**2022 Minority Science Programs (MSP) Research Symposium**

**School of Biological Sciences, University of California, Irvine**

**Center for Neurobiology of Learning and Memory | Herklotz Conference Room**

**September 19-20, 2022**

**Monday, September 19, 2022**

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| **9:50** |  | **Welcoming: Dr. Marlene De La Cruz** |
|  |  | **ORAL PRESENTATIONS (I) Herklotz Conference Room** |
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| **10:00** | Title | How cells stay the right size |
|  | Presenter | **Camryn Zurita** |
|  | Principal Investigator | Dr. James Moseley, Dartmouth College |
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| **10:10** | Title | Towards structural elucidation of *Mycobacterium tuberculosis* MraY in complex with novel inhibitors |
|  | Presenter | **Manuel Holguin** |
|  | Principal Investigator | Dr. William Clemons, Jr, California Institute of Technology |
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| **10:20** | Title | The impact of thermal stress on the volatile emission rates of Alpinia zerumbet |
|  | Presenter | **Megan Garcia** |
|  | Principal Investigator | Dr. Andrea Tenner, School of Biological Sciences |
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| **10:30** | Title | Investigating the effects of a high sugar diet on the gut microbiome and immunity in *Drosophila melanogaster* |
|  | Presenter | **Sophia Aredas** |
|  | Principal Investigator | Dr. Brian Lazzaro, Cornell University |
|  |  |  |
| **10:40** | Title | Action potential characterization of Autism-related gene, SYNGAP1, and pathology |
|  | Presenter | **Cristabel Portillo** |
|  | Principal Investigator | Dr. Christian Hanse, University of Chicago |
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| **10:50-11:00** |  | **BREAK** |
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| **11:00** | Title | Analysis of a tandem D. melanogaster-specific gene family in fourdifferent strains using oxford nanopore sequencing technology |
|  | Presenter | **Edward Oropeza-Rodriguez** |
|  | Principal Investigator | Dr. Jose Ranz, School of Biological Sciences |
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| **11:10** | Title | Characterization and perturbation of PDHK1 as a target to treat PTEN-deficient cancers |
|  | Presenter | **Mateo Valenzuela** |
|  | Principal Investigator | Dr. Trever Bivona, University of California, San Francisco |
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| **11:20** | Title | Purification of pili cap proteins in *Geobacter sulfurreducens* |
|  | Presenter | **Vanessa Saldivar** |
|  | Principal Investigator | Dr. Nikhil Malvankar, Yale University |
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| **11:30** | Title | Unique multi-drug resistant region mobilized by an IS26 composite transposon within environmental *Citrobacter freundii* plasmid |
|  | Presenter | **Isabel Vargas** |
|  | Principal Investigator | Dr. Luis Mota-Bravo, School of Biological Sciences |
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| **11:40** | Title | *Toxoplasma gondii* infection induces cell recruitment and activation in the brain |
|  | Presenter | **Megan Broad** |
|  | Principal Investigator | Dr. Melissa Lodoen, School of Biological Sciences |
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| **11:50** | Title | Dissecting the role of the UHRF1 domains in osteosarcoma metastasis |
|  | Presenter | **Arturo Salazar** |
|  | Principal Investigator | Dr. Claudia Benavente, School of Pharmaceutical Sciences |
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| **12:00-1:00** |  | **LUNCH**  |
| **1:00 - 3:30** |  | **POSTER PRESENTATIONS (I)**  |
|  |  |  |
| **Poster 1** | Title | *Escherichia coli* isolated from a migratory bird has an antibiotic resistant *Proteus* *mirabilis*-like plasmid integrated in its chromosome |
|  | Presenter | **Jessica Mikhail** |
|  | Principal Investigator | Dr. Luis Mota-Bravo, School of Biological Sciences |
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| **Poster 2** | Title | A ratiometric transcutaneous sensor for continuous pH monitoring |
|  | Presenter | **Monika Lyons** |
|  | Principal Investigator | Dr. Elliot Botvnick, School of Engineering |
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| **Poster 3** | Title | Nodeling interspecies interactions with a synthetic community representative of the Loma Ridge leaf litter microbiome |
|  | Presenter | **Miriam Lepiz** |
|  | Principal Investigator | Dr. Alejandra Rodriguez Verdugo, School of Biological Sciences |
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| **Poster 4** | Title | The impact of thermal stress on the volatile emission rates of *Alpinia zerumbet* |
|  | Presenter | **Juan Flores** |
|  | Principal Investigator | Dr. Celia Faiola, School of Biological Sciences |
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| **Poster 5** | Title | Anti-lipid antibodies in health and type 2 diabetes |
|  | Presenter | **Josue Gonzalez** |
|  | Principal Investigator | Dr. Dequina Nicholas, School of Biological Sciences |
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| **Poster 6** | Title | A novel resistant plasmid created by the translocation of five antibiotic resistance genes from an IncF plasmid into a cryptic conjugative IncX plasmid in an environmental *Escherichia coli* |
|  | Presenter | **Miray Girguis** |
|  | Principal Investigator | Dr. Luis Mota-Bravo, School of Biological Sciences |
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| **Poster 7** | Title | Internalization of exogenous Aβ peptides dependent of a lipid-mediated mechanism is age- and disease-dependent |
|  | Presenter | **Bareerah Ismail** |
|  | Principal Investigator | Dr. Michelle Digman, School of Engineering |
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| **Poster 8** | Title | Estrogen receptor levels are positively correlated to amyloid beta in the occipital cortex |
|  | Presenter | **Freddy Gonzalez** |
|  | Principal Investigator | Dr. Elizabeth Head, School of Medicine |
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| **Poster 9** | Title | Mobilization of antibiotic resistance gene CTX-M-14 by ISEcp1 transposition unit in an environmental *Escherichia coli* |
|  | Presenter | **Cesar Espinosa** |
|  | Principal Investigator | Dr. Luis Mota-Bravo, School of Biological Sciences |
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|  |  | **ORAL PRESENTATIONS (II) Herklotz Conference Room** |
|  |  |  |
| **9:50** | Title | Mechanisms of glucocorticoid reduction of T cell viability in allogeneic Hematopoietic Stem Cell Transplantation |
|  | Presenter | **Melissa Campos** |
|  | Principal Investigator | Dr. Matthew Inlay, School of Biological Sciences |
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| **10:00** | Title | Determining impact of JAK1 mutations of myeloproliferative neoplasms on JAK/STAT signalling and hematopoiesis |
|  | Presenter | **Lucas Wadley** |
|  | Principal Investigator | Dr. Angela Fleischman, School of Medicine |
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| **10:10** | Title | Screening Yosemite Valley plant extracts for KV1.3 inhibitory activity to treat inflammatory diseases |
|  | Presenter | **Mayra Mendez** |
|  | Principal Investigator | Dr. Geoffrey Abbott, School of Medicine |
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| **10:20** | Title | Identification of spindle components by biotin ligase labeling in *Toxoplasma gondii* |
|  | Presenter | **Jasmine Posada** |
|  | Principal Investigator | Dr. Naomi Morrissette, School of Biological Sciences |
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| **10:30** | Title | Lamin's structural role in nuclear dystrophy  |
|  | Presenter | **Sabrina Calderon** |
|  | Principal Investigator | Dr. Xiaoyu Shi, School of Biological Sciences |
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| **10:40** | Title | Non-Dithizone stained pseudoislets exhibit increased insulin secretion   |
|  | Presenter | **Celeste Sanchez** |
|  | Principal Investigator | Dr. Christopher Hughes, School of Biological Sciences |
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| **10:50-11:00** |  | **BREAK** |
|  |  |  |
| **11:00** | Title | Novel multidrug resistant region of environmental *Escherichia coli* is composed of multiple transposable elements |
|  | Presenter | **Isabel Suarez** |
|  | Principal Investigator | Dr. Luis Mota-Bravo, School of Biological Sciences |
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| **11:10** | Title | Investigating functional connectivity of the Paraventricular Thalamic Nucleus and susceptibility to depressive symptomology in children and adolescents |
|  | Presenter | **Abner Portillo** |
|  | Principal Investigator | Dr. Michael Yassa, School of Biological Sciences |
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| **11:20** | Title | Mitochondrial DNA regulated intercellular signaling in an osteosarcoma models |
|  | Presenter | **Alexis Anica** |
|  | Principal Investigator | Dr. Michael Teitell, University of California, Los Angeles |
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| **11:30** | Title | Environmental *Escherichia coli* carries atypical class 1 integron encoding dfrA5 gene in multidrug resistant region |
|  | Presenter | **Cierra Ord** |
|  | Principal Investigator | Dr. Luis Mota-Bravo, School of Biological Sciences |
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| **11:40** | Title | The role of T cells in Alzheimer's disease (ad) |
|  | Presenter | **Briana Morales** |
|  | Principal Investigator | Dr. Craig Walsh, School of Biological Sciences |
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| **12:00-1:00** |  | **LUNCH**  |
| **1:00 - 3:30** |  | **POSTER PRESENTATIONS (II)** |
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| **Poster 10** | Title | Aberrant changes in astrocytes: significantly lower astrocyte cell counts coupled with an abundance of S100B in Down Syndrome human frontal cortex |
|  | Presenter | **Kevin Camey** |
|  | Principal Investigator | Dr. Elizabeth Head, School of Medicine |
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| **Poster 11** | Title | Structural studies of a newly evolved TNA polymerase |
|  | Presenter | **Jenny Medina** |
|  | Principal Investigator | Dr. John Chaput, School of Pharmaceutical Sciences |
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| **Poster 12** | Title | First report of a *Klebsiella variicola* containing a ꞵ-Lactam DHA-1 resistant gene in the USA |
|  | Presenter | **Marian Khalil** |
|  | Principal Investigator | Dr. Luis Mota-Bravo, School of Biological Sciences |
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| **Poster 13** | Title | Lateralization of memory impairment in mouse model of temporal lobe epilepsy |
|  | Presenter | **Usean Redic** |
|  | Principal Investigator | Dr. Laura Ewell, School of Medicine |
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| **Poster 14** | Title | A temperate P2-like bacteriophage confers changes in bacterial motility behaviors |
|  | Presenter | **Joseph Agha** |
|  | Principal Investigator | Dr. Travis Wiles, School of Biological Sciences |
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| **Poster 15** | Title | White matter sex differences in spatial navigation ability |
|  | Presenter | **Tai Donnell-Louis** |
|  | Principal Investigator | Dr. Elizabeth Chrastil, School of Biological Sciences |
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| **Poster 16** | Title | Assessing the efficacy of CEPT and Y-27632 ROCK inhibition on brain organoid culture |
|  | Presenter | **Christine Vu** |
|  | Principal Investigator | Dr. Momoko Watanabe, School of Medicine |
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| **Poster 17** | Title | Environmental *Klebsiella pneumoniae* carries a novel composite transposon encompassing multidrug resistance region |
|  | Presenter | **Dana Mejia** |
|  | Principal Investigator | Dr. Luis Mota-Bravo, School of Biological Sciences |
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