| 9:45 | Sangbum Park (ZOOM) | Investigation of immune-epithelial interactions during skin regeneration and wound repair by using in vivo imaging. |
| 10:00 | Tommy Vo (ZOOM) | Chromatin and transcription control by RNA-binding proteins. |
| 10:15 | Break | |
| 10:30 | Andrew Olive | We examine the basis for inflammation and infection using cutting-edge genetics. |
| 10:45 | Amy Ralston | We study stem cells and embryos. My mentoring goal is to get my students what they need. |
| 11:00 | Bryan Smith (ZOOM) | Leveraging nanotechnology to harness the immune system's therapeutic and diagnostic power. |
| 11:15 | Dohun Pyeon | Understanding immune mechanisms dysregulated by HPV for cancer progression and developing novel cancer immunotherapies. |
| 11:30 | Geoffroy Laumet | Our lab investigate the interactions between neurons, immune, and cancer cells and their contributions to the development of chronic pain. |
| 11:45 | David Arnosti | The Arnosti laboratory studies basic mechanisms of eukaryotic gene expression in development, with a focus on transcriptional repression. |
| 12:00 | Erik Martinez-Hackert | Molecular basis and biologic targeting of tgfb growth factors in tissue regeneration. |
| 12:15 | Shawn Jobe | Cellular biology and pathophysiology of platelet function and hemostasis. |
| 12:30 | Lorenzo Sempere | The Sempere Lab's Research program is focused on mechanistic studies and RNA-based therapeutic strategies for prevention and treatment of breast and pancreatic cancer. |
| 12:45 | Jens Schmidt | Analysis of the molecular mechanism underlying cancer formation and survival. |
| 1:00 | Andrea Doseff | Study the role of monocyte and macrophages, key innate immune cells, in inflammatory diseases including obesity and cancer. Molecular mechanisms of cell differentiation and apoptosis. Mechanisms of plant compounds to target cancer and immune function. Immune system and microbiome crosstalk in inflammatory diseases. |
| 1:15 | Jinxing Li | The Li lab at focuses on developing new wearable and implantable sensors for biomolecular detection, as well as microscale robots for disease treatment. |
| 1:30 | End | |

Friday, August 27, 2021

11:30 AM – 4:00 PM BMS Retreat at Main Pavilion Lake Lansing North Park, 6260 E.
Lake Drive, Haslett, MI 48840 - **Mandatory**
4:00 PM – Dusk Grilled Food/Picnic/Games - Families Welcome!

Saturday, August 28, 2021

9:00 AM – 12:00 PM Graduate School Virtual Resource & Welcome Fair
[Resource Fair | The Graduate School \(msu.edu\)](#)

2:00 – 4:00 PM COGS Fall Welcome Celebration
[Home - Council of Graduate Students \(msu.edu\)](#)



*For New and Returning Graduate Students and Professional
Students, Post Docs, Friends and Family*

Benefactor's Plaza (in back of Chittenden Hall)

For more info visit: <https://cogs.msu.edu/2019/05/fall-welcome-cookout/>

Wednesday, September 1, 2021

Classes Begin!