

# 2018 IUPUI Student Research Day

Friday | April 6 | 10–2 p.m.  
Hine Hall and University Tower

## PROGRAM



ABSTRACT BOOKLET QR CODE



**IUPUI**

CENTER FOR RESEARCH AND LEARNING  
Division of Undergraduate Education

## IUPUI Student Research Day – Program 2018

Time	Event	Location
9:00-10:00 am	Registration	Hine Hall Auditorium
10:00-10:05 am	Welcome – Dominique M Galli, CRL Executive Director	Hine Hall Auditorium
10:05-10:45 am	Short Undergraduate and Graduate Student Presentations:  Micah Faidley (2017/18 UROP Awardee) - <i>The Experience of Racism on Health Outcomes: the Moderating Impact of Mindfulness</i>  Rizwana Biviji-Sharma - <i>Evaluating the Quality of Mobile Health Apps for Maternal and Child Health</i>  Bidisha Mitra - <i>After All This Time, We Found You Ms. “Sneaky” P</i>  Alex Brinker (2017/18 BJR Awardee) - <i>Bone Healing in Spaceflight</i>	Hine Hall Auditorium
11:00-12:00 pm	High School Student Welcome Session I	Hine Hall Auditorium
11:00-12:00 pm	<b>Poster Session I *</b>	University Tower-Ballroom
12:00 -12:45 am	Lunch Break	
12:45- 1:45 pm	High School Student Welcome Session II	Hine Hall Auditorium
12:45- 1:45 pm	<b>Poster Session II*</b>	University Tower-Ballroom
1:45- 2:00 pm	Drawing: Scavenger Hunt Winners Announcement of Best Undergraduate Poster Awardees	University Tower-Ballroom

\* concurrent judging of all undergraduate student individual and team posters

## Poster Presentations

### Session I 11:00 am – Noon

- P 1 Anderson III, Richard - Perceptions of Innovation at IUPUI
- P 2 Cook, Gage - The Changing War Experience of WW1 as per Erich Maria Remarque
- P 3 Francis, Delaney - How Autonomy & Agency Influence Self-Advocacy
- P 4 Woodworth, Kassie - 3D Printing of Large Scale Ceramic Components
- P 5 Stuckey, Jacey - Private Equity and Its Effects on Retailers
- P 6 Donaldson, Tyler - Implementing Situated Learning in the Geosciences at IUPUI: A Review of the Literature.
- P 7 Dyson-Drake, Jasmine - What Should Massage Education do More of, Different, Start, and, Stop? Massage Education Stakeholder Views from the 2017 Alliance for Massage Therapy
- P 8 Lakmala, Prathima - Transferrable skills gained from experience as a peer-leader in a PLTL program: reflections, applications, and long-term impacts on professional lives
- P 9 Piekarzewska, Agnieszka - International Students Adaptation Process in Midwestern Urban School of Engineering and Technology
- P 10 Kinsey, Daniel - Determining the Relationship Between Empathy and Burnout in Medical Students
- P 11 Carroll, Peyton - The relationship between parental abandonment and depression diagnosis in girls that are victims of commercial sexual exploitation
- P 12 Hoernschemeyer, Haley - Ryan White: A Geospatial Analysis of his Correspondence
- P 13 Kirby, Allison - Anxiety and Alcohol Use in E-Cigarette Users: The Mediating Role of Positive Alcohol Expectancies
- P 14 Capulong, Jiva - Identifying Key Challenges and Opportunities in Food Support Through Observation and Interviews
- P 15 Meyers, Elisabeth - mHBS powered by DHIS2: Neonatal Device Prototyping and Educational App Development to Support Targeted Neonatal Training Initiatives among Healthcare Workers in Low and Middle-Income Countries
- P 16 Bansode, Swapnil - Redesign of snowmobile to reduce emissions and noise levels
- P 17 Cardona-Serrano - Carolina Recycled and Household Plastic Suitability for Reuse via 3D Printing
- P 18 Chowdhury, Nahida Sultana - TRR: Trust-based Mobile apps selection and ordering over traditional feedback mechanism
- P 19 Dhamade, Harshal - Design of 3D printer component for extrusion of stainless steel-based slurry
- P 20 Diwate, Abole - A Residential Energy Management Unit
- P 21 Dube, Tejesh - Study of dimensional accuracy and printing parameters in 3D printed PLA
- P 22 Grove, John - Assessment of Mixed Reality Virtual Environment for STEM Learning
- P 23 Hawaldar, Nishant - 3D printing of molecular sieve zeolites 13X, 5A, 4A and 3A monoliths
- P 24 Huang, Xiang En - Nanoscale Transfer Printing of Plasmonic Structures
- P 25 Pai Raikar, Piyush - 3d Printing of Ceramics: Zircon
- P 26 Pandey, Saurabh - W-CDASH: A Service-based Decentralized Prediction System of Social Harm Events
- P 27 Pawar, Rohit - Distributed Cyberbullying Detection System
- P 28 Shetty, Vighnesh - Creep Modeling of 3D Printed Metals
- P 29 Yang, Xuehui - Additive manufacturing of polymer derived ceramics
- P 30 Zhang, Yi - Prediction of grain structure of laser powder fused metal using combined CFD and CA approach
- P 31 Watson, Brandon - Polymer Composite Materials for Flexible Electronics
- P 32 Soruco, Joseph - Fabrication and Characterization of Nano-Scale Magnetic Materials
- P 33 Canner, Samuel - Are Vitamin E and PUFA Driven Together By Cholesterol? Computer Simulation Studies
- P 34 Davis, Kymeri - Detection and Monitoring of Compounds used in Drug Facilitated Sexual Assaults
- P 35 Kennedy, Tori - Mapping Blue Ice Moraine Surface Morphology to Understand Antarctic Climate and Ice Sheet History
- P 36 Kukoyi, Kiyomi - Electrochemical Detection of Chlorate Using Paper-based Devices for Crime Scene Investigation
- P 37 Martin, Christina - Towards Developing Lipid Profiles from Biological Samples During DNA Typing
- P 38 Rael, Ashur - Micropacked Capillary Gas-Solid Chromatography with 3 and 7.5  $\mu\text{m}$  Particles for Ignitable Liquid Separations using Headspace Sampling
- P 39 Ruchti, Jacqueline - Determination of the Partition Coefficient of TNT in Chloroform/Water
- P 40 Cook, Renee - PUFA-Induced Domain-ation of Lipid Rafts
- P 41 Pulliam, Alexis - The effects of raloxifene analog on bone quality
- P 42 Alhijji, Saleh - The Effects of Epigallocatechin-gallate on Dental Adhesives and MMP Inhibition
- P 43 Aqeel, Dania - A qualitative analysis to understanding participation in physical activity and sedentary behaviors in veterans with fibromyalgia

- P 44 Aremu, Azeez - Identification of Genes Important for the Pathogenesis of Lyme disease
- P 45 Audu, Aishat - Expression of Progesterone Receptors in Ovarian Cancer Cell Line
- P 46 Balasubramani, Deepali - Investigating the role of plasma uric acid levels in Ugandan children with severe malaria
- P 47 Black, Emma - "How did they not mention that?" - A Systematic Review of Adolescent and Young Adult Cancer Survivors' Experiences of Fertility, Sexuality, and Romantic Relationships
- P 48 Blackwell, Matthew - Identifying influential Trisomic Genes in Addition to Dyrk1a that Contribute to Skeletal Phenotypes found in Down Syndrome
- P 49 Boone, Joseph - Investigation of the efficacy of p65 (NF- $\kappa$ B, RelA) gene knockdown via siRNA and treatment with DCA to increase pancreatic cancer radiation sensitivity
- P 50 Bustamante, David - Experimental and Computational Study of Cell Spheroids Used for Scaffold-Free 3D Bioprinting
- P 51 Chang, Eric - CaMKK2 as a Dual Strategy to Alleviate Metastatic Tumor Burden and Treatment-Induced Bone Loss in Advanced Prostate Cancer Patients
- P 52 Davis, Symphony - Researching a Pharmaceutical Treatment For Hydrocephalus
- P 53 Devanathan, Nirupama - Systematic Survey of the Role of IGF in the Link between Diabetes and Cancer
- P 54 Evans, Eric - Measuring the Effect of Active Video Games on Aerobic Outcomes and Enjoyment in Young Healthy
- P 55 Gorman, Rebecca - Climate Change Vulnerability Index for Marion County, IN
- P 56 Hernandez, Maribel - GABRA2 Expression in Selectively Bred Mouse Lines for High and Low Alcohol Drinking
- P 57 LaCombe, Jonathan - Rapid Degradation of EGCG Impairs Targeted Inhibition of Dyrk1a
- P 58 Lee, Joonyong - Induction of Ascl1 in Maternal Liver Ensures a Healthy Pregnancy
- P 59 Lindsay, Alison - Assessment of TLR-2 Expression in Salivary Epithelial Cells for Early Identification of Periodontitis
- P 60 Mahajan, Shivansh - Active-site Mutants of Benzoylformate Decarboxylase Provide a Variety of Implications for the Roles of the Active-site Residues, His70 and His281
- P 61 McGrew, Courtney - Effect of Nicotine on Streptococcus mutans Binding to Collagen
- P 62 Messenger, Evan - Gender Differences in Intracerebral Hemorrhage Risk Factors and Severity
- P 63 Mpofu, Philani - A Pseudo-likelihood Method For Estimating Misclassification Probabilities When Outcome Data are Partially Observed.
- P 64 Ramirez, Michelle - Lihawu Male Mentoring Camp: Understanding the Long Term Impacts on Attitudes and Perceptions Relating to Male Circumcision, HIV/STI Knowledge, Gender Inequalities and Masculinities in Swaziland
- P 65 Roy, Josh - Quantifying Soft Tissue Manipulation
- P 66 Sanchez, Juan - Adrenergic Effects on PDE10A Expression
- P 67 Shields, Priya - Influence of Various Extrinsic Environment Composition Factors on Glaucomatous Retinal Ganglion Cell Axonal Outgrowth
- P 68 Stevens, Skyler - The Effect of Listening to Music on Posture in a Dynamic Virtual Environment
- P 69 Wagenknecht, Dawn - Nicotine Increases Streptococcus mutans Biofilm and Arginine Negates the Effect
- P 70 Wind, Brandon - Cathodal Transcranial Direct Current Stimulation of Cerebellum Reduces Temporal Summation of Pain in Healthy Young Adults
- P 71 Wolfe, Mackenzie - Performance of a Timing-Based, Dexterous Task of the Hand Improves with M1 tDCS
- P 72 Zdanowicz, Nina - The Use of tDCS to Enhance Learning of a Dart Throwing Task
- P 73 Turner, Sean - Contrasting Bone Phenotypes in the Different Mouse Models of Down Syndrome Suggests Trisomic Dyrk1a Does Not Act Alone
- P 74 Behrouzi, Adib - Analysis of the RD29A Cold-Regulated Promoter in Soybean and Arabidopsis.
- P 75 Hudson, Theresa - Whichaway are the algae?
- P 76 Chapin, Cecelia - Creation of a CRISPR Initiated Mutation in the Dehydrin ERD10

## **Session II 12:45 – 1:45 pm**

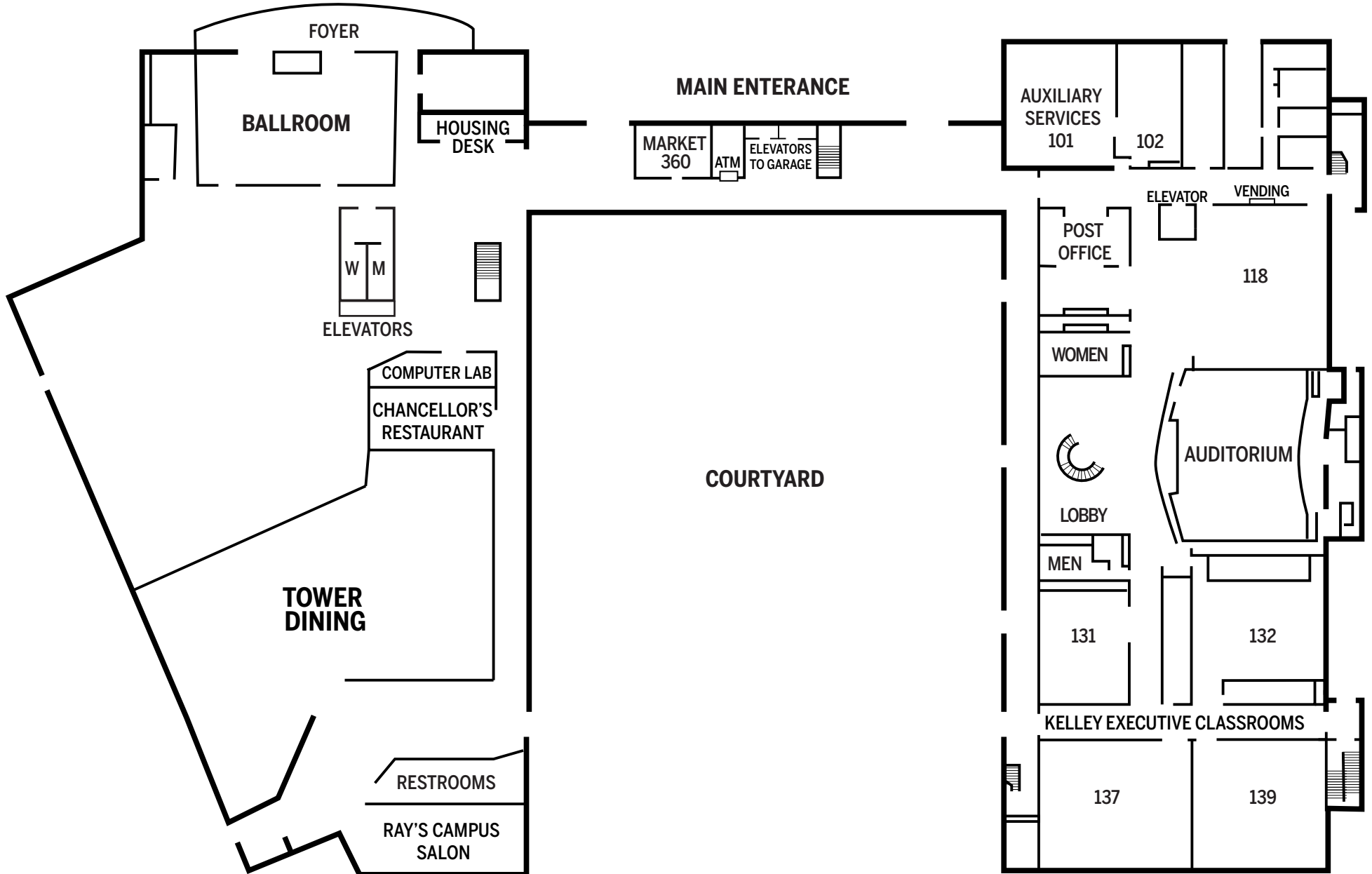
- P 1 Fierst, Adam - Vergangenheitsbewältigung in Post-World War II German Cinema
- P 2 Harrah, Peter - Mapping the Oratory of Frederick Douglass
- P 3 Huff, Andrea - Structural Racism and the Impact of Deconcentration of Impoverished Peoples
- P 4 McCraig Jr., Don - Are The BRICS Countries On The Decline?
- P 5 Mooar, Joseph - Educational System in Germany Versus America's
- P 6 Ayeni, Oyedotun - 3D Printing of Metal Infused Filament
- P 7 Bartlett, Mia - Landscape Analysis and Evaluation of Utility for Wearable and Wireless Sensors to Monitor Infant Vital Signs in a Wearable Biomedical Device
- P 8 Esperanca, Alvaro - A Framework for Social Media Sensing of Population Health
- P 9 Francois, Bri - Inferring Trisomic Interactions in Down Syndrome Skeletal Phenotype using Dp9Tyb Mice
- P 10 Meng, Lingbin - DFT study of anisotropic mechanical properties of Li<sub>x</sub>CoO<sub>2</sub>
- P 11 Mitchell, Morgan - Simulation and Apparatus Design for Dielectrophoresis to Remediate Brownfields
- P 12 Morales, Laura - Quantifying the Physical Properties of Bronze Metal
- P 13 Padmanabhan, Anudeep - Fatigue characterization of 3-D printed 15-5 stainless steel
- P 14 Sherman, Jesse - FTIR Characterization of Media via Metal Hole Array
- P 15 Whitaker, Taylor - The Influence of Reflow Profile on the Thermal Fatigue Behaviors of BGA Solder Joint
- P 16 Alam, Tanjimul - Recycled and Household Plastic Suitability for Reuse via 3D Printing
- P 17 Daniel, Ebin - High specific energy LiNiPO<sub>4</sub>/Graphene as cathode material for Lithium ion batteries
- P 18 Frye, Michael - Applying Custom Loading Waveforms to Emulate Natural Conditions
- P 19 Golub, Michael - Characterization Of Tensile And Hardness Properties And Microstructure Of 3d Printed Bronze Metal Clay
- P 20 Hickey, James - Synthesis and 3D Printing of Zircon Ceramic Slurry
- P 21 Hudson, Britney - Hypoxia-Inducible Hydrogels via Enzyme-Immobilization
- P 22 Jangam Rajshekar, Apeksha - Opportunistic Indoor tracking
- P 23 Phillips, Tyler - An Accurate and Cancellable Facial Authentication Scheme
- P 24 Lai, Patrick - Integrating Disparate Electronic Data Sources to Identify and Analyze Spatial Chlamydia Health Disparities
- P 25 Ye, Chuanwei - Matrix stiffness affects metabolic signaling and proliferation in breast cancer cells
- P 26 Bogan, Brittany - Comorbidity of Stress and Voluntary Alcohol Consumption in Male and Female Wistar Rats
- P 27 Darkey, Moses - Characterization of a Sulfate Transporter, a Putative Substrate of the Calcium Dependent Protein Kinase 3 (CDPK3) in *Toxoplasma gondii*
- P 28 Hackett, Jason - Subjective Sleep Quality and Pain Catastrophizing are associated with Chronic Post-Traumatic Headache in Mild Traumatic Brain Injury Patients
- P 29 Holland, Robert - The Effect of High Bone Mass on Orthodontic Tooth Movement
- P 30 Hopf, Brett - Determining the Role of Rpn4 in the Formation of a4 HMWCs
- P 31 Knox, Adam - Analysis of 16-Week-Old Dp1Tyb Mice Femurs Suggests Sex Dependent Skeletal Effects of Down Syndrome
- P 32 Lahiri, Niloy - Suppression of Neuroinflammation in Alzheimer's disease by Unique Glucocorticoid-induced leucine zipper (GILZ) analog
- P 33 McKinney, Reed - Effects of N-Demethylation Nicotine Metabolites on *Streptococcus mutans* Biofilm Formation
- P 34 Nambiar, Shashank - Maternal Liver Turnover and Adaptations during Pregnancy
- P 35 Ochoa, Celia - UV Nucleotide Binding Site Photocrosslinking of Antibodies at Various Light Intensities
- P 36 Rone, Victoria - Interpreting Developing Results of the Human Connectome Project
- P 37 Sears, Seth - No Title Provided
- P 38 Thomas, Jared - Skeletal Abnormalities Exhibit Sexual Dimorphism in Down Syndrome Mice
- P 39 Valdez, Sinai - The Effects of RAGE inhibition in Mice and Bone Resorption
- P 40 Ainoosah, Sultan - Managing Esthetic Complications with Digitally Fabricated Complete Dentures
- P 41 Dent, Shaquitta - Effectiveness of Yoga and Stress Relaxation Elective Courses on Stress and Anxiety in College Students
- P 42 Dodevska, Jovana - Low Magnitude Mechanical Signals Suppress Expression of Osteolytic Genes in C4-2B Human Prostate Cancer Cells
- P 43 Greenwell, Davin - M1 tDCS Does Not Influence Performance of a Fine-Motor Skill Tweezer Task
- P 44 Ho, Christina - 1H NMR Spectroscopy of Norepinephrine Binding to Lipid Vesicles
- P 45 Long, Rachel - Survey Quantifying Epigallocatechin-3-gallate (EGCG) Usage in Individuals with Down Syndrome
- P 46 McDonald, Hannah - Factors in Compliance to Developmental Follow-Up of NICU Graduates at 2 years of age
- P 47 Park, Yeeun - Genetic Variation of Anti-aging Gene FGF23 is Associated with Larger Cortical Thickness in Alzheimer's Disease

- P 48 Parker, Abigail - Developmental and Sex-Specific Differences in Trisomic Dyrk1a Expression in Brain Regions of Ts65Dn Down Syndrome Mice
- P 49 Talman, Zoe - Combined Alcohol and Methamphetamine Abuse: A Link to Parkinson's Disease?
- P 50 Zakeresfahani, Arash - Trigger Point Self-Care for Chronic Neck Pain: Pilot Study Results
- P 51 Barajas, Josh - The effects of peer led teaching on pre and post-examination scores and openness to food nutritional exploration.
- P 52 Whiteside, Jake - Preclinical Treatment of Neurobehavioral and Brain Structural Deficits in the Ts65Dn Down Syndrome Mouse Model with a Novel Dyrk1a Inhibitor
- P 53 Ogiego, Briana - Investigating Climate and Society Linkages in the Midcontinental United States using High-Resolution Lake Sediment Archives
- P 54 Cochran, Zachary - Passive PT-Symmetric Electronics With Memristors
- P 55 Walbridge, George - An efficient synthesis of acetylenic natural product through a biorenewable precursor
- P 56 Huls, Elisabeth - Investigating Climate and Society Linkages in the Mid-Continental United States using High Resolution Lake Sediment Archives
- P 57 Skaggs, Christine - LC-MS/MS Detects Urobilinoids from Feces in Fly Guts
- P 58 Nafiseh, Amira - Improving Interventions Designed for Pediatric Patients Diagnosed with ADHD and Anxiety
- P 59 Hunton, Taylor - Physical and sexual abuse as risk factors for violent crime: Important points of intervention to reduce recidivism
- P 60 Kosary, Kaitlyn - Full Moon and Suicides
- P 61 Kriech, Amber - The Role of School Connectedness in Adolescents' Romantic Relationships and Condom Use Self-efficacy
- P 62 Zervos, Andrew - Neighborhood Context and Adolescent Men's Daily Behaviors
- P 63 Studebaker, Amanda - The relationship between family history of alcohol use and problematic alcohol use in electronic cigarette users: The mechanistic role of positive alcohol expectancies
- P 64 Artis, Jabari - Intrinsic vs Extrinsic Motives for Volunteering: Impact on Corporate Social Responsibility
- P 65 Echegaray, Amanda – LiFT Me-Lift Me – A motivational Application to Support Underrepresented Students in STEM

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# FIRST FLOOR

# Hine Hall



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# SECOND FLOOR

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