36th ANNUAL GENETICS DAY

Monday, April 28th, 2024

GRADUATE STUDENTS	
1.	**LOCKED OR FLEXIBLE? HETEROGENEITY IN THE PLASTICITY OF SEXUAL STATE IN THE C. ELEGANS NERVOUS SYSTEM** JIARUI RYAN ZHANG, Carlos Diaz-Balzac, Douglas S. Portman Biology
2.	**OBELISKS: PLASMID-LIKE RNA ELEMENTS WHICH REPLICATE IN PROKARYOTES** MAEDEH AGHAHOSSEINI‡, Michael Lutz ‡, Keegan Proctor, Paul Boutz, Kai-Lieh Huang, Eric Wagner and Andrew Varble* Microbiology & Immunology
3.	**I-DO OR I-DO NOT: DECIPHERING THE ROLE OF TRYPTOPHAN CATABOLISM IN IMMUNE TOLERANCE DURING PREGNANCY** JACKIE AGYEMANG, Jasmine Reed, Phillip Spinelli, Harshavardhan Lingegowda, and Martha Susiarjo Environmental Medicine
4.	**ELUCIDATION OF GLUTATHIONE-RELATED DIPEPTIDE METABOLISM IN CANCER** FATEMEH ALIMOHAMMADI, Fabio Hecht, Marco Zocchi, Emily Tuttle, Gloria Asantewaa, Nathan Ward, Gina DeNicola, Joshua Munger, Isaac Harris Biomedical Genetics
5.	**DETERMINING THE EFFECTS OF INTEGRATOR SUBUNIT11 EFFECTS ON INTEGRATOR FUNCTION AND NEURONAL DEVELOPMENT** ALISSA C. BEAM, MaryClaire Haseley, Kai-Lieh Huang, Eric J. Wagner Biochemistry Environmental Medicine
6.	**PERFLUOROOCTANOIC ACID: A POTENTIAL ENVIRONMENTAL MODULATOR OF GESTATIONAL DIABETES MELLITUS** KNICKOLE L. BERGMAN, Mary Jerred, Ashley Fields, Phillip Spinelli, Clementina Mesaros, Martha Susiarjo
7.	**DEVELOPING AN ASPARTATE SENSOR FOR IN VIVO VISUALIZATION OF METABOLIC CHANGES DURING CELL LINEAGE DIFFERENTIATION** CARL BERGGREN, Marlies Rossmann Biomedical Genetics
8.	**UNVEILING IDO1-IDO2 IMPRINTING REGULATION IN THE PLACENTA-KEY PLAYERS OF MATERNAL-FETAL IMMUNE TOLERANCE** NEHA BIJU, Madeline O'Connell, Phillip Spinelli, Jasmine Reed, Martha Susiarjo Biomedical Genetics
9.	**IMPORTIN 9'S ROLE IN HISTONE REGULATION DURING DROSOPHILA OOGENESIS AND EMBRYOGENESIS** M.NADUNI DE SILVA, Asmita Dutta, Michael A. Welte Biology

10.	**THE INFLUENCE ON TRANSCRIPTION AND TRANSLATION BY THE TRMT1 TRNA MODIFICATION ENZYME** CHENGHONG DENG, Kejia Zhang, Dragony Fu Biology
11.	**SEGREGATION DISTORTER AND THE REGULATION OF SATELLITE DNAS** LOGAN EDVALSON, Xiaolu Wei, Amanda Larracuente Biology
12.	**DEPLETION OF THE LONG NON-CODING RNA NEAT1 INCREASES PANCREATIC CANCER CELL SENSITIVITY TO FERROPTOSIS** DAKARAI ESGDAILLE, Zamira Guerra Soares, PhD, Krista Pipho, Fabio Hecht Castro Medeiros PhD, Sara Blick-Nitko PhD, Kai-Lieh Huang PhD, Eric Wagner PhD, Isaac Harris PhD, Paul Boutz PhD, Stephano Spano Mello PhD Biomedical Genetics
13.	**EFFECT OF CHROMATIN STRUCTURE ON TRANSCRIPTIONAL DYNAMICS AT CGI PROMOTERS** MCKAYLA FORD, Paula Vertino BGG
14.	**THE ROLE OF CROSSTALK BETWEEN MDS CELLS AND THE BONE MARROW ENDOTHELIAL NICHE ON DISEASE PROGRESSION** EDGARDO I. FRANCO, Christina M. Kaszuba, Benjamin J. Rodems, Sonali Sharma, Omar Abdel-Wahab, and Jeevisha Bajaj Biomedical Engieering
15.	**NATURAL AND NON-NATURAL TRNA SUPPLEMENTATION INDUCES FUNCTIONAL CHANGE IN ENDOGENOUS CFTR CHANNEL EXPRESSION** JEFFREY GABELL, Joseph Porter, John Lueck Biochemistry & Biophysics
16.	**FERROPTOSIS AS A CAUSE OF ANEMIA INDUCED BY DHODH INHIBITORS** SALOME GHVINEPHADZE, Patrick R. Hodgson, Kathleen E. McGrath, Paul D. Kingsley, James Palis, Marlies P. Rossmann Translational Biomedical Science
17.	**THE STING OF THE NIGHT: GENETIC KEY TO BAT LONGEVITY? THE ROLE OF STING S357 IN CYTOSOLIC DNA RESPONSE** JING GUO, Alice Lin, Vera Gorbunova BGG, Biomedical Genetics
18.	**INSULIN-LIKE GROWTH FACTOR BINDING PROTEIN 7 (IGFBP7) PROMOTES SKIN FIBROSIS AND PULMONARY HYPERTENSION AND MAY SERVE AS A BIOMARKER IN SYSTEMIC SCLEROSIS** GAYATHRI GURU MURTHY, YeJin Jeong, Stacey Duemmel, Benjamin Korman Translational Biomedical Sciences PhD Program; Department of Medicine- Allergy, Immunology and Rheumatology Division

19.	**CAV1.1 DYSFUNCTION WORSENS RESPIRATORY FUNCTION IN THE MBNL1KO MODEL OF DM1** SAKURA HAMAZAKI, Matthew Sipple, Lily Cisco, Jennasea Licata, Katherine Lupia, Zhenzhi Tang, Charles Thornton, John Lueck Biology
20.	**DIRECTED EVOLUTION OF AAV5 COMBINED WITH GLYMPHATIC DELIVERY RESULTS IN SELECTIVE TARGETING OF HUMAN GLIAL PROGENITOR CELLS *in vivo*** ALEXANDER CONA, Abdellatif Benraiss, Steven A. Goldman Biomedical Genetics and Genomics
21.	**TAURINE CAN ACCELERATE ACUTE MYELOID LEUKEMIA PROGRESSION** CHRISTINA M. KASZUBA, Sonali Sharma, Benjamin J. Rodems, Cameron D. Baker, Edgardo I. Franco, Laura M. Calvi, John M. Ashton, Jeevisha Bajaj. Biomedical Engineering
22.	**CHARACTERIZATION AND FUNCTION OF A NOVEL INTEGRATOR-ASSOCIATED COMPLEX** ABBY L. MANNING, Kai-Lieh Huang Ph.D., Liang Tong Ph.D., Eric J. Wagner Ph.D. Biochemistry and Biophysics
23.	**HUNGER MODULATION OF A SENSORIMOTOR CIRCUIT** GLADYS LEITCH, Gabriella Sterne Biomedical Genetics
24.	**DEFICIENCY OF A TRNA MODIFICATION ENZYME INDUCES GLIAL ABUNDANCE CHANGES IN THE MAMMALIAN BRAIN** CAILYN LEO, Kejia Zhang, Hanna Wang, Grace Yang, and Dragony Fu Biology
25.	**MYC AND EPITHELIAL TO MESENCHYMAL TRANSITION INDEPENDENTLY PREDICT CIRCADIAN DISRUPTION IN LUNG ADENOCARCINOMA** JAMISON B BURCHETT, Aslihan Petenkaya, McKayla Ford, Jacob Cody Naccarato, Fabio Hecht, Molly Hulver, Xueyang He, Brian J Altman Biomedical Genetics
26.	**STUDYING MODIFICATIONS IN A BRAIN-ENRICHED tRNA ISODECODER** KAUSHANI MISRA*, Kejia Zhang,Dragony Fu Biomedical Genetics and Genomics
27.	**VIRTUAL PATHOLOGY: AI APPROACHES TO IMAGE ANALYSIS IN QuPATH** CODY NACCARATO, Brian Altman Pathology
28.	**PLACENTAL DNA METHYLATION OF STRESS-LINKED GENES PREDICTS INFANT STRESS RESPONSE** NAFISA NAWAL ISLAM, Susan K Murphy, Carole Grenier, Qiuyi Wu, Xing Qiu, Jessica Brunner, Richard K Miller, Emily S Barrett, Junfeng Zhang, David Q Rich, Thomas G O'Connor Translational Biomedical Science

29.	**MATERNALLY EXPRESSED REPETITIVE DNAS REMAIN ACTIVE FOLLOWING FERTILIZATION AND THEIR SILENCING PERMITS GENIC EXPRESSION** DUY NGUYEN, Patrick Murphy Pathology, Biomedical Genetics
30.	**THE CARDIAC LNCRNA CARDINAL CO-OCCUPIES SRF-REGULATED GENE PROMOTERS** JESSICA PERCIACCANTE, Priyanka Shandilya, Tamlyn N. Thomas, Douglas M. Anderson BGG
31.	**DECONVOLUTING ANP32E FUNCTION IN H2A.Z-DEPENDENT GENE ACTIVITY DURING EARLY DEVELOPMENT** NOAH REGER, Patrick Murphy, Michael Welte Biology
32.	**DOES MANGANESE TOXICITY REQUIRE PERMIT TO DESTROY? UNDERSTANDING THE CROSSTALK BETWEEN PEROXISOME AND MITOCHONDRIA IN METAL-INDUCED NEUROTOXICITY** PABLO REINA-GONZALEZ, YUNJIA LAI, MUHAMMET AY, ABDULLA ABU-SALAH, AIESHA ANCHAN, SOUVARISH SARKAR Environmental Medicine
33.	**THE ROLE OF IMPORTIN ALPHA 2 IN ACTIN ORGANIZATION DURING DROSOPHILA OOGENESIS AND EARLY EMBRYOGENESIS** ALICIA SHIPLEY, Roger White, Pakinee Phromsiri, Michael Welte Biology
34.	**EXAMINING THE FUNCTIONS OF THE KDM5 DEMETHYLASES IN LUMINAL BREAST CANCER** ZACHARY SMITH, Christina Davidson, Ching-Hua Shih, Paula Vertino Biochemistry
35.	**ESSENTIAL ROLE OF ENDOTHELIAL MTORC1/RAPTOR IN MAINTAINING LUNG VASCULAR BARRIER INTEGRITY** IMRAN TAHIR, Arshad Rahman Pediatrics (Neonatology)
36.	**ELUCIDATING THE DRIVERS OF SEX-SPECIFIC PROGRAMMING IN CAENORHABDITIS ELEGANS SEX-SHARED SENSORY NEURONS** ZACHARY C. WARD, Carlos A. Diaz-Balzac, Kelli A. Fagan, Douglas S. Portman Biomedical Genetics
37.	**INHIBITORY RECIPROCAL CIRCUIT MOTIFS IN TASTE PROCESSING** JONATHAN WILLIAMS, Attilio Ceretti, Gabriella Sterne Biomedical Genetics and Genomics, Neuroscience
38.	**EFFECTS OF IGE-MEDIATED ALLERGIC STIMULATION ON MEMORY CD4 T CELL ACTIVATION AND EFFECTOR FUNCTION** JINGYI WU, Regina K. Rowe, Bailey Matthews Biomedical Genetics and Genomics

39.	**TRANSIENT SPRR1A EXPRESSION DEFINES A POPULATION OF BORDER ZONE CARDIOMYOCYTES THAT SURVIVE ISCHEMIC INJURY** EMILY H. MARSHALL*, Daniel A. Zuppo*, PhD, BS, Kimberly N. Burgos Villar*, PhD, Adwiteeya Misra,MD, PhD, Ronald A. Dirkx, Jr., BS, and Eric M. Small, PhD Biomedical Genetics and Genomics

POSTDOCS

40.	**SEX DIFFERENCES IN CONTEXT-DEPENDENT PERSISTENT BEHAVIORAL STATES IN C. ELEGANS** CHANCE BAINBRIDGE, Gregory Reilly, Jinxin Wang, Douglas Portman Biomedical Genetics
41.	**REACHING TOWARD AN UNDERSTANDING OF DIRECTED REACHING** Attilio Ceretti, Gabriella Sterne Department of Biomedical Genetics
42.	**TREATMENT OF A SEVERE MYOTONIC DYSTROPHY TYPE I MOUSE MODEL WITH VERAPAMIL, AMLODIPINE, AND RANOLAZINE.** LILY CISCO, Sakura Hamazaki, Matthew Sipple, Katherine Lupia, Johanna Hamel, Charles Thornton, John Lueck Pharmacology and Physiology
43.	**ENHANCER EVOLUTION UNDERLYING PEA APHID WING DIMORPHISMS** KEVIN DEEM, Jenn Brisson Biology
44.	**BISPHENOL A DISRUPTS IMMUNE HOMEOSTASIS IN THE UTERUS DURING THE PRE-IMPLANTATION PERIOD** HARSHAVARDHAN LINGEGOWDA, Philip Spinelli, Jackie J. Agyemang, Martha Susiarjo Environmental Medicine

UNDERGRADUATE STUDENTS

45.	**IMPROVING ACCURACY OF SEX IMPUTATION IN PEDIATRIC SINGLE-CELL DATASETS USING SPECIFIC Y-CHROMOSOME GENE EXPRESSION** ASHAY NARAYANA, Rachel Simpson MD, PhD, Natalie Vance MS, Juilee Thakar PhD Microbiology
46.	**USE COEVOLUTION TO STUDY NOVEL PROTEIN INTERACTIONS AND FUNCTIONS** ZHI QU, John H. Werren Department of Biology
47.	**MODIFICATIONS AND ROLES OF IMPORTINA2 IN EARLY DROSOPHILA DEVELOPMENT** ZOE STANLEY, Alicia Shipley, Asmita Dutta, Michael Welte Biology

48.	**INFLAMMATORY AND OXIDATIVE EFFECTS DUE TO COMMERCIALLY AVAILABLE BRANDS OF PROPYLENE GLYCOL (PG) AND VEGETABLE GLYCERIN (VG) - COMMON HUMECTANTS IN ELECTRONIC CIGARETTES** YEHAO SUN, Gagandeep Kaur, Felix Effah, and Irfan Rahman Department of Environmental Medicine, University of Rochester Medical Center, Rochester, NY 14642, USA
49.	**THE WHEN AND HOW OF PARASITIC MANIPULATION** NATASHA VACCA, Valeria Padilla-Choy, Juan Martín Ferro, Floria M.K. Uy Biology
50.	**NOTCH1 ACTIVATION IN ENDOTHELIAL CELLS DRIVES HEART FAILURE AND METABOLIC DISORDERS** TENGGE WANG, Laith Awad Mohamad, Shumin Wang, Jasmine J Xu, Ryan Chen, Sofia Gonzalez Landa, Yara Rose, Sara Ture, Craig N. Morrell, Jinjiang Pang Aab Cardiovascular Research Institute
51.	**INVESTIGATING CANDIDATE MITOCHONDRIAL PROTEIN INTERACTIONS PREDICTED BY COEVOLUTION** YINGJIA WU, John H. Werren, Alec Kingsley Department of Biology, University of Rochester

STAFF	
52.	**NEURAL REPRESENTATIONS OF SENSORY QUALITY IN VALUE-BASED DECISION MAKING** SARAH CHIARADONNA, Yoshinori Aso, Gabriella Sterne Biomedical Genetics
53.	**EVOLUTIONARY ANALYSES PREDICT NOVEL NUCLEAR-MITOCHONDRIAL PROTEIN INTERACTIONS** John H. Werren, ALEC KINGSLEY, Zhi Qu, and Yingjia Wu Biology
54.	**A PIPELINE TO ANALYZE UNTARGETED METABOLOMICS DATA** PATRICK R. HODGSON, Carl A. Berggren, Salome Ghvinephadze, Carter Long, Xiaolu Wei, Julie A. Reisz, Angelo D'Alessandro, Seong-Hwan Jun, Paul S. Brookes, Phillip Seitzer, Matthew McCall, Marlies P. Rossmann Biomedical Genetics
55.	**DELETION OF MTOR IN TYPE I EPITHELIUM VIA A GENE TRANSFER APPROACH MITIGATES ACUTE LUNG INJURY** MOHAMMAD SHADAB, Michelle. W. Millar. Rauf A. Najar, Imran Tahir, Fabeha Fazal, David A. Dean, Arshad Rahman PEDIATRICS
56.	**THE ROLE OF DYNEIN AXONEMAL HEAVY CHAIN 2 IN PULMONARY ARTERIAL HYPERTENSION** SHUMIN WANG, Saquib Lakhani, Kate Ackerman, Joseph Kuebler, Philip Katzman, Ryan Chen, Tengge Wang, Tiffany Nguyen, Sofia Gonzalez Landa, Jinjiang Pang CVRI

	FACULTY
57.	**NTEGRATIVE GENOMICS AND EPIGENOMICS REVEAL CONVERGENT CODING AND REGULATORY VARIANTS** HONGBO Liu, Amin Abedini, Eunji Ha, Ziyuan Ma, Xin Sheng, Bernhard Dumoulin, Chengxiang Qiu, Tamas Aranyi, Shen Li, Nicole Dittrich, Hua-Chang Chen, Ran Tao, Der-Cherng Tarng, Feng-Jen Hsieh, Shih-Ann Chen, Shun-Fa Yang, Mei-Yueh Lee, Pui-Yan Kwok, Jer-Yuarn Wu, Chien-Hsiun Chen, Atlas Khan, Nita A Limdi, Wei-Qi Wei, Theresa L Walunas, Elizabeth W Karlson, Eimear E Kenny, Yuan Luo, Leah Kottyan, John J Connolly, Gail P Jarvik, Chunhua Weng, Ning Shang, Joanne B Cole, Josep M Mercader, Ravi Mandla, Timothy D Majarian, Jose C Florez, Mary E Haas, Luca A Lotta, Regeneron Genetics Center, GHS-RGC DiscovEHR Collaboration, Theodore G Drivas, Penn Medicine BioBank, Ha My T Vy, Girish N Nadkarni, Laura K Wiley, Melissa P Wilson, Christopher R Gignoux, Humaira Rasheed, Laurent F Thomas, Bjørn Olav Åsvold, Ben M Brumpton, Stein I Hallan, Kristian Hveem, Jie Zheng, Jacklyn N Hellwege, Matthew Zawistowski, Sebastian Zöllner, Nora Franceschini, Hailong Hu, Jianfu Zhou, Krzysztof Kiryluk, Marylyn D Ritchie, Matthew Palmer, Todd L Edwards, Benjamin F Voight, Adriana M Hung, Katalin Susztak Department of Biomedical Genetics
58.	**BIOBANK SHARED RESOURCE** BRADLEY MILLS, Jennifer Twardowski, Zoe Tomlinson, Irena Stefankiv Wilmot Cancer Institute