Spring 2022 Koeppe Undergraduate Honors Research Symposium

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| **MONDAY APRIL 4th** | Session 1: 10 a.m. Monday April 4th | **Biomedical technology I** |  |  |
| 10:15 AM | Julia Bay | Joe Ruiz | RNA-targeted Gene Therapy for Huntington’s Disease Using Single-Nucleotide Polymorphisms |
| 10:35 AM | Elizabeth Morton | Chengwen Li | Optimization of CRISPR-Cas9 Construct to Correct Cystic Fibrosis Mutation F508del-CFTR |
| 10:55 AM | Runjie Yuan | DIrk Dittmer | Identification of novel extracellular vesicle subpopulations by a heparin-based industry-scale purification protocol |
| 11:15 AM | reception |  |  |
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| Session 2: 12 p.m. April 4th | **Biomedical technology II** |  |  |
| 12:15 PM | Meredith Chambers | Dirk Dittmer | Direct Stochastic Optical Reconstruction Microscopy of Extracellular Vesicles in Three Dimensions |
| 12:35 PM | Ryan Merritt | Kacy Gordon |  |
| 12:55 PM | Valerie Nguyen | Ian Davis |  |
| 1:15 PM | reception |  |  |
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| Session 3: 2:00 p.m. April 4th | **Epigenetics** |  |  |
| 2:15 PM | Megan Butler | Bob Duronio | The function of L(3)mbt as a reader of H4K20 methylation |
| 2:35 PM | Paloma Ruiz | Brian Strahl | Probing the role of the PBRM1 BAH domains through mutational analysis |
| 2:55 PM | Benjamin Silver | Xian Chen | The Noncanonical Function of G9a in Protein Translation to Promote Breast Cancer |
| 3:15 PM | Yasharth Singh | Jason Whitmire | The Role of KMT2D in T cell Homeostasis |
| 3:35 PM | reception |  |  |
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| Session 4: 4:00 p.m. April 4th | **Cell & Developmental Biology** |  |  |
| 4:15 PM | Thidar Aye |  |  |
| 4:35 PM | Colleen Bereda | Jeff Sekelsky | Functional Analysis of Bloom Syndrome Helicase in Development and DNA Repair |
| 4:55 PM | Ella Patackis | Tim Gershon | Targeting mTOR Activity via POx-INK128 as a Single-Agent Therapy for SHH Medulloblastoma |
| 5:15 PM | Kelly Wan | Amy Maddox | Capping Proteins Interact with GCK-1 and CCM-3 during C. elegans Zygote Cytokinesis |
| 5:35 PM | reception |  |  |
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| **TUESDAY APRIL 5th** | Session 5: 10 a.m. Tuesday April 5th | **Inflammation I** |  |  |
| 10:15 AM | Billy Ngo | R. Balfour Sartor | Host resident microbes drive accelerated proximal dysplasia and inflammation in a murine model of primary sclerosing cholangitis associated inflammatory bowel disease (PSC-IBD) |
| 10:35 AM | Ralph Alberto | Richard Loeser | Chemokine ENA-78/CXCL5 is Produced by OA Synovial Fibroblasts in Response to a Matrix Damage Stimulus and is Found in Synovial Fluid Collected from Patients After ACL Injury |
| 10:55 AM | Najla Ward-Conyers | Saskia Neher | Antibiotic Resistance in *E. coli* |
| 11:15 AM | reception |  |  |
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| Session 6: 2:00 p.m. Tuesday April 5th | **Ecology & the Environment** |  |  |
| 2:15 PM | Audrey Bousquet | Rebecca Fry | Examining the Impact of Preconception Inorganic Arsenic Exposure on the Mouse Offspring Epigenome |
| 2:35 PM | Sydney Lai | Bob Goldstein | Characterizing The Role of Aldehyde Dehydrogenases in *C. elegans* Stress Response |
| 2:55 PM | Katherine Li | David Pfennig | ​​Maternal Obesity Correlated with Offspring Mortality in Spadefoot Toads |
| 3:15 PM | Tyler Pereira | Joel Kingsolver | Herbivory and Tolerance In Tobacco and Devil's Claw |
| 3:35 PM | reception |  |  |
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| Session 7: 4:00 p.m. Tuesday April 5th | **Inflammation II** |  |  |
| 4:15 PM | Angela Chen | Shannon Wallet |  |
| 4:35 PM | Camryn Kellogg | Stephen Tilley | Regulation of BPIFA1 Expression in Human Airway Epithelium |
| 4:55 PM | Sriya Kongala | Jonathan Schisler | Understanding why CXCL5 haploinsufficiency increases plaque burden in atherosclerosis |
| 5:15 PM | reception |  |  |
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| **WEDNESDAY APRIL 6th** | Session 8: 10:00 a.m. Wednesday April 6 | **Immunity** |  |  |
| 10:15 AM | Kelly Chong | Justin Milner | Transcriptional regulation of CAR-T cell dysfunction in vitro. |
| 10:35 AM | Sneha Ashish Makhijani | Matt Painschab | Risk Factors for Malaria During Lymphoma Treatment in Malawi |
| 10:55 AM | Rajee Ganesan | Terry Furey | Impact of guanine quadruplex formation on transcription and open chromatin regions |
| 11:15 AM | Aayush Purohit | Gauri Rao | Characterization of Extracellular Vesicles from Klebsiella pneumoniae |
| 11:35 AM | reception |  |  |
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| Session 9: noon Wednesday April 6 | **Microbiology** |  |  |
| 12:15 PM | Henry Bryant | Bo Li | Investigations of Fluopsin C Mode of Action Intracellular Targets and MexPQ-OpmE Self-Resistance Mechanisms |
| 12:35 PM | Priya Kosana | Azcarate-Peril | Characterization of Bacteroides from the Colon of Human Organ Donors |
| 12:55 PM | Rebecca Zasloff | Azcarate-Peril | Prebiotic Modulation of Intestinal Permeability |
| 1:15 PM | reception |  |  |
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| Session 10: 2:00 p.m. Wednesday April 6 | **Neuroscience** |  |  |
| 2:15 PM | Carla Escobar | Jason Stein | Cellular Resolution Brain Structure Sex Differences in a Mouse Model of Autism |
| 2:35 PM | Chavely Gonzalez Ramirez | Dr. Philpot | “Expression of UBE3A in the Developing Macaque Brain” |
| 2:55 PM | Olivia Rice | Jonathan Schisler |  |
| 3:15 AM | reception |  |  |