### NIH SUMMER RESEARCH PROGRAM

**POSTER DAY - AUGUST 8, 2019**

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NIH SUMMER RESEARCH PROGRAM POSTER DAY 2019

Posters are located in the Outer Lobby, Atrium, Balconies, Lower Level Lobby, and Conference Rooms A/B, C, E1/E2, F and G as indicated above.

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The NIH is dedicated to building a diverse community in its training and employment programs.
Center for Information Technology (CIT)

AM-1 Leya Abraham
Enhancing Genomics Core Facility Project Workflow with LabKey
University of Maryland, College Park (Maryland)
Preceptors: Mr. Michael Steele, Dr. Timothy Myers, Dr. Calvin Johnson

AM-2 Cody Bastian
Automated Process to Generate Patient-specific 3D Printed Prostate Molds for Histological Validation and Guided Fresh Tissue Procurement
University of Maryland, College Park (Maryland)
Preceptors: Mr. Tom Pohida, Mr. Marcial Garmendia-Cedillos, Mrs. Raisa Freidlin, Dr. Baris Turkbey

AM-3 Mariko Gardiner
Design and Implementation of a 3D Printed Tenodesis Type Action Hand Prosthesis
University of Alberta (Non-U.S.)
Preceptors: Mr. Tom Pohida, Mr. Marcial Garmendia, Ms. Hanna Hildenbrand, Ms. Bonnie Hodsdon

AM-4 Ajith Kanuri, Alexandra Patterson
Video Monitoring System for Automated Detection of Pain Related Mice Behaviors
University of Maryland, College Park (Maryland), University of Maryland, College Park (Maryland)
Preceptors: Mr. Ghadi Salem, Mr. Marcial Garmendia, Dr. Jianhua Zhang, Mr. Tom Pohida

AM-5 Howard Malc
Home-cage Monitoring Device for Rodent Learning and Memory Studies
Thomas Jefferson High School for Science and Technology (Virginia)
Preceptors: Mr. Jonathan Krynitsky, Dr. Jianhua Zhang, Dr. William F. Simonds, Mr. Tom Pohida

AM-6 Natasha McMasters
Design of an Analytical Centrifuge Adapter for Generation of 3-Dimensional Chondrocyte Pellet Culture
North Carolina Agricultural and Technical State University (North Carolina)
Preceptors: Mr. Marcial Garmendia-Cedillos, Mr. Tom Pohida, Dr. Peter Schuck, Dr. Julian Lui
AM-7 Wally Niu, Matthew Rosenblatt
Holographic Tracking and Visualization in Augmented Reality Guidance for Prostate Fresh Tissue Procurement
Johns Hopkins University (Maryland), University of Pittsburgh (Pennsylvania)
Preceptors: Dr. Raisa Freidlin, Dr. Peter Choyke, Dr. Baris Turkbey, Mr. Thomas Pohida

AM-8 Brandon Wang
Design of a Video Acquisition System to Assess Mouse Locomotion and Stability upon Functional Disruption of Motor Circuits
University of Wisconsin-Madison (Wisconsin)
Preceptors: Mr. Jonathan Krynitsky, Mr. Randall Pursley, Mr. Thomas Pohida, Dr. Anupama Sathyamurthy

National Human Genome Research Institute (NHGRI)

AM-9 Jeriel Ake
Perceptions and Beliefs about Experimental Treatments for Inherited Metabolic Disorders
Montgomery College (Maryland)
Preceptors: Dr. Dawn Lea, Dr. Laura Koehly

AM-10 Yoseph Boku
The Effect of Genetic Reduction of mTOR expression on G6808G Mouse Embryonic Fibroblasts
Harvard College (Massachusetts)
Preceptors: Dr. Wayne Cabral, Dr. Michael Erdos

AM-11 David Chang
Assessing the Safety of Gene Therapy Vectors: Updates to a Bioinformatics Pipeline
Cornell University (New York)
Preceptors: Ms. Stephanie Smith, Dr. Tyra Wolfsberg, Dr. Charles Venditti

AM-12 Tes Cherian
Location and Communication: Family and Physician Health Discussion
University of Tennessee at Chattanooga (Tennessee)
Preceptors: Ms. Calandra Whitted, Dr. Laura Koehly, Dr. Chris Marcum

AM-13 Claudia Chu
Mapping Impossible: Aligning Long Reads through Centromeres and Satellite Arrays
Georgia Institute of Technology (Georgia)
Preceptors: Dr. Arang Rhie, Dr. Adam Phillippy, Dr. Sergey Koren, Dr. Chirag Jain

AM-14 Stanley Clarke
Sub-populations of Common Myeloid Progenitors Contain Erythroid and Megakaryocytic Precursors
AM-15 Noah Crooks
Analysis of Cardiopulmonary Function in Patients with Gaucher Disease
Vassar College (New York)
Preceptors: Dr. Ellen Sidransky, Dr. Grisel Lopez, Ms. Alta Steward

AM-16 Sofia Dragacevac
Characterization of Novel Mutations in Auto Inflammatory Disease
University College Dublin (Non-U.S.)
Preceptors: Dr. Ivona Aksentijevich, Dr. David Beck

AM-17 Michelle Dwyer
Why is Rover Red? Genetics of Red Coat Color Variation in Domestic Dogs
Virginia Polytechnic Institute and State University (Virginia)
Preceptors: Dr. Heidi Parker, Dr. Elaine Ostrander

AM-18 Serena Fleming
A Systematic Review of the Relationship between Therapeutic Alliance and Patient Outcome in the Medical Setting: Implications for Genetic Counseling
Virginia Polytechnic Institute and State University (Virginia)
Preceptor: Dr. Lori Erby

AM-19 Gwladys Emmane Fotso Chekam
Investigating How the Length of Time in the U.S. Affects Healthcare Satisfaction of Individuals Living with Sickle Cell Disease
Towson University (Maryland)
Preceptors: Ms. Khadijah Abdallah, Dr. Vence Bonham

AM-20 Tesiya Franklin
Short Telomeres in Alveolar Type 2 Cells in Hermansky-Pudlak Syndrome Pulmonary Fibrosis
Virginia Commonwealth University (Virginia)
Preceptors: Dr. Bernadette Gochuico, Dr. Heidi Dorward, Dr. William Gahl, Mr. Chen Han

AM-21 Karen Funderburk
Combinatorial Testing of Epigenetic Biomarkers Carrying Potential for Pan-cancer Screening
Arizona State University (Arizona)
Preceptor: Dr. Laura Elnitski

AM-22 Macred Gbenro Jr
Investigating the Link between Eating Behavior, Genetic Attributions, and Self-efficacy to Inform Dietary Interventions
University Of Maryland School of Public Health (Maryland)
Preceptor: Dr. Susan Persky

**AM-23 Leila Ghaffari**  
*Color My World: Genetics of White-spotting in Domestic Dog Breeds*  
Urbana High School (Maryland)  
Preceptors: Dr. Jacquelyn Evans, Dr. Heidi Parker, Dr. Elaine Ostrander

**AM-24 Charlotte Hagerman**  
*Predictors of Parents’ Pursuit and Avoidance of Obesity Risk Information*  
George Washington University (District of Columbia)  
Preceptors: Dr. Susan Persky, Dr. Rebecca Ferrer

**AM-25 Sarah Hyman**  
*Fulfilling Expectations: The Association of Interpersonal Stressors and Support Satisfaction with Primary Caregivers’ Mental Health*  
Tulane University (Louisiana)  
Preceptors: Ms. Anna Shetler, Dr. Laura Koehly

**AM-26 Thomas Johnstone**  
*Confirming the Molecular Consequences of Non-exonic Variants in Patients Enrolled in the Undiagnosed Diseases Program*  
United States Naval Academy (Maryland)  
Preceptors: Dr. May Christine Malicdan, Dr. William Gahl

**AM-27 Elise Kane**  
*Neonatal Ultrasonic Vocalization and Motor Development Profiles in Mouse Models of Down Syndrome*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Faycal Guedj, Dr. Diana Bianchi, Ms. Sabina Khantsis

**AM-28 Bryan Malonga**  
*Rubinstein Taybi Syndrome in Diverse Populations*  
Howard University College of Medicine (District of Columbia)  
Preceptors: Dr. Paul Kruszka, Dr. Cedrik Ngongang

**AM-29 Melanie Martinez**  
*RNA Sequencing Analysis of Cbfb-MYH11 Knock-In Mice*  
Purdue University (Indiana)  
Preceptors: Dr. Paul Liu, Dr. Kai Yu

**AM-30 Elisa McRae**  
*Analysis of Anakinra Use during Pregnancy*  
Cienega High School (Arizona)
Preceptors: Dr. Amanda Ombrello, Mrs. Patrycja Hoffmann, Dr. Deborah Stone, Mrs. Michele Nehrebecky

**AM-31 Mira Mookerjee**  
*Identifying Structural Variants in a Linkage-identified Region for Subjects with Persistent Stuttering*  
Carnegie Mellon University (Pennsylvania)  
Preceptors: Dr. Zhi Liu, Dr. Nancy Hansen, Dr. Jim Mullikin

**AM-32 Carli Needle**  
*The Role of Metabolic Switching in Zebrafish Caudal Fin Regeneration*  
Vanderbilt University (Tennessee)  
Preceptors: Dr. Jason Sinclair, Dr. Shawn Burgess

**AM-33 Tysha Newman**  
*Obstetric History as a Risk Factor for Attention Deficit Hyperactivity Disorder (ADHD).*  
Bowie State University (Maryland)  
Preceptors: Dr. Philip Shaw, Ms. Wendy Sharp, Ms. Tysha Newman

**AM-34 Daniela Nganjo**  
*Genetic and Chemical Approaches to Understanding Hearing Development and Regeneration*  
Academy of Health Sciences at Prince George's Community College (Maryland)  
Preceptors: Dr. Shawn Burgess, Dr. Wuhong Pei

**AM-35 Kenzhane Pantin**  
*Do BRCA2 mutations Increase Risk for Cancers Other than Breast Cancer, Ovarian Cancer, and Melanoma?*  
University of Illinois at Urbana-Champaign (Illinois)  
Preceptors: Dr. Candace Middlebrooks, Dr. Joan Bailey-Wilson

**AM-36 Fernando Rivera**  
*Skeletal Manifestations in ERT-treated Patients with Neuronopathic Gaucher Disease.*  
Universidad Central del Caribe School of Medicine (Puerto Rico)  
Preceptors: Dr. Ellen Sidransky, Mrs. Emory Ryan, Dr. Grisel Lopez

**AM-37 Niyati Shah**  
*The Role of State Service Utilization on Caregiver Health Outcomes*  
George Washington University (District of Columbia)  
Preceptors: Ms. Anna Shetler, Mr. Aaron Gurayah, Dr. Christopher S. Marcum, Dr. Laura M. Koehly

**AM-38 Lily Smith**  
*Pro-fibrotic Phenotype of Primary Human Hermansky-Pudlak Syndrome Cells*  
University of Wisconsin-Madison (Wisconsin)
Preceptors: Dr. May Malicdan, Dr. Bernadette Gochuico, Dr. William Gahl

AM-39 Cedonia Thomas  
Coping and Resilience: Association between Positive Aspects of Caregiving and Health of Parent-Caregivers  
Tougaloo College (Mississippi)  
Preceptors: Dr. Jasmine Manalel, Dr. Laura Koehly

AM-40 Caroline Tippett  
Homozygous Missense Variant in NR2C2AP Is Possibly Associated with Primary Microcephaly and Cortical Malformations  
Franklin & Marshall College (Pennsylvania)  
Preceptors: Dr. Joshi Stephen, Dr. May Christine Malicdan, Mrs. Jennifer Wang, Dr. John Burke

AM-41 Michal Tyrlik  
Molecular Characterization of beta-galactosidase Deficient Mouse Model of Human GM1 Gangliosidosis  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Ted Han, Mr. Robin Yoon, Dr. Cynthia Tifft, Dr. Cynthia Tifft

AM-42 Kathryn Windsor  
Longitudinal Transcriptome and Protein Characterization of a-Synuclein and Glucocerebrosidase in a Mouse Model of Gaucher Disease  
Paint Branch High School (Maryland)  
Preceptors: Ms. Jenny Do, Dr. Nahid Tayebi, Dr. Ellen Sidransky

AM-43 Angela Wu  
Discovery of Microbial Communities in Metagenomic Data Using Topic Modeling  
Saint Louis University (Missouri)  
Preceptors: Mr. Brian Ondov, Dr. Adam Phillippy

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

AM-44 Noah Absalon  
Effect of Chronic Cannabis Withdrawal on Reward Seeking in Mice  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Andrew Kesner, Dr. David Lovinger

AM-45 Rishitha Anumola  
Real Time in vivo Measurements of Endocannabinoid Signaling during Striatum-dependent Behaviors  
Virginia Commonwealth University (Virginia)  
Preceptors: Dr. Shana Augustin, Dr. David Lovinger
AM-46 Nina Brown  
*Assessment of the Mu-opioid Receptor System through in vivo Peripheral Analyses*  
Howard University (District of Columbia)  
Preceptor: Dr. Sunny Kim

AM-47 Caroline Djakuduel  
*Gene Network of Dopamine Receptor Type 2 (Drd2)*  
Wheaton High School (Maryland)  
Preceptors: Dr. Lucia Guerri, Dr. David Goldman

AM-48 Gari Feria  
*The Interaction between Age and Suggestibility on Adult Alcohol Consumption*  
Wheaton High school (Maryland)  
Preceptors: Dr. Vijay Ramchandani, Ms. Nia Byrd

AM-49 Julia Harris  
*Biobehavioral Characterization of Racial Disparity between Black and White Individuals in Relation to Alcohol Use Disorder*  
American University (District of Columbia)  
Preceptors: Dr. Mehdi Farokhnia, Dr. Lorenzo Leggio

AM-50 Sean Hernandez  
*Projections from the Paraventricular Nucleus of the Thalamus to the Striatum Can Evoke Dopamine Transients through Glutamatergic and Cholinergic Signaling*  
California State University of San Marcos (California)  
Preceptors: Dr. Michael Authement, Dr. Veronica Alvarez

AM-51 Tawnjerae Joe  
*Effects of Alcohol Pre-exposure on Cocaine Locomotor Sensitization*  
Fort Lewis College (Colorado)  
Preceptors: Dr. Daniel da Silva e Silva, Dr. Veronica Alvarez

AM-52 Alana Keller  
*Bottle to Bottle: The Link between Early Life Stress, Alcohol Expectancies, and Alcohol Consumption*  
Hampton University (Virginia)  
Preceptors: Dr. Bethany Stangl, Dr. Vijay Ramchandani

AM-53 Jean Kim  
*Differential Expression of Cytochrome P450-2E1 (CYP2E1) and Other P450 Isoforms in the Small Intestine and Liver of Alcohol- or Fructose-Exposed Rodents*  
University of Chicago (Illinois)  
Preceptors: Dr. Byoung-Joon Song, Dr. Sang Su Woo
AM-54 Riley Paulsen
Alterations in Striatal Dopamine Levels Correlated with Sleep Disturbances during Cannabis Withdrawal
University of South Dakota (South Dakota)
Preceptors: Dr. Yolanda Mateo, Dr. Andrew Kesner, Mr. Lucas Voyvodic, Dr. David Lovinger

AM-55 Sarthak Shah
Optimization of Radiotracer Production and Biological Application for Positron Emission Tomography in Brain Addiction
Ohio State University (Ohio)
Preceptors: Mrs. Wenjing Zhao, Mr. Joseph Ramsey, Dr. Sunny Kim, Dr. Nora Volkow

AM-56 Belal Yasin
Preclinical Evaluation of Functionally Distinctive Adenosine A1 Radiotracers Using PET.
Howard University (District of Columbia)
Preceptor: Dr. Sunny Kim

AM-57 Mei Xing Zuo
Exploring Cell Specific Expression of Cannabinoid CB1R and iNOS in Pulmonary Fibrosis Development Using an Animal Model of Hermansky-Pudlak Syndrome Pulmonary Fibrosis
Winston Churchill High School (Maryland)
Preceptors: Ms. Jasmina Abdalla, Mr. Charles Zawatsky, Dr. George Kunos, Dr. Resat Cinar

National Institute on Allergy and Infectious Diseases (NIAID)

AM-58 Angelika Alberstadt
Mutation or Variation? Functional Assessment of Patient Variants in IRF2BP2
St. John's College (Maryland)
Preceptors: Ms. Amy Hsu, Dr. Steven Holland

AM-59 Daniel Antonelli
Development of an Assay to Determine Presence of a Proprietary Molecule in Process Development
University of Alabama (Alabama)
Preceptor: Mr. Michael Pratt

AM-60 Larissa Ault
In vitro Affinity Maturation of Broadly Neutralizing HIV Antibody CAP256-VRC26.25
University of Hawaii at Manoa (Hawaii)
Preceptors: Dr. John Misasi, Dr. Nicole Doria-Rose, Dr. John Mascola
AM-61 Shenavia Balcom-Luker
*Biologically Active Molecules as Immune Modulators in Beta-glucan Trained Human Macrophage Cells*
Texas Woman's University (Texas)
Preceptor: Dr. Sinu John

AM-62 Hulaimatou Bayo
*Assessing the Impact of HSCT on Cytokine Levels in CGD vs. Non-CGD Mice*
James Hubert Blake High School (Maryland)
Preceptors: Ms. Caroline Kreitzer, Dr. Elizabeth Kang, Dr. Harry Malech

AM-63 Daniella Bloch
*Inborn Errors in Proteoglycan Synthesis Impair gp130 Signaling to Promote Allergic Phenotypes in Humans*
University of Maryland, College Park (Maryland)
Preceptors: Ms. Sarah Blackstone, Dr. Jonathan Lyons, Dr. Michael O'Connell, Dr. Joshua Milner

AM-64 Nicholas Breehl
*Pichia Expression of a pfs230D1 Fusion for Evaluation as a Part of a Two-component Self-assembling Nanopartical Vaccine*
Hood College (Maryland)
Preceptor: Dr. Nicholas MacDonald

AM-65 Terance Camacho
*Immunophenotyping Markers in Blood and Cerebrospinal Fluid of Multiple Sclerosis Patients*
University of Guam (Guam)
Preceptors: Mr. Paavali Hannikainen, Dr. Bibiana Bielekova

AM-66 Jamie Carmichael
*Characterizing Secreted IgM and IgG3 Bound to B Cells of HIV-infected Individuals*
Watkins Mill High School (Maryland)
Preceptors: Mr. Krittin Trihemasava, Dr. Susan Moir

AM-67 Cecelia Castleberry
*Effect of Preventive Coartem® Treatment on Malaria Exposures in a Cohort of Malian Children*
University of North Dakota (North Dakota)
Preceptor: Dr. Jennifer Kwan

AM-68 Amanda Chan
*Monoclonal Antibody Binding to SIV gp120 Envelope Proteins Reveals Biochemical Properties and Antigenic Features*
University of California, Los Angeles (California)
Preceptors: Dr. James Arthos, Ms. Sinmanus Vimonpatranon, Ms. Nathalie Chen
AM-69 Anna Chen
A Molecular Characterization of the Interaction between the CD4 Receptor and Integrin alpha4beta7 on alpha4beta7high CD4+ T cells
Richard Montgomery High School (Maryland)
Preceptor: Dr. James Arthos

AM-70 Lucy Chen
Purification, Characterization, and Structural Study of the HCMV Envelope Trimer
Winston Churchill High School (Maryland)
Preceptors: Dr. Peter Kwong, Dr. Tongqing Zhou

AM-71 Steven Chen
Design and optimization of Nanoparticle Carrier Vaccines Targeting the Fusion Peptide of HIV-1
Swarthmore College (Pennsylvania)
Preceptors: Dr. Li Ou, Dr. Peter Kwong

AM-72 Holly Coleman
Integration of Proteomics and Metabolomics for the Identification of Severe Malaria Biomarkers
Missouri University of Science and Technology (Missouri)
Preceptors: Dr. Patricia Gonzales, Dr. Michal Fried

AM-73 Kimia Dasteh Goli
The Expression and Purification of Cas9 from CRISPR/Cas9 Gene Editing System
University of Illinois at Chicago (Illinois)
Preceptors: Mr. Matthew Spencer, Dr. David Garboczi

AM-74 David Dean
Characterization of Plasmodium falciparum Translation-enhancing Factor
University of South Florida, Morsani College of Medicine (Florida)
Preceptors: Dr. Patrick Duffy, Dr. Bethany Jenkins

AM-75 Trisha Deshmukh
Transfection Platforms and Stability for Vaccine Reagent Production
Virginia Polytechnic Institute and State University (Virginia)
Preceptors: Dr. Abasha Williams, Ms. Elle Millender, Dr. Elizabeth Scheideman, Mr. Daniel Schankel

AM-76 Nelson Diaz
Identifying Host Proteins Interacting with Tg ROP38 to Affect Immune Signaling in Toxoplasma Infected cells
Don Bosco Cristo Rey High School (Maryland)
Preceptors: Mr. Nelson Diaz, Dr. Beth Gregg, Mrs. Olivia Yanes, Dr. Michael E. Grigg
AM-77 Emma Duge  
*Generation of Reporter Genes in Leishmania tropica*  
Colgate University (New York)  
Preceptors: Dr. David Sacks, Dr. Isabelle Louradour, Dr. Tiago Rodrigues Ferreira

AM-78 Sarah Gao  
*CXCL9-binding Peptides for PET Imaging*  
Princeton University (New Jersey)  
Preceptors: Dr. Hongwei Zhang, Dr. Joshua Farber

AM-79 Arindam Ghosh  
*The Conformation of an Epitope in CD4 Domain 2 Is Altered by HIV gp120 Binding to CD4 Domain 1*  
Duke University (North Carolina)  
Preceptors: Dr. James Arthos, Ms. Nathalie Chen

AM-80 Talya Gordon  
*Quality Control for Development of Antigen Specific B cell Analysis via Flow Cytometry for HIV Clinical Trials*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Adrian McDermott, Dr. David Leggat, Dr. Sandeep Narpala

AM-81 Edlawit Gorfu  
*Evaluation of bDEF1 Regulation in Intestinal Epithelial Cells of SIV-Infected Macaques*  
Montgomery Blair High School (Maryland)  
Preceptors: Mr. Jacob Flynn, Dr. Jason Brenchley, Dr. Alexandra Ortiz

AM-82 Bezawit Hailu  
*The Role of GPR35 Nonsense Mutation in Susceptibility of Previously-healthy People to Cryptococcal Meningoencephalitis*  
Montgomery College (Maryland)  
Preceptors: Dr. Jessica Hargarten, Dr. Peter Williamson

AM-83 Mohamed Hamideh  
*Analyzing the Role of Antigen Affinity in Differentiation of Memory B Cell to Plasma Cell*  
East Los Angeles College (California)  
Preceptors: Dr. Abhijit Ambegaonkar, Dr. Susan Pierce

AM-84 Olivia Isabella Hansen  
*Interleukin-7 Potently Induces the Release of Anti-HIV Chemokines in Human Peripheral Blood Mononuclear Cells*  
Georgetown University (District of Columbia)  
Preceptors: Dr. Paolo Lusso, Dr. Hana Schmeisser
AM-85 Dorottya Harangi
*The Function of CD151 in Response to Cryptococcus Infection*
University of Toronto (Non-U.S.)
Preceptor: Dr. Nannan Zhang

AM-86 Christian Hernandez
*Identification and Characterization of Retnla+ Colon Macrophages/Dendritic Cells*
Princeton University (New Jersey)
Preceptors: Dr. Brian Kelsall, Dr. Philip Murphy, Dr. Byunghyun Kang

AM-87 Tran Hoang
*Exploring the Mechanisms of Intracellular Gram-negative Bacteria Recognition*
Pacific Lutheran University (Washington)
Preceptors: Dr. Orna Rabinovich Ernst, Dr. Iain Fraser, Dr. Sharat Jacob Vayttaden

AM-88 Dylan Kim
*Characterizing Ccr1L1, an Orphan Mouse Chemokine Receptor*
Princeton University (New Jersey)
Preceptors: Dr. Philip Murphy, Ms. Jaclyn Kline

AM-89 Judah Levy
*Immunoglobulin Allele Detection in Underresearched Populations*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Daniel Douek

AM-90 Jonathan Li
*SeqSorter: A Desktop Application to Summarize Barcode Sequences of NGS Data*
Thomas S. Wootton High School (Maryland)
Preceptors: Mr. Da Wei Huang, Ms. Esther Asaki

AM-91 Xinwei Li
*Structural Characterization of Norovirus VLPs and Interaction with Neutralizing Antibodies*
Georgetown University (District of Columbia)
Preceptor: Dr. Raffaello Verardi

AM-92 Ben Liu
*Synthesis of Pfs230-DT as a Malarial Transmission Blocking Vaccine*
University of Virginia (Virginia)
Preceptors: Mrs. Beth Chen, Dr. Puthupparampil Scaria, Dr. Patrick Duffy

AM-93 Ayelet Makovoz
*The Role of Trabecular Bone Scores and Bone Turnover Markers in the Assessment of Fracture Risk in Patients with Systemic Mastocytosis*
Charter Oak State College (Connecticut)
Preceptor: Dr. Hirsch Komarow

AM-94 Maxwell Marshall
Evaluation of DNA Damage Response in Hepatitis Delta Transfected Cells
Denison University (Ohio)
Preceptors: Dr. Anna Pomerenke, Dr. Patrizia Farci

AM-95 Lindsay Martin
Fitness of D7 Salivary Knockout Aedes aegypti Mosquitoes
University of Central Florida (Florida)
Preceptors: Dr. Ines Martin-Martin, Dr. Eric Calvo

AM-96 Teagan McCarthy
Comparative Genomic Analysis of 149 M. tuberculosis Isolates: A Look beyond SNPs into Large Sequence Polymorphisms
Saint Joseph’s University (Pennsylvania)
Preceptors: Dr. Mariam Quinones, Dr. Marybeth Daucher

AM-97 Dhalia Metenou
Immune Modulation by Brugia malayi Microfilaria-derived Extracellular Vesicles
George Mason University (Virginia)
Preceptors: Dr. Alessandra Ricciardi, Dr. Thomas Nutman

AM-98 Matthew Moser
Systemic Regulation of Growth Factor Proteins in Human Filarial Infection
University of California, Santa Cruz (California)
Preceptors: Dr. Thomas Nutman, Dr. Pedro Gazzinelli-Guimaraes

AM-99 Neelesh Mupparapu
Studying Clag3 Trafficking in P. falciparum
University of Maryland, College Park (Maryland)
Preceptors: Dr. Sanjay Desai, Dr. Jinfeng Shao

AM-100 Lydia Narum
Growth Characteristics of African Thicket Rats from Birth to Day 28
Salisbury University (Maryland)
Preceptors: Ms. Lynn Lambert, Dr. Patrick Duffy

AM-101 Emmanuela Otunuga
Characterizing the Metabolic Output of T Cells Using Seahorse Flux Analyzer
University of Maryland, Baltimore County (Maryland)
Preceptor: Dr. Billur Akkaya
AM-102 Rachel Pang  
*Lineage-Based Design of Influenza Immunogens for Elicitation of the HV6-1 Class of Broadly Neutralizing Antibodies*  
Northwest High School (Maryland)  
Preceptors: Dr. Crystal Cheung, Dr. Tongqing Zhou, Dr. Peter Kwong

AM-103 Nashae Prout  
*Contrasting Roles for Type 1 Interferon Signaling in Two Models of Intracellular Bacterial Infection*  
Morgan State University (Maryland)  
Preceptors: Dr. Michael Dorrington, Dr. Sinu John, Dr. Iain Fraser

AM-104 Rachel Prucnal  
*Detection of Products of Excipient Degradation in Vaccine Formulation Buffers*  
University of Maryland, College Park (Maryland)  
Preceptors: Mr. Aakash Patel, Dr. William Shadrick, Dr. Jonathan Cooper

AM-105 Ujwal Punyamurtula  
*Shotgun Proteomics of Germ-free and Conventionalized Mice on Western and Normal Diets*  
Brown University (Rhode Island)  
Preceptors: Dr. Nathan Manes, Dr. Aleksandra Nita-Lazar

AM-106 Easha Qasba  
*The Impact of Dietary Iron Restriction on Hepatic Hepcidin Expression in Sickle Cell Mice*  
College of William and Mary (Virginia)  
Preceptors: Dr. Hans Ackerman, Dr. Steven Brooks, Mr. Majed Almashjary, Dr. Xianke Zeng

AM-107 Erin Reilly  
*Determining Potency of Therapeutic Monoclonal Antibody Charge Isoforms*  
University of Maryland, College Park (Maryland)  
Preceptors: Mr. Aakash Patel, Dr. William Shadrick, Dr. Jonathan Cooper

AM-108 Kyle Searles  
*Establishing a Diffusion Gradient in a Micro-chamber to Study Chemotaxis*  
University of Texas at Dallas (Texas)  
Preceptors: Dr. Javier Manzella-Lapeira, Dr. Joseph Brzostowski, Dr. Nicole Morgan, Dr. Robert Lutz

AM-109 Janis Shin  
*HIV Fusion Peptide Immunogen Design Using Virus-like Particles*  
University of Washington (Washington)  
Preceptors: Dr. Rui Kong, Dr. John Mascola
AM-110 Niharika Shukla
Cross-reactivity of a PvDBP-specific Monoclonal Antibody with a P. falciparum Placental-Malaria Antigen
Vassar College (New York)
Preceptors: Dr. Rui Ma, Ms. Nichole Salinas, Dr. Niraj Tolia

AM-111 Deven Singh
Ocular Findings of Cryptococcal Meningitis in Previously Healthy Patients
Rutgers University (New Jersey)
Preceptors: Dr. Seher Anjum, Dr. Chinwenwa Okeagu, Ms. Terri Scott, Dr. Peter Williamson

AM-112 Julia Smolen
Confirming the Platform Purification Process of HIV-1 Trimeric Envelope Protein Vaccine Candidates: Stage 1 Design Space Parameter Exploration
University of Maryland, College Park (Maryland)
Preceptors: Ms. Nicole Cibelli, Dr. Krishana Gulla, Dr. Daniel Gowetski

AM-113 Zachary Stotz
Structural Engineering of KRAS G12V-Specific T-cell Receptors
University of California, Los Angeles (California)
Preceptors: Dr. Malcolm Sim, Dr. Peter Sun

AM-114 Julia Szepieniec
Expression of Full Length VAR2CSA in an Episomal System
Upper Iowa University (Iowa)
Preceptors: Dr. Jonathan Renn, Dr. Patrick Duffy

AM-115 Jessica Tiako
Autoantibody Screening in Neurocysticercosis Patients
Prince George's Community College (Maryland)
Preceptors: Dr. Elise O'Connell, Dr. Thomas Nutman, Mr. Joshua Sciurba

AM-116 Christina Toumanios
Producing SHIV Virus-like Particles to Study Antibody-Virion Immune Complexes in Non-human Primates
Colgate University (New York)
Preceptors: Dr. Mark Connors, Dr. Daniel Rogan

AM-117 Trisha Tucholski
NativePAGE-MS Mediated Characterization of the ASK Signalosome in LPS-stimulated Macrophages
University of Wisconsin-Madison (Wisconsin)
Preceptors: Dr. Casey Daniels, Dr. Aleksandra Nita-Lazar
AM-118 John Vaile  
*Computationally Designed Nanoparticle Displaying Influenza HA Elicits Broad Heterosubtypic Immunity to Influenza Virus*  
University of Delaware (Delaware)  
Preceptors: Dr. Seyhan Boyoglu-Barnum, Dr. Masaru Kanekiyo, Dr. Barney Graham

AM-119 Sara Verschleisser  
*Contribution of Engineered Disulfide Bonds to MHC-I Molecule Stability*  
Yeshiva University Stern College for Women (New York)  
Preceptors: Ms. Boyd Lisa, Dr. Kannan Natarajan, Dr. Jiansheng Jiang, Dr. David Margulies

AM-120 Anne Werner  
*Immunogenicity of MERS S2 Protein in Mice*  
Cornell University College of Agriculture and Life Science (New York)  
Preceptors: Dr. Kizzmekia Corbett, Dr. Barney Graham

AM-121 Christina Yap  
*Influenza Hemagglutinin-stem Displayed on Self-assembling Nanoparticles Induces Heterosubtypic Immune Response*  
University of California, Davis (California)  
Preceptors: Dr. Barney Graham, Dr. Syed Moin

AM-122 Jessie Yung  
*Characterization of FP-Bacteriophage VLP Immunogens*  
Richard Montgomery High School (Maryland)  
Preceptors: Dr. Yongping Yang, Dr. Peter Kwong

AM-123 Sarah Zalar  
*Seroprevalence of Emerging GII.17 Norovirus Strains*  
University of Illinois at Urbana-Champaign (Illinois)  
Preceptors: Dr. Kim Green, Dr. Stanislav Sosnovtsev, Ms. Jessica Van Loben Sels

National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)

AM-124 Rutha Adhanom  
*Long Term Follow-up and Outcomes of Subjects with IgE and IgG Autoantibodies in Systemic Lupus Erythematosus*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Sarfaraz Hasni, Dr. Sarthak Gupta, Mr. Zerai Manna, Dr. Mariana Kaplan

AM-125 Hugh Alessi
High-throughput Screening in Primary Immune Cells  
Colorado College (Colorado)  
Preceptors: Dr. Luis Franco, Dr. Jing Sun, Ms. Manasi Gadkari

AM-126 Ashley Bushey  
*Differential B Cell Activation and Interferon Responses in Systemic Lupus Erythematosus*  
Temple University (Pennsylvania)  
Preceptors: Dr. Mariana Kaplan, Mr. Xinghao Wang

AM-127 Marlee Dinterman  
*Genome Editing Experiments to Investigate the Functional Interactions between Transcription Factors*  
West Virginia University (West Virginia)  
Preceptors: Dr. Andrea Conte, Dr. Supriya Vartak, Dr. Rafael Casellas

AM-128 Rajee Ganesan  
*Novel Serum-based Proteomic Analysis in Juvenile Dermatomyositis (JDM)*  
University of California, San Diego (California)  
Preceptors: Dr. Hanna Kim, Dr. Lisa Rider

AM-129 Uzma Hussain  
*Deciphering the Role of TGFbeta3 Variants in Scleroderma Pathogenesis*  
Howard University College of Medicine (District of Columbia)  
Preceptor: Dr. Pravitt Gourh

AM-130 Amal Hutchinson  
*Matk Function in the Brain*  
Howard University (District of Columbia)  
Preceptors: Dr. John O'Shea, Dr. Rachael Philips

AM-131 Christopher Jones  
*The Effect of MYD88 S209R on Cell Death.*  
University of Illinois Urbana-Champaign (Illinois)  
Preceptors: Dr. Keith Sikora, Ms. Sufia Bakshi

AM-132 Tyler Kellenberger  
*Understanding the Anticancer Mechanism of Disulfiram, Copper, and Etoposide in Merkel Cell Carcinoma*  
University of Florida (Florida)  
Preceptors: Dr. Isaac Brownell, Dr. Natasha Hill

AM-133 Viridiana Murillo
Predicting the Immune Cell Types Encoded in a Genome by Searching for Orthologs of Known Cell Type Markers
Keck Graduate Institute (California)
Preceptors: Dr. John O'Shea, Dr. Fred Davis

AM-134 Manolya Osman
Using Three-Dimensional (3D) Imaging as a Quantitative Analysis of Cutaneous Neurofibromas for Future Clinical Trials
University of Maryland, College Park (Maryland)
Preceptors: Dr. Dominique Pichard, Dr. Edward Cowen

AM-135 Lowrey Peyton
Single Cell Analysis of Adult Mouse Skeletal Muscle Stem Cells in Homeostatic and Regenerative Conditions
Virginia Polytechnic Institute and State University (Virginia)
Preceptors: Dr. Vittorio Sartorelli, Dr. Hong-Wei Sun, Dr. Kyung Dae Ko, Dr. Stephen Brooks

AM-136 Leah Schachter
Tagging Mitochondrial RNA Binding Proteins to Study Post-transcriptional Gene Regulation
Touro College (New York)
Preceptors: Dr. James Marks, Dr. Markus Hafner

AM-137 Anne Schauer
Optimization of an Assay to Assess Phosphorylation of STAT4 in Human Peripheral Blood Mononuclear Cells
Montgomery College (Maryland)
Preceptors: Ms. Christine Liu, Dr. Massimo Gadina, Dr. Laura Vian

National Institute of Biomedical Imaging and Bioengineering (NIBIB)

AM-138 Kathleen Burkhard
Optimization and Analysis of Recovered Cells from 3D Cancer Cultures with Micropillar Oxygen Delivery
Rensselaer Polytechnic Institute (New York)
Preceptors: Dr. Nicole Morgan, Dr. Michael Gottesman

AM-139 Britney Forsyth
Motion and Eddy Current Correction of Diffusion MRI Data with Python
Pennsylvania State University (Pennsylvania)
Preceptors: Dr. Okan Irfanoglu, Ms. Anh Thai, Dr. Carlo Pierpaoli

AM-140 Ishan Kalburge
Using Atomic Force Microscopy to Study Collagen Assembly toward Extracellular Matrix
Wilbert Tucker Woodson High School (Virginia)
Preceptors: Dr. Albert Jin, Dr. Andrew Doyle

AM-141 William Pace
Development of an Intraarticular Fracture Model for Studying the Progression of Post-traumatic Osteoarthritis in a Rat
Vanderbilt University (Tennessee)
Preceptors: Dr. Stephen Goldman, Dr. Christopher Dearth

AM-142 Kristofor Pas
Challenges in Establishing Pathological-Radiological Correlations in the Traumatically Injured Brain
University of Texas at Arlington (Texas)
Preceptors: Dr. Peter Basser, Dr. Dan Benjamini

AM-143 Melissa Requist
Trunk-Pelvis Coordination following Osseointegration in Service Members with Transfemoral Limb Loss
University of Arizona (Arizona)
Preceptor: Dr. Bradford Hendershot

AM-144 Abel Ressom
Mesoporous Metal-Organic Frameworks Serve as Nanocarriers: Controlled Drug Release for Chemotherapy
Hayfield Secondary School (Virginia)
Preceptors: Dr. Yuan Liu, Dr. Xiaoyuan (Shawn) Chen

AM-145 Matthew Rosenblatt, Wally Niu
Motion Tracking Optimization for Augmented Reality Guidance to Assist Prostate Fresh Tissue Procurement
University of Pittsburgh (Pennsylvania), Johns Hopkins University (Maryland)
Preceptors: Dr. Raisa Freidlin, Dr. Peter Choyke, Dr. Baris Turkbey, Mr. Tom Pohida

AM-146 Catherine Sano
Chemical Synthesis of Folic Acid Isomers for Molecular Imaging Applications
Langley High School (Virginia)
Preceptor: Dr. Dale Kiesewetter

AM-147 Sophia Wu
Comparing the Properties of Microtubules Treated with Taxol and Peloroside Using BioAFM
Walter Johnson High School (Maryland)
Preceptors: Dr. Albert Jin, Dr. Dan Sackett
National Institute of Diabetes and Digestive and Kidney Disorders (NIDDK)

AM-148 Sarah Adams
*Multi-center Optimization and Validation of Human Whole-room Calorimeters*
University of Toledo (Ohio)
Preceptors: Dr. Kong Chen, Dr. Robert Brychta

AM-149 Cameron Allen
*Genome Editing and Antibiotic Cell Pool Selection*
College of Southern Maryland (Maryland)
Preceptors: Dr. Astrid Haase, Ms. Celine Marlin Andrews

AM-150 Ahimsa Aradhya
*Evaluating Uric Acid Levels in Plasma and Urine as a Biomarker in Patients with Insulin Sensitivity*
Johns Hopkins University (Maryland)
Preceptors: Dr. Ranganath Muniyappa, Dr. Mary Walter

AM-151 Trevor Atkeson
*Transcriptional Repressor ETO2 Is Required for Globin Gene Regulation and Hemoglobin Switch during Development*
University of Virginia (Virginia)
Preceptors: Dr. Ann Dean, Dr. Xiang Guo

AM-152 Alice Babin
*Biomarker Characterization of Calcitonin and Carcinoembryonic Antigen Doubling Times as Prognostic Factors in MEN2B Patients Treated with Tyrosine Kinase Inhibitors*
California Polytechnic State University, San Luis Obispo (California)
Preceptors: Dr. Joanna Klubo-Gwiezdzinska, Dr. Cristiane Gomes-Lima

AM-153 Seung-Ho Bae
*Similarities in Dynamical Systems of Human Brain Resting States Inferred from Human Connectome Project MEG Data*
Johns Hopkins University (Maryland)
Preceptor: Dr. Vipul Periwal

AM-154 Leilah Nicole Baumgarten
*Sexual Dimorphism of Coronary Artery Disease in a Low- and Intermediate-risk Asymptomatic Population: Association with Coronary Vessel Wall Thickness at MRI in Women*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Ahmed M. Gharib, Dr. Jatin Raj Matta

AM-155 Gustavo Bruno
Functional Analysis of a CYB5A 5’-UTR Variant That Associates with Obesity in American Indians from Arizona
Dominican University (Illinois)
Preceptors: Dr. Samantha Day, Dr. Michael Traurig, Dr. Leslie Baier

AM-156 Viktoria Catalan
Beta-Arrestin-1 Plays a Key Role in the Maintenance of Pancreatic Beta Cells under Glucolipotoxic Conditions
Cornell University (New York)
Preceptors: Dr. Luiz Barella, Dr. Jurgen Wess

AM-157 Kavisha Chandrawarakkalage
The Role of OGT-1 Activity in C. elegans Male Fertility
University of Maryland, College Park (Maryland)
Preceptors: Mr. Dan Konzman, Dr. John Hanover

AM-158 Rohit Chari
Developing a Mouse Model for Rhabdomyolysis/AKI Using Mouse Myoglobin
University of Maryland, College Park (Maryland)
Preceptors: Dr. Jonathan Street, Dr. Peter Yuen, Dr. Robert Star

AM-159 Christine Chukwuocha
Identification of Cell Types Expressing Type 2 Deiodinase, a Thyroid Hormone Activating Enzyme, in Mouse Brain Utilizing Dio2-Cre Reporter Gene System
University of Minnesota Rochester (Minnesota)
Preceptors: Dr. Douglas Forrest, Dr. Lily ng, Dr. Ye Lui

AM-160 Andrew DePass
Translation of the 3’ Untranslated Regions of mRNAs in RNase L Mediated Viral Response
Quinnipiac University (Connecticut)
Preceptors: Dr. Agnes Karasik, Dr. Nicholas Guydosh

AM-161 Jessica Diarra
The Role of a Ceramide-sensitive Phosphatase in Regulating Ceramide Homeostasis in Yeast
University of Toronto (Non-U.S.)
Preceptors: Dr. William Prinz, Dr. Alexandre Toulmay

AM-162 Chiamaka Ekwunazu
Metabolic Regulation by Estrogen and Brain Erythropoietin during Diet-induced Obesity in Mice
Howard University College of Medicine (District of Columbia)
Preceptors: Dr. Soumyadeep Dey, Dr. Connie Noguchi

AM-163 Rob Esterquest
Differentiating MEN1 Phenotypes: Gene-negative vs. Gene-positive
Rush University Medical School (Illinois)
Preceptors: Dr. Jenny Blau, Mr. James Welch

AM-164 Trevor Fachko
Towards Structural Elucidations of PKR-activating UTRs from Human IFNgamma and TNFalpha Genes
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Charles Bou-Nader, Dr. Jinwei Zhang

AM-165 Syeda Fatima
The Effect of Different Oxygen Tensions on Oxidative Stress and Lipid Accumulation in HepG2 Cells
Northern Virginia Community College (Virginia)
Preceptors: Dr. Maren Podszun, Dr. Yaron Rotman

AM-166 Ellen Freebern
Simulations to Inform the Design of an NIH Repository Study on the Association between Insulin Resistance and Lipoproteins in Diverse Hispanic Populations
University of Maryland, College Park (Maryland)
Preceptors: Dr. Sungyoung Auh, Dr. Kenneth Wilkins, Dr. Elizabeth Wright

AM-167 Jordan Galbraith
Changes in Energy Expenditure following Fish, Meat, and Soda Intake in a 12-week Inpatient Study
Vanderbilt University (Tennessee)
Preceptors: Dr. Susanne Votruba, Dr. Marci Gluck, Dr. Jonathan Krakoff

AM-168 Michael Gan
Mice with Melanocortin Receptor 4 (MC4R) Site Mutation F51L Develop Severe Obesity Independent of Gsa/cAMP Signaling
Richard Montgomery High School (Maryland)
Preceptors: Mr. Peter Metzger, Dr. Min Chen, Dr. Lee Weinstein

AM-169 Jessica Ghobrial
Crosstalk between Erythropoietin and Estrogen in 3t3l1 Cells
Duquesne University (Pennsylvania)
Preceptors: Dr. Jeeyoung Lee, Dr. Constance Noguchi

AM-170 Mayte Gonzalez
The Development of an LC-MS Method for Analysis of Stevia in Urine and Human Plasma
Schreiner University (Texas)
Preceptors: Dr. Peter J. Walter, Dr. Hongyi Cai

AM-171 Ruth Hailemeskel
Structural Characterization of the Essential Components of the TOM Complex Using Electron Microscopy
Mount Vernon High School (Virginia)
Preceptors: Ms. Ashley Pitt, Dr. Susan Buchanan

AM-172 Jonathan Harrison
Determining the Structure and Interactions of O-GlcNAc Transferase and O-GlcNAcase Isoforms in vitro
Catholic University of America (District of Columbia)
Preceptors: Dr. Agata Steenackers, Dr. Lara Abramowitz, Dr. John Hanover

AM-173 Clio Hockens
Validating an in vitro Polycystic Kidney Disease Model
Pasadena City College (California)
Preceptors: Dr. Gregory Germino, Dr. Luis Menezes, Dr. Takeshi Terabayashi

AM-174 Jennifer Hudson
Gastrointestinal Symptoms in Youth Taking Standard-release and Extended-release Metformin
Northern Arizona University (Arizona)
Preceptors: Dr. Stephanie Chung, Dr. Abby Meyers

AM-175 Hi'ilei Ishii-Chaves
Dyslipidemia in Type 2 Diabetes vs. Type 1 Diabetes in Youth
Chaminade University of Honolulu (Hawaii)
Preceptors: Dr. Stephanie Chung, Ms. Celeste Cravalho

AM-176 Kendra Jeans
Peptide Nucleic Acid Coated Gold Nanoparticles for Use in Nucleic Acid-based Microfluidic Diagnostics
Colgate University (New York)
Preceptors: Dr. Kaylyn Oshaben, Dr. Daniel Appella

AM-177 Dartanyon Jones
Identification of Genetic Variants Contributing to Nighttime Eating Behavior in American Indians
Howard University (District of Columbia)
Preceptors: Dr. Cigdem Koroglu, Mr. Darin Mahkee, Dr. Leslie Baier

AM-178 Suhail Kaleem
Regulation of Hepatic Differentiation of Human Pluripotent Stem Cells by Compounds Targeting Specific Cellular Pathways
Geisinger Commonwealth School of Medicine (Pennsylvania)
Preceptors: Dr. Seung Bum Park, Dr. Jake Liang

AM-179 Benjamin Kennard
TSH Receptor-mediated Inhibition of Cell Proliferation by Small Molecule Ligands in Preosteoblast-like U2OS Cells
Bill Gatton College of Pharmacy (Tennessee)
Preceptors: Dr. Alisa Boutin, Dr. Marvin Gershengorn, Dr. Susanne Neumann

AM-180 Osamah Khan
Transcriptional Regulation of Pituitary Genes by Thyroid Hormone Receptor Beta
Virginia Commonwealth University School of Medicine (Virginia)
Preceptors: Dr. Young-Wook Cho, Dr. Douglas Forrest

AM-181 Carol Kong
Nitrite and Nitric Oxide Generation in Bacteria from the Eye Microbiota
American University (District of Columbia)
Preceptor: Dr. Alan Schechter

AM-182 Anivarya Kumar
Prevalence of Non-alcoholic Fatty Liver Disease (NAFLD) in an Urban Pediatric Population
Vanderbilt University (Tennessee)
Preceptors: Dr. Madhumita Sinha, Dr. Shailesh Khetarpal, Dr. William Knowler

AM-183 Ankith Laichetty
Using Vancomycin Resistant Bacteria to Discover Antibiotics
University of Virginia (Virginia)
Preceptors: Dr. Carole Bewley, Dr. Hongbing Liu, Dr. Shannon Ohlemacher, Dr. Jiadong Sun

AM-184 Long Lam
Understanding Function(s) of Fes1 of Candida glabrata
Montgomery Blair High School (Maryland)
Preceptors: Dr. Shailesh Kumar, Dr. Daniel Masison

AM-185 Bowoo Lee
Generating Humanized HSD17B13 Mice Through Adeno-associated Viral Gene Transfer
University of California, Berkeley (California)
Preceptors: Dr. Yanling Ma, Dr. Yaron Rotman

AM-186 Matthew Martin
Opa1 Dimerizes through an N-Terminal Coiled-Coil Domain, Independent of the Nucleotide State
University of Maryland, College Park (Maryland)
Preceptors: Dr. Andrew Kehr, Ms. Abby Stanton, Ms. Lieza Chan, Dr. Jenny Hinshaw

AM-187 Cai McCann
Dissecting the Mechanisms of Repeat Expansion and Chromosome Fragility in the Fragile X-Related Disorders
University of Vermont (Vermont)
Preceptors: Dr. Carson Miller, Dr. Bruce Hayward, Dr. Rachel Lokanga, Dr. Karen Usdin

AM-188 Esther Meisler
*Endogenous Tagging of PIWI Using CRISPR / CAS Genome Editing*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Astrid Haase, Ms. Celine Marlin Andrews

AM-189 Val Meleshkevich
*Understanding ER/NE Membrane Dynamics in the C. elegans 1-cell Embryo*
College of William and Mary (Virginia)
Preceptors: Dr. Richa Maheshwari, Dr. Mohammad Rahman, Dr. Orna Cohen-Fix

AM-190 Nicholas Munyan
*Development of a New LC-MS/MS Assay For Dehydroascorbic Acid in Human Plasma*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Pierre-Christian Violet, Dr. Mark Levine

AM-191 Yashira Ortega-Sustache
*Hypercoagulable Events Patients with MEN1: Data from NIDDK Database*
School of Nursing at Medical Science Campus (Puerto Rico)
Preceptor: Dr. Jenny Blau

AM-192 Hannah Ortiz, David Wu
*ISWI Chromatin Remodeling Complex Is Essential for Adipogenesis*
Schreiner University (Texas), Walter Johnson High School (Maryland)
Preceptors: Mr. Nhien Tran, Dr. Younghoon Jang, Dr. Young-Kwon Park, Dr. Kai Ge

AM-193 Alexandra T. Patterson
*Synthesis of Selective P2Y14 Receptor Antagonists*
University of South Carolina (South Carolina)
Preceptors: Dr. Zhiwei Wen, Dr. Kenneth Jacobson

AM-194 Oscar Ramos
*Developing Yeast as a Model System to Study Human Hsp90 Function*
Arizona State University (Arizona)
Preceptors: Dr. Mike Reidy, Dr. Daniel Masison

AM-195 Ankita Sahoo
*Role of Neuronal and Glial Adenosine 1 Receptor in Adenosine-induced Hypothermia*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Oksana Gavrilo, Dr. Marc Reitman

AM-196 Srinath Seshadri
Modeling Human Timothy Syndrome in C. elegans using CRISPR-Cas9
Case Western Reserve University (Ohio)
Preceptors: Dr. Andy Golden, Ms. Rosie Bauer

AM-197 Tesia Shi
Meta-data Analysis for Inflammation and O-GlcNAcylation Pathways in Three Psychiatric Disorders (BP, MDD, SCH)
Richard Montgomery High School (Maryland)
Preceptors: Dr. Kenneth Jacobson, Dr. Weiping Chen, Dr. John Hanover

AM-198 Susie Song
Evaluation of a Wireless, Dry EEG System for Decoding Visual Stimuli
Cornell University (New York)
Preceptors: Dr. Carson Chow, Dr. Shashaank Vattikuti

AM-199 Xiangliang Sui
The Use of Cyclotriazadisulfonamides to Inhibit Endogenous TSHR Signaling in Human Primary Cells
Washington University in St. Louis (Missouri)
Preceptors: Dr. Christine Krieger, Dr. Susanne Neumann, Dr. Marvin Gershengorn

AM-200 Isaias Torres
Mouse piRNA Are Required for Response of Cellular Stress
California State University, San Marcos (California)
Preceptor: Dr. Heejin Choi

AM-201 Khalid Tunau-Spencer
Changes in Erythropoietic Receptor Expression in Differentiated Mouse Myoblasts
University Of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Constance Noguchi, Dr. Praveen Rajvanshi, Dr. Jee Young Lee

AM-202 Nevin Varghese
Effects of Severe Insulin Resistance on Inflammation and Fibrinolysis in Patients with Lipodystrophy and Insulin Receptoropathy
University of Maryland School of Medicine (Maryland)
Preceptors: Dr. Rebecca Brown, Dr. Marissa Lightbourne

AM-203 Vishwas Wadhwa
Utilization of the DNA Methyltransferase Inhibitor Decitabine to Improve Somatostatin Receptor Expression for Targeted Imaging of Thyroid Cancer
High Point High School (Maryland)
Preceptors: Dr. Shilpa Thakur, Dr. Joanna Klubo-Gwiazdzinska

AM-204 Rebecca Wang
Base Editing of Late-onset Tay-Sachs Disease Patient Fibroblasts to Correct a Pathogenic Point Mutation
Johns Hopkins University (Maryland)
Preceptors: Dr. Richard Proia, Dr. Laura Allende, Ms. Vienna Huso

AM-205 Quin Waterbury
FIGLA Is a Multifunctional Regulator of Ovarian Oocyte Differentiation and Folliculogenesis
Purdue University (Indiana)
Preceptors: Dr. Zhengpin Wang, Dr. Jurrien Dean

AM-206 Kyle Wilson
Generating a Sperm-specific PEZO-1 Degradation System in C. elegans
University of Maryland, College Park (Maryland)
Preceptors: Dr. Xiaofei Bai, Dr. Andy Golden

AM-207 Lindsey Wilson
Purification of Mdm34, a Member of the ER-Mitochondria Encounter Structure
Purdue University (Indiana)
Preceptors: Dr. Porsha Shaw, Dr. Susan Buchanan

AM-208 Donald Wunsch
Outcome of Hepatitis B e Antigen Negative Chronic Hepatitis B
Missouri University of Science and Technology (Missouri)
Preceptor: Dr. Marc Ghany

AM-209 Ashley Young
Inferring the Dynamics of the Resting Human Brain from Long Duration MEG Data
Cornell University (New York)
Preceptor: Dr. Vipul Periwal

National Institute of Neurological Disorders and Stroke (NINDS)

AM-210 Sarangelica Alamo-Ortiz
Comparison of Brain Volume and Its Clinical Correlates in HIV and Matched-control Subjects
University of Puerto Rico at Humacao (Puerto Rico)
Preceptors: Ms. Elizabeth Horne, Dr. Govind Bhagavatheeshwaran

AM-211 Rebeca Amaya Escobar
Unilateral Whisker Loss-induced Plasticity in the Non-deprived Mouse Somatosensory Cortex
University of Maryland, College Park (Maryland)
Preceptors: Dr. Alan Koretsky, Dr. Patrick Wright
AM-212 Philip Amenyo-Awude  
*Resting State fMRI Studies in Parkinson's Disease*  
Northern Virginia Community College (Virginia)  
Preceptor: Dr. Silvina Horovitz

AM-213 Greeshma Anand  
*Optogenetic Manipulation of Astrocytes in Mouse Respiratory Rhythm-generating Circuits*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Shahriar SheikhBahaei, Dr. Jeffrey Smith

AM-214 Nivetha Aravind  
*The Effects of Corticotropin-releasing Hormone Stimulation on Regional Brain Activity*  
Emory College of Arts and Science, Emory University (Georgia)  
Preceptors: Dr. Prashant Chittiboina, Dr. Elizabeth Hogan, Dr. Konstantinos Floros

AM-215 Oluwatobi Ariyo  
*Programmed Death-ligand 2 Expression in Glioblastoma*  
Harvard College (Massachusetts)  
Preceptors: Dr. Edjah Nduom, Mr. Anthony Nwankwo

AM-216 Jamal Bailey  
*Intrathecal Administration of Resiniferatoxin for Treating Intractable Cancer-Related Severe Chronic Pain*  
Bowie State University (Maryland)  
Preceptors: Dr. John Heiss, Ms. Jessica Mack, Ms. Andrea Bowling

AM-217 Aracely Barajas  
*Genetically Modified Mice to Study Gonadotropin Releasing Hormone (GnRH) Neural Migration*  
Fort Lewis College (Colorado)  
Preceptors: Dr. Susan Wray, Dr. Yufei Shan

AM-218 Shaia Bierman-Chow  
*Investigating Astrocyte Response Post Spinal Cord Injury*  
Smith College (Massachusetts)  
Preceptors: Ms. Kaya Matson, Dr. Ariel Levine

AM-219 Nicolette Brown, Khayla Black  
*Characterization of Hippocampal Parvalbumin Interneurons during Disease Progression in the 5xFAD Mouse Model of Alzheimer's Disease*  
Montana State University (Montana), New York University Shanghai (Non-U.S.)  
Preceptors: Dr. Chris McBain, Ms. Connie Mackenzie-Gray Scott
AM-220 Joshua Cade
*Genotype-Phenotype Correlations in Parkinson’s Disease: Retrospective Analysis of the NIH-PD Cohort*
University of North Carolina at Pembroke (North Carolina)
Preceptor: Dr. Derek Narendra

AM-221 Hannah Calvelli
*Comparison of Mito-QC and Mito-Keima Reporters for the Measurement of PINK1/Parkin-dependent and independent Mitophagy*
Rutgers University (New Jersey)
Preceptors: Dr. Derek Narendra, Dr. Xiaoping Huang

AM-222 Ethan Cheng
*Lipid Trafficking in Drosophila Central Nervous System Mediated by Neuron-Glia Interactions*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Quan Yuan, Dr. Jun Yin

AM-223 Yong-Han Cheng
*Detection of Misfolded TDP-43 by an Intrabody in an in vitro Model of Amyotrophic Lateral Sclerosis*
University of Washington (Washington)
Preceptors: Dr. Marta Garcia Montojo, Dr. Avindra Nath

AM-224 Magnolia Chinn
*Mapping Somatostatin- and Parvalbumin-positive Interneuron Populations in Mouse Models of Genetic Predisposition to Schizophrenia*
Massachusetts Institute of Technology (Massachusetts)
Preceptors: Dr. David Kupferschmidt, Dr. Joshua Gordon

AM-225 Rahin Chowdhury
*Cloning and Expression of A. californica Slo1 Channel in Xenopus laevis*
Carnegie Mellon University (Pennsylvania)
Preceptors: Dr. Miguel Holmgren, Mrs. Deepa Srikumar, Dr. Pablo Miranda

AM-226 Emilio Chufan-Bordon
*Fluorescence Analysis of TIRF Images to Differentiate Membrane and ER Expression of Sodium Channels*
University of Michigan (Michigan)
Preceptors: Dr. Miguel Holmgren, Dr. Pablo Miranda, Dr. Teresa Giraldez

AM-227 Annaliese Clauze
*Significance of Reactivation of HHV-6: Analysis of Normal and Chromosomally Integrated HHV-6 Donors*
Colgate University (New York)
Preceptors: Dr. Steven Jacobson, Ms. Mary Alice Allnutt

**AM-228 Caleb Colbert**
*Statins as Neuroprotective Agents*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Joseph Steiner, Muzna Bachani

**AM-229 Devon DiSanza**
*Generation and Validation of a Novel Mouse Model of Intellectual Disability*
University of Virginia (Virginia)
Preceptors: Mr. Jeramiah Paskus, Dr. Kai Chang, Dr. Katherine Roche

**AM-230 Cole Dittenthaler**
*Exploring the Effects of DREADD-Mediated Modulations of Activity in the Parafascicular Thalamic Nucleus on Motor Symptoms in Hemiparkinsonian Rats*
Yakima Valley College (Washington)
Preceptors: Dr. Elena Brazhnik, Dr. Nikolay Novikov, Dr. Alex McCoy

**AM-231 Jade Dodge**
*Protein Arginine Methyltransferasse 5 Inhibition Enhances the Antitumor Efficacy of Trametinib in Glioblastoma Neurospheres*
Morgan State University (Maryland)
Preceptors: Ms. Hannah Sur, Dr. Yeshavanth Banasavadi-Siddegowda

**AM-232 Yiling Dong**
*The Role of Genetic, Epigenetic, and Environmental Factors in Functional Movement Disorders*
Indiana University (Indiana)
Preceptors: Dr. Primavera Spagnolo, Dr. Mark Hallett

**AM-233 Tsemacha Dubuche**
*Measure of Spinal Cord Atrophy in Chronic Progressive Neurological Diseases*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Steven Jacobson, Dr. Govind Bhagavatheeshwaran

**AM-234 Anneke Duin**
*Investigating How Closed-loop Optogenetic Stimulation Affects the Activity of Ventral Hippocampus and Prefrontal Cortex during a Working Memory Task*
University of Minnesota (Minnesota)
Preceptors: Dr. Joshua Gordon, Dr. David Kupferschmidt, Dr. Maxym Myroshnchenko

**AM-235 Zekiel Factor**
*Modulating Connectivity of the Attentional Network: A Comparison across Modalities*
State University of New York at Binghamton (New York)
Preceptors: Dr. Selene Schintu, Dr. Michael Freedberg, Dr. Eric Wassermann
AM-236 Saul Flores
*Modulating HERV-K Expression Increases Susceptibility to Chemotherapeutic Drugs in AT/RT Cells*
University of Maryland, College Park (Maryland)
Preceptors: Mrs. Brianna DiSanza, Dr. Tara Doucet-O'Hare, Dr. Avindra Nath

AM-237 Benjamin Gastfriend
*Incorporation of Microglia into iPSC-derived Brain Organoids*
University of Wisconsin-Madison (Wisconsin)
Preceptors: Dr. David Wang, Ms. Valerie McDonald, Dr. Avindra Nath

AM-238 Katrina Geannopoulos
*Retinal Ganglion Cell Layer Thinning in Well-controlled HIV-infected Subjects*
University of Illinois College of Medicine (Illinois)
Preceptor: Dr. Bryan Smith

AM-239 Radhika Gholap
*Investigating the Efficiency of Vivo-Morpholinos in Correcting a Pseudoexon Splice Mutation in Cell and Animal Models for Collagen-VI Muscular Dystrophy*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Veronique Bolduc, Dr. Carsten Bonnemann, Dr. Carston Bonnemann

AM-240 Fatima Gomez
*Quality of Life Assessment in Patients with Drug Resistant Focal Epilepsy*
University of Washington (Washington)
Preceptors: Dr. Sara Inati, Ms. Aaliyah Hamidullah Thiam, Dr. Aaliyah Hamidullah Thiam, - Sara Inati

AM-241 Lydia Guo
*MicroRNA Expression in Remyelinated and Demyelinated Multiple Sclerosis Lesions*
Wellesley College (Massachusetts)
Preceptors: Dr. Hadar Kolb, Dr. Daniel Reich

AM-242 Randall Hughes
*Generation of Spontaneous EBV Transformed B Lymphoblastoid Cell Lines from Normal Donors and Patients With Multiple Sclerosis*
Fort Lewis College (Colorado)
Preceptors: Dr. Maria Chiara Monaco-Kushner, Dr. Steve Jacobson

AM-243 Ryan Hunt
*MRI Single Cell Tracking Allows for Visualization of Monocyte Entry to Brain during Neuroinflammation*
Michigan State University (Michigan)
AM-244 Laura Inbody  
*Characterization of Novel Negative Allosteric Modulators of the D3 Dopamine Receptor*  
University of Findlay (Ohio)  
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*Tumor Reprogramming in Pituitary Adenomas Demonstrated by Multiplex Immunohistochemistry Stains*  
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Virginia Commonwealth University (Virginia)  
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*Characterization of Acute Ischemic Injury in Patients Following Head Trauma*  
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*Role of the Glia Limitans in Partitioning Myeloid Cell Responses following Repeat Traumatic Brain Injury*  
University of Wisconsin-Madison (Wisconsin)  
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AM-249 Ishar Alexander Kalsi  
*Exploring Morphological Brain Changes in Parkinson’s Disease: An MRI Structural Study*  
GKT School of Medical Education, King's College London (Non-U.S.)  
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AM-250 Mahish Kewalramani  
*The Role of de novo Mutations of Shank3/Trio in Neurodevelopmental Disorders*  
Duke University (North Carolina)  
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*Thyroid Hormone T3 Treatment Alters the Spectral Responses of Larval Zebrafish Eyes*  
University of Virginia (Virginia)  
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AM-252 Samantha Lazo-Contreras  
*The Expression of Pou6f2 in Developing Mouse*  
Trinity Washington University (District of Columbia)  
Preceptors: Dr. Susan Wray, Dr. hyunju cho

AM-253 Alexander Lehr  
*Characterization of a Mouse Model for Neuroligin Deficit at Excitatory Synapses*  
Ursinus College (Pennsylvania)  
Preceptors: Mr. Thien Nguyen, Dr. Katherine Roche

AM-254 Tianming Li, Madison Stevens  
*Characterization of TMEM132B in Cultured Hippocampal Neurons*  
University of Maryland, College Park (Maryland), Cornell University (New York)  
Preceptors: Mr. David Castellano, Dr. Wei Lu

AM-255 Delores Luttrell  
*Mechanism of TDP-43 Mediated Upregulation of HERV-k Expression*  
Northern Virginia Community College (Virginia)  
Preceptor: Dr. Lisa Henderson

AM-256 Anthony Maddox  
*An Interactive Screening Test for the Assessment of Possible Cognitive Impairments - Version 2.0 with Additional Assessments and Enhancements*  
Drexel University (Pennsylvania)  
Preceptors: Dr. Yang Fann, Mr. Amarendra Yavatkar

AM-257 Miles Martinez  
*Atlas-free Brain Segmentation by Classification using DErivative-based Features (CDEF) in Progressive Multifocal Leukoencephalopathy (PML)*  
Brown University (Rhode Island)  
Preceptors: Dr. Govind Bhagavatheeshwaran, Dr. Daniel Reich

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*Engineering Split Peroxidase-tagged Nanobodies to Find Novel Neuron-Microglia Interactions*  
Midwestern State University (Texas)  
Preceptors: Ms. Saadia Hasan, Dr. Michael Ward

AM-259 Matthew Nelson  
*Automated CRISPRi Screens in iPSC-derived Neurons*  
University of Michigan (Michigan)  
Preceptor: Dr. Michael Ward
AM-260 Aaron Park
*Characterizing Postsynaptic Density Protein 95 via Molecular Biology and Recombinant Protein Techniques*
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Xiaobing Chen, Mr. Raymond Fields, Mrs. Christine Winters

AM-261 Thomas Policicchio
*DTI Tractographic Correlates of Weight Gain after Deep Brain Stimulation Surgery in Parkinson’s Disease Patients*
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*Modulations of Characteristics of Essential Tremor Components with Different Hand Posture.*
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AM-263 Jenna Richter
*Investigating Disrupted mRNA Processing in Patients with Spinal Muscular Atrophy with Respiratory Distress Type 1 (SMARD1)*
St. Olaf College (Minnesota)
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AM-264 Evan Rubinovitz
*M-BRAIN: Marmoset Brain Research and Imaging Network*
Stony Brook University (New York)
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AM-265 Ntumba Sangwa
*Structural Model of Human Glycine-selective Transporter GlyT1*
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AM-266 Vibha Sastri
*Characterization of Inhibitory Synapses through Immunocytochemistry*
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*Evaluation of Eligibility Criteria in Treated Patients with Large Vessel Occlusion: A Closer Look at Core*
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*Network Properties and Stability of Local Cortical Connectivity*  
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*Role of Epstein-Barr Virus (EBV) in Multiple Sclerosis (MS): T-cell Responses to EBV Peptides in MS Patients and Controls*  
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*Gender Differences in Stroke Outcomes*  
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*The Localization of SynGAP in the Postsynaptic Density*  
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*Relationship between Electrode Location and Neuropsychological Outcome of Deep Brain Stimulation in Parkinson’s Disease*  
George Washington University School of Medicine and Health Sciences (District of Columbia)  
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*CRISPR Mediated Endogenous Tagging of a Novel Cellular Adhesion Molecule*  
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*Characterizing the Development-dependent Local Synthesis of Axonal Mitochondrial Docking Protein Syntaphilin*  
Johns Hopkins University (Maryland)  
Preceptors: Dr. Sunan Li, Dr. Ning Huang, Dr. Zu-Hang Sheng

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*Novel Compound Provides Insight into HIF2α Hypoxia Signaling Pathway*  
University of Illinois at Chicago (Illinois)  
Preceptors: Dr. John Heiss, Dr. Zhengping Zhuang
AM-276 Kaylee Tsingine
*Developing Resources for Native American Participants in NIH Intramural Clinical Research Studies*
Northern Arizona University (Arizona)
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AM-277 Alice Turnham
*Computational Modelling of Realistic Dopaminergic Axon*
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AM-278 Anjali Vyas
*Flavonoids: A Natural and Novel Approach to Provide Neuroprotection against HIV-TAT*
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*Analysis of Mitochondria Integrity in a D. melanogaster Model of Neurodegeneration*
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*Pharmacology and Structure-Activity Relationships for D1 Dopamine Receptor Positive Allosteric Modulators.*
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*Documenting Scientific Software: Mutagene Package for Mutational Analysis*
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*Machine Learning Using RBM to Compare Rest and Task Brain Networks in Functional Neuroimaging*
Texas Tech University (Texas)
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*Cardiovascular Disease Prediction Using Repeated Measurements*
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*Automatic Medical Question Generation*
University of Maryland, College Park (Maryland)
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*Detecting Cancer Driver Mutations by Signs of Position Selection*
Georgia Institute of Technology (Georgia)
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AM-287 Christopher Hill
*Computational Analysis of GWAS SNPs*
University of Michigan (Michigan)
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*Improving Computational Analysis of Viral Sequences Utilizing Multiple Sequence Alignments*
University of Maryland, Baltimore County (Maryland)
Preceptor: Dr. Eric Nawrocki

AM-289 Amanda Liu
*Comparison and Validation of Drug Sensitivity and Resistance via Network Approach*
Montgomery Blair High School (Maryland)
Preceptors: Dr. Yoo-Ah Kim, Dr. Teresa Przytycka

AM-290 Usha Lokala
*Semantic Relation Extraction between Medical Entities*
Wright State University (Ohio)
Preceptor: Dr. Asma Ben Abacha

AM-291 Karan Luthria
*Utilizing Semantic and Contextual Measures to Evaluate the Similarity between Disease Concepts in UMLS*
University of Maryland, Baltimore County (Maryland)
Preceptor: Dr. Olivier Bodenreider

**AM-292 Vidhyanand Mahase**  
*The Application of Bioinformatic Tools in Analyzing RNAseq Data from Mouse Embryonic Fibroblasts*  
Howard University (District of Columbia)  
Preceptors: Dr. Leonardo Marino-Ramirez, Dr. Roberto Vera Alvarez

**AM-293 Zeyad Moustafa**  
*Visual Question Answering in the Medical Domain*  
Vanderbilt University (Tennessee)  
Preceptors: Dr. Dina Demner-Fushman, Dr. Asma Ben Abacha

**AM-294 Harshit Parmar**  
*Deep Learning Applications in Functional Neuroimaging.*  
Texas Tech University (Texas)  
Preceptor: Mr. Rodney Long

**AM-295 Protiva Rahman**  
*User Evaluation of Biomedical Literature Search*  
Ohio State University (Ohio)  
Preceptors: Dr. Zhiyong Lu, Dr. Rezarta Islamaj, Dr. Don Comeau

**AM-296 Alex Rankine**  
*BioCreative/OHNLP STS Challenge 2019: Combining Rich Features and Deep Learning for Finding Similar Sentences in Electronic Health Records*  
Harvard College (Massachusetts)  
Preceptors: Dr. Yifan Peng, Dr. Qingyu Chen, Dr. Zhiyong Lu

**AM-297 Sanjana Singh**  
*Using Deep Learning for Cervical Histology Image Analysis*  
McLean High School (Virginia)  
Preceptors: Dr. Zhiyun Xue, Mr. Carl Cornwell, Mr. Rodney Long, Dr. Sameer Antani

**AM-298 Shreya Singh**  
*Development of Machine Learning-based Prediction Models for Chemical Modulators of the Glucocorticoid Receptor Signaling Pathway Using Public-domain Bioactivity Data*  
Johns Hopkins University (Maryland)  
Preceptor: Dr. Sunghwan Kim
National Center for Advancing Translational Sciences (NCATS)

LCH-1 Samuel Aboagye
Data Augmentation Approaches to Boost Deep Learning Predictions in Drug Discovery
George Washington University (District of Columbia)
Preceptors: Dr. Vishal Siramshetty, Dr. Alexey Zakharov, Mr. Tyler Peryea, Mr. Trung Nguyen

LCH-2 Cameron Amini
Effects of Protein Target Distance upon Synergistic Drug Combinations in IDH1 Mutant Glioma
University of Maryland, College Park (Maryland)
Preceptors: Dr. Kelli Wilson, Mr. Sam Michael

LCH-3 Maria Antony
Quantitative High-throughput Screening (qHTS) to Identify Activators of p97/VCP
University of Connecticut School of Medicine (Connecticut)
Preceptors: Dr. Tino Sanchez, Dr. Mark Henderson

LCH-4 Brooklyn Aragon
Synthesis of ULK1 Inhibitors for Autophagy-dependent Cancers
New Mexico Highlands University (New Mexico)
Preceptor: Dr. Kanny Wan

LCH-5 Christopher Bach
Making a Comprehensive Inventory of Medical Devices Marketed in the U.S.
University of Maryland, College Park (Maryland)
Preceptor: Mr. Tyler Peryea

LCH-6 Anup Challa
In silico Screening to Discover Novel beta-Glucuronidase Inhibitors Targeting the Human Microbiome
Vanderbilt University (Tennessee)
Preceptors: Dr. Min Shen, Dr. Xin Hu

LCH-7 Jina Chung
Synthesis towards NCGC00538279, an Agonist of the Ghrelin Receptor GSHR1a
Emory University (Georgia)
Preceptor: Dr. David Kim

LCH-8 Justin Clabaugh
Dissecting Endothelial Cell Responses to Tobacco Chemicals Reveals Transcriptional Networks that Underlie Atherosclerosis
Hood College (Maryland)
Preceptors: Dr. David Gerohld, Dr. Greg Tawa
LCH-9 Aviv Elor
*BioLumin - An Immersive Mixed Reality Platform for Interactive Biological Visualization*
University of California, Santa Cruz (California)
Preceptors: Dr. Sam Michael, Dr. Nathan Hotaling, Dr. Ty Voss

LCH-10 Madison Gamma
*Isolation and Characterization of Distinct Cell Populations Using Dielectrophoresis*
Cornell University (New York)
Preceptors: Dr. Richard Eastman, Dr. Anton Simeonov

LCH-11 Emily Hone
*Bioinformatics Pipeline - Gathering Potential Gene Targets for Disease Therapeutics*
West Virginia University (West Virginia)
Preceptors: Dr. Greg Tawa, Dr. Donald Lo, Dr. Anton Simeonov, Dr. Chris Austin

LCH-12 Samuel Levenson
*Validation of Drug Metabolic Pathway Figure Extraction from Literature*
Cornell University (New York)
Preceptors: Dr. Elias Padilha, Dr. Xin Xu

LCH-13 Andrew Li
*Profiling Butyrylcholinesterase Inhibitors*
Dartmouth College (New Hampshire)
Preceptors: Dr. Shuaizhang Li, Dr. Ruili Huang, Dr. Menghang Xia

LCH-14 Choyhee Nyusha Lin
*Gamification of Training Data Production for Artificial Intelligence*
University of California, Los Angeles (California)
Preceptor: Dr. Nathan Hotaling

LCH-15 Wensen Liu
*Improving Chemical Image Recognition with Deep Network Architectures*
Montgomery Blair High School (Maryland)
Preceptors: Mr. Trung Nguyen, Mr. Tyler Peryea, Dr. Alexey Zakharov

LCH-16 Jake Niebler
*Identification of Compounds That Inhibit Pregnane X Receptor Using a High-throughput Screening Platform*
Juniata College (Pennsylvania)
Preceptors: Dr. Caitlin Lynch, Dr. Ruili Huang, Dr. Menghang Xia
LCH-17 Taylor Niehoff
*Developing Biochemical and Cell-based Target Engagement and Activity Assays to Identify Selective Inhibitors for the Aldehyde Dehydrogenase (ALDH) Family*
Georgia Institute of Technology (Georgia)
Preceptors: Dr. Natalia Martinez, Mr. Adam Yasgar

LCH-18 Mason Rule
*First-in-class Small Molecule Agonists of the Insulin-Like3 (INSL3) Peptide Receptor RXFP2, an Unexplored Therapeutic Target for the Treatment of Osteoporosis: Synthesis, SAR, and Biological Validation.*
University of South Florida (Florida)
Preceptor: Dr. Kenneth Wilson

LCH-19 Deepro Sarkar
*Evaluation of a Novel Lysosomotropic Substrate to Measure Glucocerebrosidase Activity in Gaucher Disease Cells*
Virginia Polytechnic Institute and State University (Virginia)
Preceptors: Dr. Dipannita Dutta, Dr. Mark Henderson

LCH-20 Esther Sim
*Biofabrication of 3D Tissue Models of Ovarian Cancer Metastasis for Disease Modeling and Drug Discovery*
Arizona State University (Arizona)
Preceptors: Dr. Marc Ferrer, Dr. Jiaqi Fu, Dr. Min Jae Song

LCH-21 Williams Song
*Integrative Analysis of the Kinase Landscape for Selective Inhibitors*
College of William & Mary (Virginia)
Preceptors: Dr. Ruili Huang, Ms. Deborah Ngan, Mr. Tyler Peryea

LCH-22 Kara Webb
*Bacterial Capsules as a Growth Medium for a C. elegans Model System in Laser Cytometry Based Screening*
Hood College (Maryland)
Preceptors: Dr. James Inglese, Dr. Laurence Lamy, Dr. Patricia Dranchak, Dr. Mahesh Aitha

LCH-23 Rebecca Zaayenga
*Development of a High-throughput Assay Using Glycolytically Active S. pombe Yeast as a Model Organism Heterologously Expressing Human and Parasitic Nematode Phosphoglycerate Mutase*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Patricia Dranchak, Dr. James Inglese
National Eye Institute (NEI)

LCH-24 Emma Attar  
*Genotype-Phenotype Studies of Mouse Models of Uveal Coloboma*  
Stone Ridge School of the Sacred Heart (Maryland)  
Preceptors: Dr. Ramakrishna Alur, Dr. Tiziana Cogliati, Dr. Brian Brooks, Ms. Julia Chertkof

LCH-25 Enat Ayele  
*Imaging Mass Spectrometry of Fatty acids Present in Mouse Brain and Ocular Tissue*  
Northwestern University (Illinois)  
Preceptors: Mr. Todd Duncan, Dr. Jennifer Kielczewski, Dr. William Samuel, Dr. Michael Redmond

LCH-26 Kairo Baylor  
*Modulation of the Cellular Localization of beta-carotene-9',10'-oxygenase (BCO2)*  
Bard College at Simon's Rock (Massachusetts)  
Preceptors: Dr. Eugenia Poliakov, Dr. Sheetal Uppal, Dr. T. Michael Redmond

LCH-27 Katherine Byrnes  
*ABCA4 and Subcellular Lipid Deposits in iPSC-derived Retinal Pigment Epithelium Cells*  
Tulane University (Louisiana)  
Preceptors: Ms. Devika Bose, Dr. Mitra Farnoodian-Tedrick, Dr. Kapil Bharti

LCH-28 Michelle Chen  
*The Rate of Photoreceptor Loss in ABCA4 Retinopathy Measured by Optical Coherence Tomography*  
Howard University College of Medicine (District of Columbia)  
Preceptor: Dr. Brett Jeffrey

LCH-29 Julia Chertkof, Emma Attar  
*Oculocutaneous Albinism and in vitro Approaches for Drug Screening*  
Yale University (Connecticut), Stone Ridge School of the Sacred Heart (Maryland)  
Preceptors: Dr. Ramakrishna Prasad Alur, Dr. Tiziana Cogliati, Dr. Brian Patrick Brooks

LCH-30 Paola Eusebio-Severino  
*The Role of Gm28876 during Aging of Rod Photoreceptors.*  
Interamerican University of Puerto Rico at Bayamon (Puerto Rico)  
Preceptors: Dr. Ximena Corso-Diaz, Dr. Anand Swaroop

LCH-31 Eric Feng  
*Variant Visualization to Assist Clinical Interpretation in Ophthalmic Genetics*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Robert Hufnagel, Dr. Bin Guan
LCH-32 Jorge Ferrari Escoto
*Analysis of Cellular Phenotypes for iPSC derived RPE*
Montgomery College (Maryland)
Preceptors: Dr. Kapil Bharti, Mr. Davide Ortolan

LCH-33 Eric Fields, Alice Zhu
*Transmembrane Domain of P Protein: Computational Analysis of OCA2 Mutations and Protein Expression Efforts*
University of Maryland, College Park (Maryland), University of Maryland, College Park (Maryland)
Preceptors: Dr. Yuri Sergeev, Dr. Monika Dolinska

LCH-34 Pura Gutierrez-Mirabal
*Functional Screening of Candidate Transcription Factors Regulating Retinal Pigment Epithelium Differentiation*
University of Puerto Rico School of Medicine (Puerto Rico)
Preceptors: Dr. Robert Hufnagel, Dr. Temesgen Fufa

LCH-35 Yoo-Jean Han
*A Deep Learning Method to Detect Heterogeneously Fluorescent Cell Patterns in the Living Human Eye*
Washington and Lee University (Virginia)
Preceptors: Dr. Jianfei Liu, Dr. Johnny Tam

LCH-36 Akshay Krishnan
*Spatial Relationship between Genuine S-cones and ipRGCs*
Sidwell Friends School (District of Columbia)
Preceptors: Dr. Francisco Nadal-Nicolas, Dr. Wei Li

LCH-37 Srikar Kuppa
*Zebrafish UBA2 Loss-of-function Phenocopies a Rare Human Disorder*
Lewis Katz School of Medicine at Temple University (Pennsylvania)
Preceptors: Dr. Robert Hufnagel, Dr. Sairah Yousaf

LCH-38 Trisha Lal
*An Asymmetric Case of Retinitis Pigmentosa Studied on Autopsied Eyes*
Howard University College of Medicine (District of Columbia)
Preceptor: Dr. Robert Hufnagel

LCH-39 Tyger Lin
*Characterization of Brn3b Knockout Retinal Ganglion Cell Receptive Field Properties*
Johns Hopkins University (Maryland)
Preceptor: Dr. Tudor Badea
LCH-40 Kevin Manakkunnel, Jalela Bahar, Ezekiel Olumuyide
*Single-domain anti-STAT3 Antibody (VHH Nanobody): Therapeutic Use in Experimental Autoimmune Uveitis*
University of Maryland, College Park (Maryland), University of Tennessee at Chattanooga (Tennessee), CUNY Lehman College (New York)
Preceptors: Dr. Ming Yan, Dr. Jin Kyeong Choi, Dr. Cheng-Rong Yu, Dr. Charles Egwuagu

LCH-41 Carolyn Marar
*Functional Validation of Quantitative Trait Loci Associated with Age-related Macular Degeneration Susceptibility*
Johns Hopkins University (Maryland)
Preceptors: Dr. Anand Swaroop, Dr. Nivedita Singh

LCH-42 Dominique Noriega
*Quantification of Longitudinal Changes in Late-onset Retinal Degeneration*
State University of New York Downstate College of Medicine (New York)
Preceptors: Dr. Catherine Cukras, Dr. Tharindu De Silva

LCH-43 Alexis O'Keiffe
*Quantifying the Rate of Change in Retinal Thickness/Volume and Choroidal Thickness in Patients with Advanced ABCA4 Retinopathy*
Howard University (District of Columbia)
Preceptor: Dr. Brett Jeffrey

LCH-44 Tamir Odzorig
*Optimization of Clearing and Permeabilization of 3D Bioprinted Tissues for Imaging*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Kapil Bharti, Dr. Minjae Song, Mr. Russell Quinn, Mr. Eric Nguyen

LCH-45 Ezekiel Olumuyide, Kevin Manakkunnel
*Characterization of Novel STAT3 Inhibitors as Potential Drugs for the Treatment of Uveitis*
CUNY Lehman College (New York), University of Maryland, College Park (Maryland)
Preceptors: Dr. Cheng-Rong Yu, Dr. Charles Egwuagu

LCH-46 Laura Patak
*Investigating Associations between Microglia and Synapses in the Inner Plexiform Layer*
Colgate University (New York)
Preceptors: Dr. Wei Li, Dr. Francisco Nadal-Nicolas, Dr. John Ball

LCH-47 Daniel Sanchez-Mendoza
*Characterization of Znf503 Zebrafish Mutants by CRISPR Cas9 Mutagenesis*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Elangovan Boobalan, Dr. Brian Brooks
LCH-48 Robin Schneider  
*Interaction of Soluble Protein Components and Core Subunits of the AMPA Receptor Complex in Mouse Brain and Retina*  
Midwestern University Chicago College of Osteopathic Medicine (Illinois)  
Preceptors: Dr. Naoki Nakaya, Dr. Stanislav Tomarev

LCH-49 Shahar Silverman  
*Regulation of Ocular Autoimmunity by the Gut Commensal Microbiota*  
Hebrew University (Non-U.S.)  
Preceptors: Dr. Reiko Yamane, Dr. Rachel Caspi

LCH-50 Anant Tewari  
*High Resolution Eye Tracker*  
University of Virginia (Virginia)  
Preceptors: Dr. Christian Quaia, Dr. Bruce Cumming

LCH-51 Jennifer Zhu  
*Development of the Cone-dominated Ground Squirrel Retina*  
Wellesley College (Massachusetts)  
Preceptors: Dr. Vincent Kunze, Dr. Wei Li

**National Heart, Lung, and Blood Institute (NHLBI)**

LCH-52 Beatrice Acha  
*Role of POT1 in Cell Proliferation and Telomere Maintenance of HAP1 Cells*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Fernanda Gutierrez Rodrigues, Dr. Sachiko Kajigaya, Dr. Neal Young

LCH-53 Raphael Agbor-Enoh  
*Venous Thromboembolism Prophylaxis in Sickle Cell Disease Patients Hospitalized for Vaso-occlusive Crisis*  
Temple University School of Pharmacy (Pennsylvania)  
Preceptor: Dr. Arun Shet

LCH-54 Elise Ahn  
*The Effect of Spermidine on AMPK*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Sung Jun Park, Dr. Jay Chung

LCH-55 Hermela Amdeta  
*Portfolio Analysis of Behavioral Science Applications Submitted to Clinical Trial FOAs at NHLBI*  
American University (District of Columbia)
Preceptor: Dr. Rebecca Campo

LCH-56 Ian Atkinson
Top Predictors of Primary Outcomes in the STICH Trial Using Machine Learning
Cornell University (New York)
Preceptors: Dr. Ahmed Hasan, Dr. Yves Rosenberg

LCH-57 Jonathan Bao
Plasticity-related Gene Protein Overcomes Negative Cues by Increasing Cell Attachment
Rensselaer Polytechnic Institute (New York)
Preceptors: Dr. Sharada Tilve, Dr. Herbert Geller

LCH-58 Alexis Brake
Role of Astrocyte Cell Stiffness in Controlling the Glial Scar
University of Florida (Florida)
Preceptors: Dr. Caitlin Mencio, Dr. Herbert Geller

LCH-59 Alanna Brown
Analysis of the National Heart, Lung, and Blood Institute’s Nutrition Research Portfolio, 2008 to 2018
Spelman College (Georgia)
Preceptors: Mr. Travis Hyams, MPH, Dr. Alison Brown, Dr. Holly Nicastro, Dr. Charlotte Pratt

LCH-60 Sarah Carney
Impact of Stress-related Neurotransmitters on Endothelial Cell Function
Case Western Reserve University (Ohio)
Preceptors: Dr. Yvonne Baumer, Dr. Tiffany Powell-Wiley

LCH-61 Alexandra Chand
Developing Analysis Protocol for Monitoring Intracellular Oxygenation Using Fluorescence Lifetime Imaging of Myoglobin-mCherry
Lawrence University (Wisconsin)
Preceptors: Dr. Rozhin Penjweini, Mr. Branden Roarke, Mr. Greg Alspaugh, Dr. Jay Knutson

LCH-62 Daniel Chen
Generation of Human Induced Pluripotent Cells from an Individual with Periodic Fever Syndrome
University of Maryland, College Park (Maryland)
Preceptors: Dr. Manfred Boehm, Dr. Guibin Chen

LCH-63 Eric Cho
The Effect of Crossover Rates on Statistical Power in Pragmatic Trials
Vanderbilt University (Tennessee)
Preceptor: Dr. Dong-yun Kim
LCH-64 Rodica Monica Ciurea  
*Association of Insulin Dosage with Cardiovascular Mortality in ACCORD Trial*  
Georgetown University (District of Columbia)  
Preceptors: Dr. Xin Tian, Dr. Colin Wu

LCH-65 Christian Cullen  
*Phenotypic Effects of PIEZO1 E756del Variant on Red Blood Cells in Sickle Cell Disease*  
Medical College of Georgia (Georgia)  
Preceptors: Dr. Swee Lay Thein, Dr. Xunde Wang

LCH-66 Mehana Daftary  
*Characterization of Drosophila Myosin V via Single-molecule Assays*  
Yale University (Connecticut)  
Preceptors: Dr. Rong Liu, Dr. James Sellers

LCH-67 Gauri Dandi  
*Identifying Predictors of Heart Failure in Racial Subgroups of the TOPCAT Trial Using Machine Learning*  
Northeastern University (Massachusetts)  
Preceptors: Dr. Ahmed Hasan, Dr. Yves Rosenberg, Dr. Amit Dey, Dr. Colin Wu

LCH-68 Alisha Desai  
*Ultra-sensitive Detection of Corticotropin-Releasing Factor (CRF) and Its Correlation with Biologic and Psychosocial Cardiovascular Risk Markers among African Americans*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Ankit Saxena, Dr. Yvonne Baumer, Dr. Tiffany Powell-Wiley, Dr. J. Philip McCoy

LCH-69 Vivian Dong  
*Comparative Single Cell Transcriptomic Analysis of the Hematopoietic System between Human and Mouse*  
Brown University (Rhode Island)  
Preceptors: Dr. Neal Young, Dr. Shouguo Gao

LCH-70 Heather Dorsey-Hirt  
*The Host-Pathogen Dynamics of Enterovirus D-68*  
Truckee Meadows Community College (Nevada)  
Preceptors: Dr. Marianita Santiana, Dr. Nihal Altan-Bonnet

LCH-71 Vinay Durbhakula  
*A Simple Fluorescent-Lipid Based Assay to Identify Plasma Lipoprotein-X*  
Winston Churchill High School (Maryland)  
Preceptors: Dr. Edward Neufeld, Dr. Masaki Sato, Dr. Lita Freeman, Dr. Alan Remaley
LCH-72 Nuha Gani  
*Top Predictors of All-cause Mortality in Racial Subgroups of the SPRINT Trial Identified by Machine Learning*
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Ahmed Hasan, Dr. Yves Rosenberg, Dr. Amit Dey, Dr. Colin Wu

LCH-73 Grace Ge  
*Modifiers of Blood Pressure in Elastin-insufficient Mice*
University of Maryland, College Park (Maryland)  
Preceptors: Ms. Zhouhong Cao, Mr. Russell Knutsen, Dr. Kitman Tsang, Dr. Beth Kozel

LCH-74 Elnaz Ghajar-Rahimi  
*Automated Method for Quantification and Analysis of Flight Behavior in Drosophila*
University of Virginia (Virginia)  
Preceptors: Dr. Brian Glancy, Dr. Prasanna Katti

LCH-75 Adriana Grewe, Chloe Kesey  
*Effects of Variations in Osmium Staining on Membrane Visibility*
Walter Johnson High School (Maryland), Walter Johnson High School (Maryland)  
Preceptors: Dr. Christopher Bleck, Dr. Eric Lindberg, Ms. Heba Mohammed, Dr. Prianka Anand

LCH-76 Carla Griffiths  
*Using Quantitative Microscopy to Map Differential Protein Expression in the Cortical Collecting Duct*
University College London (Non-U.S.)  
Preceptor: Dr. Mark Knepper

LCH-77 Lina Gu  
*Engineering Nonhuman Primate Lymphocytes to Express CD33 Chimeric Antigen Receptor (CAR)*
Georgia Institute of Technology (Georgia)  
Preceptors: Dr. David Young, Dr. Cynthia Dunbar

LCH-78 Wonhee Han  
*Role of GCN5L1 in Lysosome Homeostasis*
Carnegie Mellon University (Pennsylvania)  
Preceptors: Dr. Michael Sack, Dr. Kaiyuan Wu

LCH-79 Jeffrey Hayashi  
*Over-expression of C-X-C Chemokine Receptors CXCR4 in Endothelial Cells Causes Vascular Abnormalities during Angiogenesis*
University of Portland (Oregon)  
Preceptors: Dr. Yoh-suke Mukouyama, Dr. Wenling Li
LCH-80 Grace Igbinosun  
*Measuring Three Stressors on Erythrocytes Using LoRRca Maxis Osmoscan*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Pierre-Christian Violet, Mrs. Laurel Mendelsohn, Dr. Mark Levine, Dr. Swee Lay Thein

LCH-81 Promotto Islam  
*Transgelin: A Novel Regulator of Low Density Lipoprotein Metabolism*  
University of Virginia (Virginia)  
Preceptors: Dr. Diego Lucero, Dr. Lita Freeman, Dr. Edward Neufield, Dr. Alan Remaley

LCH-82 Sabrina Johnson  
*Bax and Bid Sequestration into Amyloid-like Fibers by Humanin*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Nico Tjandra, Dr. Daniel Morris

LCH-83 Ruth Kim  
*Identifying Target Cells for Norovirus Pathogenesis*  
Northern Virginia Community College (Virginia)  
Preceptors: Dr. Sourish Ghosh, Dr. Manish Kumar, Dr. Nihal Alton-Bonnet

LCH-84 Laya Krishnan  
*Effect of CRISPR-Cas9 Deletion of Myosin Light Chain Kinase on Phosphoproteome of Renal Epithelial Cells: A Bioinformatic Analysis*  
University of Illinois at Chicago (Illinois)  
Preceptors: Dr. Mark Knepper, Dr. Viswanathan (“Raghu”) Raghuram

LCH-85 Oscar Levine  
*The Association between BMI and Cardiac Chamber Size as Measured by a Novel Artificial Intelligence (AI) System on Cardiac Computed Tomography Angiography (CCTA) Images*  
Washington University in St. Louis (Missouri)  
Preceptors: Dr. Sujata Shanbhag, Ms. Vy Bui, Dr. Li-Yueh Hsu, Dr. Marcus Chen

LCH-86 Zyannah Mallick  
*Comparative Analysis of Top Predictors of Hard Outcomes Identified by Machine Learning in the BARI 2D and STICH Trials*  
College of William and Mary (Virginia)  
Preceptors: Dr. Ahmed Hasan, Dr. Yves Rosenberg, Dr. Amit Dey

LCH-87 Ash Lee Manley  
*Analysis of Segmentation and Filtering Effects on Chromatin and Nuclei’s 3D Volume in Yeast Cells*  
Virginia Polytechnic Institute and State University (Virginia)
Preceptors: Dr. Christopher Bleck, Dr. Eric Lindberg

LCH-88 Dominique Mata
*Mitochondrial Respiration Affects Intracellular Oxygen Levels*
University of Texas at El Paso (Texas)
Preceptors: Dr. Mateus Mori, Dr. Rozhin Penjweini, Dr. Jay Knutson, Dr. Paul Hwang

LCH-89 Allanah Matthews
*Production, Purification, and Fluorophore-labeling of a Rabbit Polyclonal Antibody to the Na-K-ATPase alpha-1 Subunit*
University at Albany, State University of New York (New York)
Preceptors: Dr. Mark Knepper, Dr. Lihe Chen

LCH-90 Franklin Mendelsohn
*Mapping the Structure of Endocytosis*
Northwood High School (Maryland)
Preceptor: Dr. Justin Taraska

LCH-91 Halyn Orellana
*Targeted RNA Cleavage and Protection Using CRISPR-associated RNA Guided Ribonucleases Cas13b and CasRx*
Georgetown University (District of Columbia)
Preceptors: Dr. Sarah Fritz, Dr. J. Robert Hogg

LCH-92 Nikhita Perry
*Role of Epigenetic Reprogramming on Human Endogenous Retrovirus Type E (HERV-E) Expression in Clear Cell Renal Cell Carcinoma (ccRCC)*
University of Pittsburgh (Pennsylvania)
Preceptors: Dr. Elena Cherkasova, Dr. Stefan Barisic, Mr. Robert Reger, Dr. Richard Childs

LCH-93 Sana Rahman
*Re-validation of Cigarette Smoking Susceptibility Measures Using Longitudinal Data from Population Assessment of Tobacco and Health (PATH) Study*
Georgetown University (District of Columbia)
Preceptors: Dr. Eliseo Perez-Stable, Dr. Erik Rodriguez, Ms. Saida Coreas

LCH-94 Sanim Rahman
*The Molecular Motor: Mechanics and Energetics of ATP Synthase*
University of South Florida (Florida)
Preceptors: Dr. Jose Faraldo, Dr. Wenchang Zhou

LCH-95 Rahul Ramraj
*High Dimensional Flow Cytometry Reveals Deficiencies in B but not T Cell Subsets in Bone Marrow of AML Patients Compared with Appropriately Age-Mismatched Healthy Donors*
Virginia Commonwealth University School of Medicine (Virginia)
Preceptors: Dr. Christopher Hourigan, Ms. Meghali Goswami, Dr. Laura Dillon, Dr. Pradeep Dagur

LCH-96 Karim Salhadar
CRISPR-Cas9 Deletion of Protein Kinase A in Aquaporin-2-expressing Collecting Duct Cells: Effect on Phosphoproteome
University of Texas at Austin (Texas)
Preceptors: Dr. Mark Knepper, Dr. Viswanathan Raghuram, Dr. Chin-Rang Yang, Dr. Kavee Limbutara

LCH-97 Janyla Seltzer
Exploring the Connection between Neighborhood Change and Cardiometabolic Health: Identification of Areas of Gentrification in Washington, D.C.
Howard University College of Medicine (District of Columbia)
Preceptor: Dr. Tiffany Powell-Wiley

LCH-98 Ali Sethi
In-vitro and in-vivo Lipolysis Stimulated by D6PV Peptide
Univeristy of California, Davis (California)
Preceptors: Dr. Denis Sviridov, Dr. Anna Wolska, Dr. Alan Remaley

LCH-99 Sana Shahbaz Ahmad
Proteomics Analysis of Janus Kinase 1 (JAK1) Signaling in T-cell Immunity
Northern Virginia Community College (Virginia)
Preceptors: Dr. Jianhua Xiong, Dr. Warren J Leonard

LCH-100 Feven Tadesse
Circulating Mitochondrial and Nuclear DNA in Heart Transplant Recipients: Optimizing Biomarkers of Organ Transplant Rejection
John F. Kennedy High School (Maryland)
Preceptors: Dr. Hannah Valantine, Dr. Sean Agbor-Enoh, Dr. Moon Kyoo Jang, Mr. Kenneth Bhatti

LCH-101 Adam Tyrlik
Understanding Factors Involved in E and A Wave Fusion in the Pulse Wave Doppler Mitral Valve Signal in Mice
University of Maryland, College Park (Maryland)
Preceptor: Dr. Danielle Springer

LCH-102 Lauren Vaughn
High Sensitivity Detection of Mutations Associated with Drug Resistance in Chronic Lymphocytic Leukemia Patients
University of Florida (Florida)
Preceptors: Dr. Chingiz Underbayev, Dr. Adrian Wiestner

LCH-103 Emily Vollmer
*Investigating the Replication and Immune Response Evasion of Vesicle-cloaked Rotavirus*
Indiana University (Indiana)
Preceptors: Dr. Sourish Ghosh, Dr. Nihal Altan-Bonnet

LCH-104 Sheavonnie Wright
*Exercise Tolerance and Activity Levels in Individuals with Williams Beuren Syndrome*
Lehman College (New York)
Preceptors: Dr. Beth Kozel, Ms. Neelam Raja, Ms. Zoe Wong, Mr. Russell Knutsen

LCH-105 Victoria Xin
*Antihypertensive Medication for Revascularized Patients with Machine Learning*
Montgomery Blair High School (Maryland)
Preceptors: Dr. Yves Rosenberg, Dr. Ahmed Hasan

LCH-106 Harsh Yadav
*Bioinformatics Approach for Quantification of Long Non-coding RNA in Cancer*
Richard Montgomery High School (Maryland)
Preceptors: Dr. Mehdi Pirooznia, Dr. Vijender Chaitankar, Dr. Fayaz Seifuddin

LCH-107 Josette Yeboah
*Assessing the Impact of Neurotransmitters on NK Cell Functionality*
Lafayette College (Pennsylvania)
Preceptors: Dr. Yvonne Baumer, Mr. Cristhian Gutierrez Huerta, Dr. Tiffany Powell-Wiley

LCH-108 Peter Yong
*Is There a Relationship between Mitochondrial Morphology and Oxygen Consumption?*
University of Minnesota Twin Cities (Minnesota)
Preceptors: Dr. Rozhin Penjweini, Dr. Jay Knutson

LCH-109 Nathan Zimmerberg
*Towards Faster Constant-pressure Molecular Dynamics Simulations*
Cornell University (New York)
Preceptors: Dr. Andrew Simmonett, Mr. Samarjeet Prasad, Dr. Richard Pastor, Dr. Bernard Brooks

National Institute on Aging (NIA)

LCH-110 Christiana Agbo
*Ceramide Increases Extracellular Vesicle Secretion via Reactive Oxygen Species in beta Cells*
Cornell University (New York)
Preceptor: Dr. Paritosh Ghosh

LCH-111 Oluwafunto Akindona
*Genetic Modification of the Auto-inhibitory IAK Motif in KIF5A*
Carleton College (Minnesota)
Preceptors: Dr. Bryan Traynor, Dr. Sara Saez-Atienzar

LCH-112 Pelumi Akinpelu
*Evaluation of miR-200 Family in Murine Left Ventricle*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Cristina Florio, Dr. Edward Lakatta

LCH-113 Battulga Amarbat
*Senescence as a Function of Age in GESTALT Skin Fibroblasts*
Rutgers University (New Jersey)
Preceptors: Dr. Kotb Abdelmohsen, Dr. Martina Rossi, Ms. Rachel Munk

LCH-114 Ahlina Archibald
*Using Novel Methodologies to Explore iPS Cell Models*
Howard University (District of Columbia)
Preceptors: Ms. Rebekah Langston, Dr. Mark Cookson

LCH-115 Mercy Arkorful
*Examining WAVE2 Differential Gene Expression and its Link to Hypertension Health Disparities in Women*
Morgan State University (Maryland)
Preceptors: Dr. Nicole Noren Hooten, Dr. Michele Evans, Dr. Douglas Dluzeb

LCH-116 Ray Bai
*Expanding upon an Interactive Manhattan Plot to Better Understand and Interpret SNP Data*
Thomas Jefferson High School for Science and Technology (Virginia)
Preceptors: Dr. Bryan Traynor, Dr. Ruth Chia

LCH-117 Ann Bensen
*Proteostasis of ARC in Rat Model of Cognitive Aging*
Towson University (Maryland)
Preceptors: Dr. Perla Moreno-Castilla, Dr. Peter Rapp

LCH-118 Olouwakemi Biaou
*The Characterization of the SIRT6-Open Tubular column*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Ruin Moaddel, Dr. Rita Lima
LCH-119 Wyatt Bollinger
Effect of a Chronic Treatment with an ACE Inhibitor, Lisinopril, on Central Arterial Stiffness, Cerebral Vasculature, and Tissue Remodeling in Adult Hypertensive Dahl Salt-Sensitive Rats
University of Nevada, Reno (Nevada)
Preceptors: Dr. Olga Fedorova, Dr. Ondrej Juhasz

LCH-120 Alexandra Cancio-Bello
Familiar KIF5A Mutation in ALS Leads to a Hyperactivation of the Protein
Howard University College of Medicine (District of Columbia)
Preceptors: Dr. Sara Saez, Dr. Bryan Traynor

LCH-121 Meagan Colie
Identification of Aging Viomarkers in Human T-cells
Appalachian State University (North Carolina)
Preceptors: Dr. Christopher Dunn, Mr. Thomas Nguyen, Dr. Achouak Achour, Dr. Nan-Ping Weng

LCH-122 Will Crews
Studying the Function of FBXW7 Hot Spot Mutation (R475) Using Biochemical and Mouse Model Approaches
Harding University (Arkansas)
Preceptors: Dr. Veenu Tripathi, Dr. Norman Sharpless, Mr. Ian McClain-Caldwell

LCH-123 Corrina Davis
Investigating the Role of Transposable Elements in the Predisposition and Pathogenesis of Parkinson’s Disease
Lafayette College (Pennsylvania)
Preceptor: Dr. Kimberley Billingsley

LCH-124 Dominique Ebedes
Antibodies and Antigens of Atherosclerosis
Georgetown University (District of Columbia)
Preceptors: Dr. Mark Hutchinson, Dr. Patricia Gearhart

LCH-125 Sarah Edoho
The Relationship between DNA Damage and Mitophagy in C. Elegans
Howard University (District of Columbia)
Preceptor: Dr. Anthony Moore

LCH-126 Patrick Fuller
Oligomeric Aβ42 Changes Prion Protein Levels in Neuronal-derived Extracellular Vesicles
University of California, Santa Cruz (California)
Preceptors: Dr. Dimitrios Kapogiannis, Dr. Carlos Nogueras-Ortiz
LCH-127 Alana Germroth  
*Identifying Microsomal Glutathione S-Transferase as a Senescence Marker*  
Centennial High School (Maryland)  
Preceptors: Dr. Kotb Abdelmohsenk, Dr. Dimitrios Tsitsipatis

LCH-128 Jeffrey Gu  
*Prevalence of Mitochondria-derived Vesicles in Neurons*  
Duke University (North Carolina)  
Preceptors: Dr. Pamela Yao, Dr. Dimitrios Kapogiannis

LCH-129 Kailin Guo  
*The Use of CRISPR and Cas9 to Disrupt Genes Enriched in the Midbrain to Explore Their Function in PD Pathology*  
University of California, Los Angeles (California)  
Preceptors: Dr. Lixin Sun, Dr. Wotu Tian

LCH-130 Jamie Hartnett  
*Epigenetic Targeting via CRISPR/Cas9 to Modulate Liver Genes during Aging*  
Towson University (Maryland)  
Preceptors: Dr. Na Yang, Dr. Payel Sen

LCH-131 Nicolas Held  
*The Gut Microbiome in Mice Serially Infected with Viruses (γHV-68, Sendai, mCMV, and H. polygyrus)*  
Eleanor Roosevelt High School (Maryland)  
Preceptor: Dr. Kevin Becker

LCH-132 Katherine Ho  
*Genetic Screens to Identify Functional Interactors of Topoisomerase 3-beta and TDRD3*  
Stanford University (California)  
Preceptors: Dr. Tianyi Zhang, Dr. Weiping Shen, Dr. Weidong Wang

LCH-133 Derek Huell  
*Cerebellum Purkinje Cell Vulnerability in Cognitive Aging: Beyond the Hippocampus*  
Georgia Institute of Technology (Georgia)  
Preceptors: Dr. Ciana Cooper, Dr. Cristina Banuelos

LCH-134 Aditya Joshi  
*A Comparison of Voxel Wise Partial Volume Correction Methods for Positron Emission Tomography*  
Johns Hopkins University (Maryland)  
Preceptors: Dr. Murat Bilgel, Dr. Susan Resnick
LCH-135 Jacob Joubert  
*How Can the Mighty TGAC8 Heart Survive?*  
Howard University (District of Columbia)  
Preceptor: Dr. Maria Grazia Perino

LCH-136 Jordan Kalai  
*Sequencing GCH1 in Two Families with Dopa-responsive Dystonia*  
Columbia University (New York)  
Preceptors: Ms. Monica Diez-Fairen, Dr. Sara Bandres-Ciga, Dr. Andrew Singleton

LCH-137 Andreanna Le  
*The Role of ALDH1A1 in Protecting Dopamine Neurons against α-synuclein–mediated Cytotoxicity*  
Sidwell Friends School (District of Columbia)  
Preceptors: Ms. Jie Dong, Dr. Lisa Chang, Dr. Huaibin Cai, Dr. Andrew Singleton

LCH-138 Sam Lee  
*Analyzing Mortality Risk through Hematological Parameters in Study on Longitudinal Aging in Mice (SLAM)*  
Massachusetts Institute of Technology (Massachusetts)  
Preceptors: Dr. Dushani Palliyaguru, Dr. Camila Vieira Ligo Teixeira, Dr. Eric Shiroma, Dr. Rafael De Cabo

LCH-139 Emily Lerner  
*Role of Cyclin-dependent Kinase Inhibitor p16 in Medullary Thymic Epithelial Cell Development and Immunosenescence in Transgenic Mouse Models*  
University of Michigan (Michigan)  
Preceptors: Dr. Suresh Kumar, Mr. Ian McClain-Caldwell, Dr. Veenu Tripathi, Dr. Norman Sharpless

LCH-140 Winston Lin  
*Integrative Analysis of DNA Methylation and Gene Expression Data Identifies Their Age-associated Changes in CD8+ T Cells and NK Cells*  
Johns Hopkins University (Maryland)  
Preceptors: Mr. Raheel Ahmad, Mr. Thomas Nguyen, Dr. Nan Ping Weng

LCH-141 Brittany Linus  
*Mapping Mutations during Somatic Hypermutation in Antibody Variable Regions*  
Academy of Health Sciences at Prince George's Community College (Maryland)  
Preceptors: Dr. Justin Heltzel, Dr. Patricia Gearhart
LCH-142 Brianah McCoy  
*Identification of MYH3, MYL2, NLRP3, and CNR1 as Molecular Markers for Human Skeletal Muscle Aging*  
Arizona State University (Arizona)  
Preceptor: Dr. Qing Liu

LCH-143 Amelie Nkodo  
*Longitudinal Associations between Monetary Value of the Diet, DASH Diet Score, and the Allostatic Load among Middle-aged Urban Adults*  
Johns Hopkins University (Maryland)  
Preceptors: Dr. May Baydoun, Dr. Michele Evans, Dr. Alan Zonderman

LCH-144 Evián Pérez Rivera  
*Longitudinal White Matter Microstructural Decline Is Faster in Preclinical MCI/AD Compared to Cognitively Normal Older Adults*  
San Juan Bautista School of Medicine (Puerto Rico)  
Preceptors: Dr. Owen A Williams, Dr. Andrea T Schafer, Dr. Bennet A Landman, Dr. Susan M Resnick

LCH-145 Jewyl Raikes  
*REM-associated Hippocampal Activation and Inhibition in Normal Cognitive Aging*  
St. John's University (New York)  
Preceptors: Dr. Craig Myrum, Ms. Margaret Stelzner, Mr. Joshua Hunt, Dr. Peter Rapp

LCH-146 Shardul Rakshit  
*Cluster Distributions of Ryanodine Receptors in Cardiac Pacemaker Cells Revealed By Super-resolution Microscopy and 3D Computational Geometry Algorithms*  
Johns Hopkins University (Maryland)  
Preceptors: Dr. Victor Maltsev, Dr. Michael Stern

LCH-147 Carlos Reyes-Sepulveda  
*The Impact of Nrf2 on Sex-specific Differences under Dietary Interventions*  
University of Puerto Rico at Bayamón (Puerto Rico)  
Preceptors: Dr. Laura Corrales-Diaz Pomatto, Ms. Oye Bosompra, Mr. Jonathan Kato, Ms. Sarah Wong

LCH-148 O'wayne Rodney  
*MicroRNA Regulators of Senescence Transcriptome Signature*  
Howard University (District of Columbia)  
Preceptors: Mr. Kotb Abdelmohsen, Dr. Allison Herman, Dr. Poonam Pandey

LCH-149 Samuel Rosemore  
*Behavioral Effects of rTMS in a Rat Model of Neurocognitive Aging*  
Beth Tfiloh Dahan Community School (Maryland)
LCH-150 Gabriel Sacarello
Association of Central Arterial Stiffness with Hippocampal Blood Flow and Neuronal Viability in Hypertensive Dahl Salt Sensitive Rats treated with an ACE inhibitor, lisinopril
San Juan Bautista School of Medicine (Puerto Rico)
Preceptors: Dr. Olga Fedorova, Mr. Samuel Ajamu

LCH-151 Valeria Santiago Padilla
Alterations in Mitochondrial Ultrastructure in Alzheimer’s Disease: Effect of Ketone and NAD+ Supplementation
University of Puerto Rico, Río Piedras Campus (Puerto Rico)
Preceptors: Dr. Tyler Demarest, Dr. Vilhelm Bohr, Dr. Mark Mattson

LCH-152 Aleah Scott
Mutation in XRCC1 Can Lead to a Mitochondrial Dysfunction
Baltimore Polytechnic Institute (Maryland)
Preceptors: Ms. Arina Perez, Dr. Vilhelm Bohr

LCH-153 Everett Stubblefield
miR-200 Modulation in Cardiac Aging
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Cristina Florio, Dr. Edward Lakatta

LCH-154 Seth Talyansky
Imaging Transcription Factor Activity and Gene Expression in Single Primary Macrophages
Stanford University (California)
Preceptors: Dr. Erik Martin, Dr. Mia Sung

LCH-155 Diego Tanton
Changes in Lean Muscle Mass and Oral Glucose Tolerance as a Function of Age in the Study of Longitudinal Aging in Mice (SLAM)
Johns Hopkins University (Maryland)
Preceptors: Dr. Dushani Palliyaguru, Dr. Eric Shiroma, Dr. Michel Bernier, Dr. Rafael de Cabo

LCH-156 August Thomas
High-throughput Variance Inflation Factor (VIF) Filtering via HPC for Massive Datasets
Virginia Commonwealth University (Virginia)
Preceptors: Dr. Michael Nalls, Dr. Sara Bandres, Ms. Mary Makarious

LCH-157 Ethan Trepka
Three Dimensional Quantification of Septohippocampal Projection Systems in Young and Aged Rats Using Light Sheet Microscopy
Dartmouth College (New Hampshire)
Preceptors: Dr. Cristina Banuelos, Dr. Sharyn Rossi, Dr. Peter Rapp

LCH-158 Kirtana Veeraraghavan  
*Identification and Characterization of Circular RNA in Alzheimer's Disease*  
University of California, Los Angeles (California)  
Preceptors: Dr. Supriyo De, Mr. Gautam Kundu, Dr. Krystyna Mazan-Mamczarz, Mr. Christopher Coletta

LCH-159 Guillermo Veron  
*Elementary Intracellular Calcium Signals Are Initiated by a Phase Transition of Calcium Release Channels in a Metastable State*  
University of California, Los Angeles (California)  
Preceptors: Dr. Victor Maltsev, Dr. Michael Stern, Dr. Anna Maltsev

LCH-160 Jewel Washington  
*Comparison of Glucose Metabolism and Insulin Physiology between C57BL/6 Mouse Strains*  
North Carolina Agricultural and Technical State University (North Carolina)  
Preceptors: Dr. Caio Mazucanti, Dr. Jennifer O'Connell, Dr. Josephine Egan

LCH-161 Deja Webber  
*The Role of the Sister Chromatid Cohesion Helicase DDX11 in Double Strand Break Repair*  
Loyola Marymount University (California)  
Preceptors: Dr. Arindam Datta, Dr. Robert Brosh

LCH-162 Aileen Zhang  
*Cockayne Syndrome Protein B Interacts with LEO1 in Repairing Genotoxin-induced DNA Damage*  
University of California, Berkeley (California)  
Preceptors: Dr. Vinod Tawari, Dr. Vilhelm Bohr

**Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)**

LCH-163 John Ahrens  
*Targeting Autophagy in Pluripotent Cancer Cells*  
Rice University (Texas)  
Preceptors: Dr. Arup Chakraborty, Dr. Melvin DePamphilis

LCH-164 Zarina Akbary  
*Investigating the Localization of a Legionella Virulence Factor That Targets Host Cell Mitochondria*  
Drew University (New Jersey)  
Preceptors: Dr. Xiao Li, Dr. Matthias Machner
LCH-165 Syed Ali  
*The Effects of CHD8 Mutations on Intestinal Dysmotility and Peristalsis Rate in a Larval Zebrafish (Danio rerio) Model of Autism*  
Bluefield State College (West Virginia)  
Preceptors: Dr. Harold Burgess, Dr. James Walters

LCH-166 Dhanya Asokumar  
*Interneuron Fate and Maturation in Ezh2 Mutant Mice*  
Johns Hopkins University (Maryland)  
Preceptors: Mr. Christopher Rhodes, Dr. Tim Petros

LCH-167 Kadee Atkinson  
*Does Maternal Race/Ethnicity Modify the Association between Maternal Psychiatric Disorders and Preterm Birth?*  
Howard University (District of Columbia)  
Preceptors: Dr. Pauline Mendola, Dr. Carrie Nobles, Ms. Jenna Kanner

LCH-168 Zoya Bharmal  
*Role of MC3R in Energy Homeostasis*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Jack Yanovski, Dr. Tusharkumar Patel

LCH-169 Andrew Blum  
*Using Dual Channel Fluorescence Cross Correlation Spectroscopy to Assess Membrane Binding Dynamics of Alpha-Synuclein*  
Colgate University (New York)  
Preceptors: Dr. Maria Queralt Martin, Dr. Tatiana Rostovtseva

LCH-170 Catherine Boehmer  
*A Genetic Screen for Tissue-specific Epigenetic Regulators*  
Bethesda-Chevy Chase High School (Maryland)  
Preceptors: Dr. Aniket Gore, Dr. Kiyohito Taimatsu, Ms. Avery Swearer, Dr. Brant Weinstein

LCH-171 Caleise Britt  
*Initial Characterization of Mgat5/Npc1 Mice*  
St. Johns University (New York)  
Preceptor: Dr. Niamh Cawley

LCH-172 Varuna Chopra  
*Modulating Multidrug Efflux Pumps in Pseudomonas aeruginosa*  
Northern Virginia Community College (Virginia)  
Preceptors: Dr. Gisela Storz, Dr. Mona Orr, Ms. Franchesca Uribe-Rheinbolt
LCH-173 Iqra Choudhry  
*Metabolism and the Regulation of Meiotic Progression in Drosophila*  
Georgetown University (District of Columbia)  
Preceptors: Mr. Kuikwon Kim, Dr. Mary Lilly, Dr. Chun-Yuan Ting

LCH-174 Seymone Clarke  
*Socioeconomic Status and Parent Perception of Disordered Eating Behaviors in Relation to Food Intake Patterns Among Youth*  
Holton-Arms School (Maryland)  
Preceptors: Dr. Jack Yanovski, Ms. Meghan Byrne, Ms. Sarah Rubin, Dr. Marian Tanofsky-Kraff

LCH-175 Urjita Das, Dhanya Asokumar  
*Quantifying the Developmental Time Points of MGE-derived Cells*  
University of Maryland, College Park (Maryland), Johns Hopkins University (Maryland)  
Preceptors: Mr. Sanan Venkatesh, Dr. Tim Petros

LCH-176 Katherine Degner  
*Characterization of npc2 Expression in Zebrafish Embryos*  
Washington and Lee University (Virginia)  
Preceptors: Ms. Ana Johnson Escauriza, Dr. Wei-Chia Tseng, Dr. Christopher Wassif, Dr. Forbes Porter

LCH-177 Delaram Doorandish  
*The Purification and Characterization of Neuronally Derived Exosomes*  
University of Maryland, Baltimore County (Maryland)  
Preceptor: Dr. Niamh Cawley

LCH-178 Olufisola Famuyiwa  
*Suppression of High-fat Diet-induced Inflammation by Colchicine in Mice: Modulation of the NLRP3 Inflammasome*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Jack Yanovski, Dr. Tusharkumar Patel, Mr. Jordan Levine

LCH-179 Alisa Forsberg  
*A Novel Transgenic Zebrafish Line to Study Epigenetics during Regeneration*  
Bethesda-Chevy Chase High School (Maryland)  
Preceptors: Dr. Aniket Gore, Dr. Kiyohito Taimatsu, Ms. Avery Swearer, Dr. Brant Weinstein

LCH-180 Kartik Gannamaneni  
*Expression Studies on Alternative Translation Initiation Sites Leading to N-terminally Extended Protein Isoforms*  
Purdue University (Indiana)  
Preceptors: Dr. Shardul Kulkarni, Dr. Jon Lorsch
LCH-181 Athanasios Gkirgkinoudis, Marian Fernandez  
Renal Manifestations in Carney Complex  
School of Medicine, University of Patras (Non-U.S.), Wheaton High School (Maryland)  
Preceptors: Dr. Constantine Stratakis, Dr. Crystal Kamilaris, Dr. Christina Tatsi, Dr. Georgia Pitsava

LCH-182 Julia Grafstein  
Why Are Enhancers Directional?  
Walter Johnson High School (Maryland)  
Preceptors: Dr. Karl Pfeifer, Dr. Christopher Tracy

LCH-183 Mahad Gudal  
Early Life Origins of All-cause Mortality in the National Collaborative Perinatal Project  
University of Massachusetts Amherst (Massachusetts)  
Preceptors: Dr. Stephen Gilman, Dr. Risë Goldstein, Ms. Gina Ma, Dr. Jing Yu

LCH-184 Nicholas Habibian  
Effects of the Combination of Aurora Kinase Inhibitor, AMG 900, and Wnt/Beta Catenin Pathway Inhibitor, PNU 74654, on Adrenocortical Tumor Cells  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Andrea Gutierrez Maria, Dr. Constantine A. Stratakis

LCH-185 Eric Hommel  
Generation of NFATc1 Reporter Zebrafish Model Using Tol2-mediated Transgenesis  
Northern Virginia Community College (Virginia)  
Preceptors: Dr. Hyun Min Jung, Dr. Brant Weinstein

LCH-186 Syan Timothy Lopez  
Functional Analysis of Neural Crosstalk in Taste Discrimination in Drosophila melanogaster  
Solano Community College (California)  
Preceptors: Dr. Bo-Mi Song, Dr. Mark Stopfer

LCH-187 Melissa Melehy  
ABCA1 and Its Potential Association with Nonalcoholic Fatty Liver Disease  
Stone Ridge School of the Sacred Heart (Maryland)  
Preceptors: Ms. Michelle Bloyd, Dr. Edra London, Dr. Constantine Stratakis

LCH-188 Emmi Mills  
Sperm Suppression and Hormone Levels over Time in Response to Nestorone®/Testosterone Gel Treatment  
Walter Johnson High School (Maryland)  
Preceptors: Dr. Diana Blithe, Dr. Jill Long, Dr. Min Lee
LCH-189 Jan Mooney
*Assessing the Influences of Stress and Motivation for Healthy Eating on Diet Quality during Pregnancy and Postpartum*
University of North Carolina at Charlotte (North Carolina)
Preceptors: Dr. Tonja Nansel, Dr. Leah Lipsky

LCH-190 Amitoj Nagaich
*Projection Patterns of Olfactory Receptor Neurons in the Antennal Lobe, a First Order Neural Center*
Walter Johnson High School (Maryland)
Preceptors: Dr. Mark Stopfer, Dr. Alejandra Boronat-Garcia

LCH-191 Nicolas Nava
*Evaluation of Somatic ARMC5 Genetic Variability in Primary Macro Nodular Adrenocortical Hyperplasia(PMAH)*
DeMatha Catholic High School (Maryland)
Preceptors: Dr. Fabio Faucz, Dr. Constatine Stratakis

LCH-192 Tuyet Nguyen
*Role of Mannose Receptors in Cerebrospinal Fluid Filtration by Vascular-associated Meningeal Scavenger Cells*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Marina Venero Galanternik, Mr. Ryan Gober, Dr. Brant Weinstein

LCH-193 Katherine O'Meara
*The Clinical Significance of Elevated NT-proB-type Natriuretic Peptide (BNP) in Children with Creatine Transporter Deficiency (CTD)*
St. Charles High School (Maryland)
Preceptors: Mr. John Perreault, Dr. Simona Bianconi

LCH-194 Frances Odibo
*Implications of Placental Epigenetic Aging on Fetal Development and Maternal Outcomes*
University of California, Berkeley (California)
Preceptors: Dr. Fasil Tekola-Ayele, Dr. Tsegaselassie Workalemahu, Dr. Marion Ouidir

LCH-195 Isaac Oh
*Optimizing a Zebrafish Brain Atlas in a Lightweight Web Browser along with Virtual Reality*
Virginia Polytechnic Institute and State University (Virginia)
Preceptor: Dr. Harold Burgess

LCH-196 Aaron Ouyang
*Structural and Functional Classes of Higher Order Olfactory Neurons in an Insect Model System*
College Preparatory School (California)
Preceptors: Dr. Zane Aldworth, Dr. Mark Stopfer

LCH-197 Cameron Paranzino
Characterization of a Genetic Strategy to Selectively Target GABAergic Interneurons Located in the Lacunosum Moleculare Subfield of Rodent Hippocampus
Walter Johnson High School (Maryland)
Preceptors: Dr. Chris McBain, Dr. Ramesh Chittajallu

LCH-198 Jeremy Popowitz
Identifying Regulatory Factors for Axonal Transport Using Zebrafish Lateral Line Axon Terminals Swellings
American University (District of Columbia)
Preceptor: Dr. Katie Drerup

LCH-199 Kaitlin Powell
Association between the Severity of Hypokalemia and Primary Aldosteronism
Tougaloo College (Mississippi)
Preceptors: Dr. Fady Hannah-Shmouni, Mr. Jancarlos Camacho

LCH-200 Megan Rescigno
Evaluation of the Thymus in Pediatric Patients with Cushing Disease
University of Nevada, Reno School of Medicine (Nevada)
Preceptors: Dr. Constantine Stratakis, Dr. Christina Tatsi, Dr. Georgios Papadakis

LCH-201 Vanessa L. Reyes
Characterizing Vascular Endothelial Cell RHOA Function in Zebrafish
Colonel Zadok Magruder High School (Maryland)
Preceptors: Dr. Laura M. Pillay, Dr. Brant M. Weinstein

LCH-202 Chunghwan Ro
Liaison between Secondary Messengers: Effect of ppGpp on the cAMP-CRP Regulon
College of William & Mary (Virginia)
Preceptors: Dr. Llorenç Fernandez-Coll, Dr. Michael Cashel

LCH-203 Erin Santos
The Effects of AP-4 Deficiency on Oligodendrocyte Maturation and Myelination
Colgate University (New York)
Preceptor: Dr. Doug Fields

LCH-204 Anaya Savoy
Phenotypical Characterization of ybiI Gene in E. coli: A Gene with Unknown Function
Academy of Health Sciences at Prince George's Community College (Maryland)
Preceptors: Dr. Llorenç Fernandez Coll, Dr. Michael Cashel
LCH-205 Igor Semyonov  
*Black Lipid Membrane Deformation Energetics Probed by Gramicidin A Channel*
George Mason University (Virginia)  
Preceptors: Dr. Andrew Beaven, Dr. Alexander Sodt

LCH-206 Steven Spector  
*Copy Number Variations of PKA Catalytic Subunits Are Present in Isolated Micronodular Adrenocortical Disease (iMAD)*
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Nikolaos Settas, Dr. Constantine Stratakis

LCH-207 Zachary Sturgeon  
*Determinants of AcrZ interaction with E. coli Multidrug Efflux Pumps*
Santa Rosa Junior College (California)  
Preceptors: Dr. Gisela Storz, Dr. Mona Orr, Ms. Franchesca Uribe-Rheinbolt

LCH-208 Biniam Teferedegn  
*Creating an UNC 13D and Biaap3 Double Mutant Zebrafish Line to Study Blood Vessel Development*
Howard Community College (Maryland)  
Preceptors: Dr. Scott Paulissen, Dr. Brant Weinstein

LCH-209 Samuel Teshome  
*Mechanistic Characterization of eIF1 N-terminal Tail (eIF1 NTT) in Start Codon Recognition*
University of Rochester (New York)  
Preceptors: Dr. Jagpreet Nanda, Dr. Jon Lorsch

LCH-210 Alexis Thornburg  
*A Yeast Model of Human MEHMO Syndrome Mutations in Translation Factor eIF2gamma*
Case Western Reserve University (Ohio)  
Preceptors: Dr. Sara Young-Baird, Dr. Thomas Dever

LCH-211 Clayton Tindell  
*Cushing's disease: Evaluation of the TGF-Beta Pathway in the Absence of Faf1 in the Pituitary Gland*
John Carroll University (Ohio)  
Preceptors: Mr. Niko Darby, Dr. Christina Tatsi, Dr. Constantine Stratakis

LCH-212 Harini Venkataganesh  
*A Requirement for Lysine-specific Histone Demethylase 1A (Lsd1) for T cell Development*
University High School (Irvine, CA) (California)  
Preceptors: Dr. Paul Love, Dr. LiQi Li, Mr. Daniel Stamos, Ms. Lauren Clubb
LCH-213 Rhianna Vergeer
Interaction of Weight Status and Loss of Control Eating Status on Measures of Psychosocial Distress among Youth
University of Michigan (Michigan)
Preceptors: Dr. Jack Yanovski, Ms. Deborah Altman, Ms. Sophie Ramirez, Mrs. Sarah Lemay Russell

LCH-214 Tarun Vippa
The Dynamics of Collective Cell Migration Explored via Chemical Inhibition of Rho Kinase and Arp2/3 Complex in Zebrafish Embryos
University of Virginia (Virginia)
Preceptors: Dr. Damian Dalle-Nogare, Dr. Ajay Chitnis

LCH-215 Alythia Vo
Delineating Circuitry That Mediates Neural Crosstalk in Gustation in D. melanogaster
University of Maryland, College Park (Maryland)
Preceptors: Dr. Bo-mi Song, Dr. Mark Stopfer

LCH-216 Mariana Voudouri
The Utility of IGF1 in the Evaluation of Children with Endogenous Hypercortisolism
Icahn School of Medicine at Mount Sinai (New York)
Preceptor: Dr. Christina Tatsi

LCH-217 James Wang
Computational Analysis of Chromosome Conformation Capture to Reveal Principles of Gene Regulation
University of California, Los Angeles (California)
Preceptors: Dr. Pedro Rocha, Dr. Joyce Thompson

LCH-218 Manahel Zahid
Investigation of a Mouse Macrophage Protein That Restricts Intracellular Replication of Legionella
University of Maryland, College Park (Maryland)
Preceptors: Dr. Devanand Bondage, Dr. Matthias Machner

National Institute on Drug Abuse (NIDA)

LCH-219 Ferdinand Anokwuru
Developing an Analytic Framework for the Prediction of HIV Diagnoses in Baltimore, Maryland Using Machine Learning Methods
Morgan State University (Maryland)
Preceptors: Dr. Albert Burgess-Hull, Dr. David Epstein
LCH-220 Aneesh Bal
Known Unknowns: Differentiating the Effects of Risk and Uncertainty on Goal-directed Behavior
Michigan State University (Michigan)
Preceptors: Dr. Kaue Costa, Dr. Geoffrey Schoenbaum

LCH-221 Andrew Belilos
The Role of the Olfactory Tubercle in Fentanyl-induced Locomotor Sensitization and Conditioned Place Preference in Mice
University of Notre Dame (Indiana)
Preceptors: Dr. Khaled Moussawi, Mrs. Mariamagdalena Ortiz

LCH-222 Barbara Benowitz
The Effects of Medial Prefrontal Cortex Self-stimulation on Learning in Mice
Gettysburg College (Pennsylvania)
Preceptors: Dr. Ahmed Badawi, Mr. Reuben Don, Dr. Satoshi Ikemoto

LCH-223 Emilie Cheng
Non-canonical Intracellular Action of Cocaine at the Sigma-1 Receptor
Johns Hopkins University (Maryland)
Preceptors: Dr. Nino Goguadze, Dr. Tsung-Ping Su

LCH-224 Benvindo Chicha
Examining the Roles of D1 and D2 Nucleus Accumbens Neurons in Reward
Bowie State University (Maryland)
Preceptors: Dr. Satoshi Ikemoto, Mr. Christian Potter

LCH-225 Jae Choi
Using Fos-mRFP Rats to Map Neuronal Ensembles during Reward Learning
Johns Hopkins University (Maryland)
Preceptors: Dr. Bruce Hope, Dr. Rajtarun Madangopal

LCH-226 Myra Dada
The Effects of Zinc Availability on Cocaine-induced Locomotor Sensitization
University of Chicago (Illinois)
Preceptors: Dr. Juan Gomez, Dr. Mike Michaelides

LCH-227 Meena Deshpande
Ventral Tegmental Area Glutamatergic Inputs to Medial Prefrontal Cortex Drive Aversion
University of Illinois at Urbana-Champaign (Illinois)
Preceptors: Dr. Hui-Ling Wang, Dr. Marisela Morales

LCH-228 Bryan Dong
Examination of NAc D1- and D2-MSN Ensembles during Compulsive Sucrose Seeking
Gilman School (Maryland)
Preceptors: Dr. Craig Werner, Dr. Da-Ting Lin

LCH-229 Orlando Espinoza
Colocalization of Lateral Hypothalamic Neuropeptides and Glutamatergic Neurons Projecting to the Ventral Tegmental Area
Johns Hopkins University (Maryland)
Preceptors: Dr. M. Flavia Barbano, Dr. Marisela Morales

LCH-230 Anjali Gajendiran
Characterization and Output of Parvalbumin Expressing Neurons of the Anterior Hypothalamic Area
Centennial High School (Maryland)
Preceptors: Dr. Brenton Laing, Dr. Yeka Aponte

LCH-231 Maria Garcia
Characterizing Fos-expressing Neuronal Ensembles in Prefrontal Cortex following Cocaine Place Conditioning
Albright College (Pennsylvania)
Preceptors: Dr. Leslie Whitaker, Ms. Courtney Cann

LCH-232 Soham Ghoshal
Role of Orbitofrontal Cortex in Relapse to Fentanyl Seeking after Food Choice-induced Voluntary Abstinence
Hunter College (New York)
Preceptors: Dr. David Reiner, Dr. Yavin Shaham

LCH-233 Kirsten Grant
VTA Photostimulation of Glutamatergic Projections from the Parabrachial Nucleus Drives Aversion
Stevenson University (Maryland)
Preceptors: Dr. Smriti Mongia, Dr. Hui-ling Wang, Dr. Marisela Morales

LCH-234 McKenzie Hall
In silico to in vitro: Identification of an ERS-containing Protein and its Response to ER Calcium Depletion
Aberdeen High School (Maryland)
Preceptors: Dr. Emily Wires, Dr. Brandon Harvey

LCH-235 Brittany Hayes
Nicotine Dose- and Exposure Age-dependent Changes in nNicotinic Acetylcholine Receptor Densities: A Whole Brain Analysis
Towson University (Maryland)
Preceptor: Dr. Robin Keeley
LCH-236 Cassandra Jennings
Genetic Associations of Reduced Brain Volume and Cortical Thickness in Male and Female Smokers
Rice University (Texas)
Preceptors: Dr. Xiaoyu (Sherry) Ding, Dr. Elisabeth Caparelli, Dr. Elliot Stein, Dr. Osama Abulseoud

LCH-237 Suyeon Ju
3D Reconstruction Reveals Release of Glutamate and GABA from Same Axon Terminals in Lateral Habenula
Johns Hopkins University (Maryland)
Preceptor: Dr. Steven Zhang

LCH-238 Grace Lechmann
Nicotine Dose and Exposure Age Change Alpha 7 Nicotinic Acetylcholine Receptor Densities across the Rat Brain
University of Maryland, College Park (Maryland)
Preceptor: Dr. Robin Keeley

LCH-239 Gustavo Mejias-Torres
Opioid-induced Respiratory Depression in Rats: Characterization and Data Analysis
Hereford High School (Maryland)
Preceptors: Dr. Renata Marchette, Dr. Leandro Vendruscolo

LCH-240 Radwan Mezghanni
The Effect of Focal Transcranial Magnetic Stimulation (TMS) on Glucose Uptake in Rat Motor Cortex
Centennial High School (Maryland)
Preceptors: Dr. Hanbing Lu, - Sam Cermak

LCH-241 Hannah Morgan
Periaqueductal Gray Inputs to the VTA: Electrophysiological Characterization
College of New Jersey (New Jersey)
Preceptors: Dr. Carlos Mejias-Aponte, Dr. Marisela Morales

LCH-242 Joseph Nguyen
The iDISCO-SMART Pipeline for Whole Brain Activity Mapping following Incubation of Palatable Food Seeking
College of William and Mary (Virginia)
Preceptors: Dr. Rajtarun Madangopal, Dr. Jennifer Bossert, Dr. Yavin Shaham

LCH-243 Gabrielle O’Brien
Sex Differences in Dorsal Root Ganglia Ion Channels Relevant to Neuropathic Pain
University of Maryland, College Park (Maryland)
Preceptors: Dr. Tsung-Ping Su, Dr. Hsiang-En Wu

LCH-244 Sruti Pari
*Dissociating Nicotine Reward vs. Aversion: Nicotinic Receptor Subunit Distribution in the Ventral Tegmental Area*
Dartmouth College (New Hampshire)
Preceptors: Ms. Bree Humburg, Dr. Chloe Jordan, Dr. Zheng-Xiong Xi

LCH-245 Nayely Rivera-Lavaire
*GABAergic Inputs to Dorsal Raphe VGluT3 Neurons*
University of Pennsylvania (Pennsylvania)
Preceptors: Dr. Hui-Ling Wang, Dr. Bing Liu, Dr. Marisela Morales

LCH-246 Ibrahim Sartaj
*Pathway-specific Synaptic Changes following Chronic Mild Unpredictable Stress in Adolescent Rats*
Prince George’s Community College (Maryland)
Preceptors: Dr. Carl Lupica, Dr. Alex Hoffman, Dr. Kshitij Jadhav

LCH-247 Sreeja Varanasi
*Development of a LC/MS Assay for the Measurement of Lipids in an Obesity Model*
University of South Carolina (South Carolina)
Preceptors: Dr. Amina Woods, Dr. Ludovic Muller, Dr. Shelley Jackson

LCH-248 Ray Wang
*Glial CB1 Receptor Involvement in Cannabinoid-induced Tetrad Effects in Mice*
University of Virginia (Virginia)
Preceptors: Dr. Guo-Hua Bi, Dr. Zheng-Xiong Xi

National Institute on Deafness and Other Communication Disorders (NIDCD)

LCH-249 Sarah Allen
*Uncovering the Expression Profile of the Bhlhe40 Gene during Inner Ear Development*
Colgate University (New York)
Preceptors: Dr. Braulio Peguero, Dr. Matthew Kelley

LCH-250 Brynae Harrod
*Using Zebrafish to Understand How Presynaptic Function Contributes to Neomycin-induced Hair Cell Death*
Capital City Public Charter School (District of Columbia)
Preceptors: Ms. Daria Lukasz, Ms. Hiu Wong, Dr. Katie Kindt
LCH-251 Cecilia Lacey  
*Amikacin Ototoxicity: Risk Factors and Sensitivity of Grading Scales*  
University of Pittsburgh (Pennsylvania)  
Preceptors: Dr. Carmen Brewer, Dr. Chris Zalewski

LCH-252 Sandy Reynolds  
*Analysis of BMP7 through CRISPR technology*  
Prairie View A&M University (Texas)  
Preceptor: Dr. Matt Kelly

LCH-253 Riya Singh  
*Quantification and Intensity Analysis of Multichannel smFISH Signal in Mammalian Stria Vascularis*  
Cornell University (New York)  
Preceptors: Dr. Michael Hoa, Mr. Ian Taukulis, Dr. Rafal Olszewski

**National Institute of Dental and Craniofacial Research (NIDCR)**

LCH-254 Madeleine Daily  
*Metabolic Profiling of Mucosal and Exocrine Tissues in Oral Chronic Graft-versus-Host Disease*  
Columbia University College of Dental Medicine (New York)  
Preceptors: Dr. Jacqueline Mays, Dr. Ana Costa da Silva

LCH-255 Jonathan Gunasti  
*Smad7 Is Differentially Expressed in CD4+ and CD8+ Regulatory T Cells*  
Pomona College (California)  
Preceptors: Dr. Liliana Patino-Molano, Dr. Wanjun Chen

LCH-256 Bakey Kouanda  
*Optimization Of Immunohistochemistry Markers and Quantum Dots for Clinical Investigations*  
University of Connecticut (Connecticut)  
Preceptors: Dr. Jacqueline Mays, Dr. Ana Costa da Silva, Mr. Joshua Dodge

LCH-257 Ellie Spector  
*Calcified Entheses Are a Feature of FGF23-mediated Hypophosphatemia due to Tumor-induced Osteomalacia*  
Colby College (Maine)  
Preceptor: Dr. Rachel Gafni

**National Institute of Environmental Health Sciences (NIEHS)**
LCH-258 Mythri Ambatipudi  
*Peripheral Blood Transcriptomic Analysis of Dermatomyositis and Systemic Lupus Erythematosus*
Harvard University (Massachusetts)  
Preceptors: Dr. Lisa Rider, Dr. James Ward

LCH-259 Jonathan Chen  
*Stress Is a Potential Risk Factor for the Development of Myositis and a Subset of Its Clinical Phenotypes*
Case Western Reserve University (Ohio)  
Preceptors: Dr. Adam Schiffenbauer, Dr. Frederick Miller

LCH-260 Kevin Liu  
*The Upstream Regulators of GLIS3 in Kidney Development*
University of North Carolina at Chapel Hill (North Carolina)  
Preceptors: Dr. Chitrangda Srivastava, Dr. Anton Jetten, Dr. Hong Soon Kang

LCH-261 Alexandra Martinez Lopez, Emma Garval  
*Why Happy Hour Isn’t So Happy: Alcohol Consumption Related to Faster Aging*
Wellesley College (Massachusetts), Scripps College (California)  
Preceptors: Dr. Jacob Kresovich, Dr. Jack Taylor

LCH-262 Andy Mendoza  
*Identification of Interferent Chemicals by Technology and Assay Platform Using the Tox21 Data*
Appalachian State University (North Carolina)  
Preceptors: Dr. Alexandre Borrel, Dr. Nicole Kleinstreuer

**National Institute of Mental Health (NIMH)**

LCH-263 Boluwatife Aladesuru  
*The Importance of Cultural Competency in Human Subjects Research: Diction, Dress, and Diagnosis*
Princeton University (New Jersey)  
Preceptors: Dr. Francis McMahon, Dr. Layla Kassem, Ms. Emily Besancon, Ms. Laura Sheridan

LCH-264 Bryan Alvarez-Carcamo  
*The Effect of Stress on the Expression of the Opioid Peptide Dynorphin in the Nucleus Accumbens*
University of Pennsylvania (Pennsylvania)  
Preceptors: Dr. Huikun Wang, Dr. Hugo Tejeda
LCH-265 Abraham Arzola  
*Attempt to identify neural Substrates of Eclosion*  
University of Texas at El Paso (Texas)  
Preceptors: Dr. Benjamin White, Dr. Haojiang Luan

LCH-266 Vishal Bhaia  
*Modeling Population Receptive Fields across the Visual Cortex*  
University of California, Davis (California)  
Preceptors: Dr. Chris Baker, Dr. Edward Silson, Dr. Susan Wardle

LCH-267 Bess Bloomer  
*Does Memory Recency Modulate Anterior and Posterior Hippocampal Contributions to Autobiographical Retrieval?*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Alex Martin, Dr. Adrian Gilmore

LCH-268 Andrea D'Souza  
*Heart Rate Variability as an Index of Parasympathetic Activation during Sleep in Children with ASD*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Emma Condy, Dr. Audrey Thurm, Dr. Ashura Buckley

LCH-269 Noah Daniel, Teddy Daniel  
*Who Gets Better? Factors Affecting Patient Outcome in a Schizophrenia Research Subject Population*  
Dartmouth College (New Hampshire), Brown University (Rhode Island)  
Preceptors: Dr. Daniel Eisenberg, Dr. Karen Berman

LCH-270 Teddy Daniel, Noah Daniel  
*Predicting the Past: Hypothesized Schizophrenia Cognitive Trajectory Subgroups Based on Adult Test Data Show Expected Differences in Developmental History*  
Brown University (Rhode Island), Dartmouth College (New Hampshire)  
Preceptors: Dr. Dwight Dickinson, Ms. Amy Lieberman, Dr. Karen Berman

LCH-271 Hannah Davidson  
*Depression during Perimenopause: Relationship to Life Events*  
Hampshire College (Massachusetts)  
Preceptors: Dr. Ella Hong, Dr. Pedro Martinez, Dr. Peter Schmidt

LCH-272 Allison DePuyt  
*Innate Immunity at the Blood-Brain Barrier following Chronic Stress*  
Colgate University (New York)  
Preceptors: Dr. Stacey Kigar, Dr. Miles Herkenham
LCH-273 Apoorva Dhanala  
*The Effects of Stress on Information Processing in Brain Reward Circuitry during Motivational Behavior*  
University of Georgia (Georgia)  
Preceptors: Dr. Victor Correa, Dr. Hugo Tejeda

LCH-274 Peter Ehmann  
*Canonical Correlation Analysis of Reward and Inhibitory Brain Activation in Adolescents*  
Rutgers University (New Jersey)  
Preceptors: Dr. Katharina Kircanski, Dr. Daniel Pine, Dr. Anderson Winkler

LCH-275 Zakariya Gordon  
*Prior Attack Experience Influences Future Attack Behavior through Potentiation of Medial Amygdala Circuits*  
Montgomery Blair High School (Maryland)  
Preceptors: Dr. Jacob Nordman, Dr. Zheng Li

LCH-276 Hilarie Hannigan  
*Self-reported Sleep and Suicide Risk: Interim Results from the Neurobiology of Suicide Study*  
Heritage University (Washington)  
Preceptors: Dr. Elizabeth Ballard, Dr. Carlos Zarate

LCH-277 Ananya Jambhale  
*MIR137 Host Gene Expression and the Effects of Schizophrenia Risk-asssociated SNPs in Postmortem Human Brains*  
Cornell University (New York)  
Preceptors: Dr. Barbara Lipska, Dr. Stefano Marenco, Dr. Ningping Feng

LCH-278 Shawn Kamboj  
*Modeling Pathology of Smith-Magenis Syndrome (SMS) Using iPSC-derived Neural Progenitor Cells*  
University of California, Davis (California)  
Preceptors: Dr. Francis Mcmahon, Dr. Sevilla Detera-Wadleigh, Dr. Francis Gordovez, Mr. Bryce England

LCH-279 Sara Kirmani  
*Assessment of Audiogenic Seizure Susceptibility in Tuberous Sclerosis and Fragile X Syndrome Double Knockout Mice*  
University of Virginia (Virginia)  
Preceptors: Dr. Rachel Sare, Dr. Carolyn Smith

LCH-280 Stephen Lyons  
*Compliance Training in Marmosets*
LCH-281 Mary Ashley Mckay
*Is Fibrinogen a Causal Link between Inflammation and Chronic Stress Susceptibility?*
Illinois State University (Illinois)
Preceptors: Dr. Michael Lehmann, Dr. Miles Herkenham

LCH-282 Matthew Miller
*Behavioral Changes in Septal Lesioned Male and Female Rats*
Eleanor Roosevelt High School (Maryland)
Preceptors: Dr. Gurueswar Nagarajan, Dr. Yogita Chudasama

LCH-283 Briana Murray
*The Challenges of Diagnosing Autism Spectrum Disorder in Children with Smith-Lemli-Opitz Syndrome*
Salisbury University (Maryland)
Preceptors: Dr. Audrey Thurm, Dr. Cristan Farmer

LCH-284 Anna Pearson
*Morphometric Analysis of Cortical Neurons in Subcortically Lesioned Male and Female Rats*
DePauw University (Indiana)
Preceptors: Dr. Gurueswar Nagarajan, Dr. Yogita Chudasama

LCH-285 Emily Ray
*Targeting Area-dependent Presynaptic Ensembles of Cortical Pyramidal Neurons in the Primary Sensory Cortex*
Washington University in St. Louis (Missouri)
Preceptors: Dr. Soohyun Lee, Dr. Jia Qi

LCH-286 Peter Riley
*Implementation of Data Pipeline That Automates Whole-brain Images Cell Count*
George Washington University (District of Columbia)
Preceptors: Dr. Sarah Williams Avram, Dr. Ted Usdin

LCH-287 Victoria Rooke
*Inhibitory Control as a Potential Target for the Treatment of Irritability*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Melissa Brotman, Dr. Elise Cardinale

LCH-288 Nikhil Sahni
*Changes in Cortical Responses Caused by Learning Novel Optogenetic Stimuli*
University of Maryland, College Park (Maryland)
Preceptors: Mr. Paul LaFosse, Dr. Mark Histed
LCH-289 Leslie Schneider  
*Brain Morphometry in Language Delayed Toddlers*  
Yale University (Connecticut)  
Preceptors: Dr. Courtney Filippi, Dr. Daniel Pine

LCH-290 Roshan Shet  
*An Analysis of Objective Sleep Measures in Pediatric Neurodevelopmental Cohorts*  
University of Maryland, College Park (Maryland)  
Preceptor: Dr. Ashura Buckley

LCH-291 Katie Shrout  
*Visualizing Neural Characteristics of Response Inhibition Using Magnetoencephalography*  
University of Maryland College Park (Maryland)  
Preceptors: Dr. Allison Nugent, Ms. Linnea Sepe-Forrest, Dr. Fredrick Carver, Dr. Tom Holroyd

LCH-292 William Snyder  
*Implementation of Automated Large-scale Calcium Imaging Analysis Using Caiman*  
Bucknell University (Pennsylvania)  
Preceptors: Dr. Soohyun Lee, Dr. Ana Lourenco Inacio, Mr. Jonathan Krynitsky

LCH-293 Pooja Varma  
*Behavioral Characterization of a Conditional Oxytocin Receptor Knockout Mouse*  
Nova Southeastern University (Florida)  
Preceptors: Dr. Scott Young, Dr. Adi Cymerblit-Sabba

LCH-294 Queenie Wang  
*Characterization of the Projection of Medial Prefrontal Cortex Dynorphin-expressing Cells and Their Expression of Dopamine Receptors*  
Tulane University (Louisiana)  
Preceptors: Dr. Huikun Wang, Dr. Hugo Tejeda

LCH-295 Elizabeth Wat  
*Using Nonconventional Methods to Understand What Everyone Else Is Thinking: An fMRI Study*  
University of Virginia (Virginia)  
Preceptors: Dr. Peter Molfese, Dr. Emily Finn, Dr. Peter Bandettini

LCH-296 Katy Werwath  
*Finding the Optimal Euler Number Threshold to Classify the Quality of Cortical Surface Reconstructions*  
Maggie Walker Governor’s School (Virginia)  
Preceptors: Dr. Anderson Winkler, Dr. Daniel Pine
LCH-297 Jiali Zhang
Comparing fMRI and MEG Brain Activity Recordings to Activations of Deep Neural Networks Trained on Variations of ImageNet
Johns Hopkins University (Maryland)
Preceptors: Dr. Martin Hebart, Dr. Christopher Baker

Clinical Center (CC)

PM-1 Vatsal Agarwal
Weakly-supervised Lesion Segmentation Using Co-segmentation and Adversarial Learning
University of Maryland, College Park (Maryland)
Preceptors: Dr. Youbao Tang, Dr. Ronald Summers

PM-2 Arjun Ashok
Uncertainty in Radionuclide Therapy
University of Rochester (New York)
Preceptor: Dr. Roberto Maass-Moreno

PM-3 Francesca Bonetta-Misteli
Modeling Cryoablation Isotherms and Predictors in a Bench Model
University of Washington in St. Louis (Missouri)
Preceptors: Dr. Quirina De Ruiter, Dr. Brad Wood

PM-4 Monica Bonilla
Comparison of Automated vs. Manual Bone Age Assessments in a Cohort of Patients with Classic Congenital Adrenal Hyperplasia
College of William and Mary (Virginia)
Preceptors: Dr. Ashwini Mallappa, Dr. Deborah Merke

PM-5 Camella Carlson
Development and Characterization of Immune-modulating Drug-eluting Beads for Transarterial Tumor Embolization
Texas A&M University (Texas)
Preceptors: Dr. Ayele Negussie, Dr. Andrew Mikhail, Dr. Brad Wood

PM-6 Anna Christou
Characterization of Radiofrequency-induced Thermal Changes via Conductive Devices in a Thermochromic Phantom
Columbia University (New York)
Preceptors: Dr. John Karanian, Dr. Brad Wood

PM-7 Lucas Folio
Self-paced Treadmill Control Using a Commercially Available Motion Tracking System
Walt Whitman High School (Maryland)
Preceptor: Mr. Andrew Gravunder

PM-8 Divya Gandla
*Prediction of Known and Novel Blood Antigen Variants Using Whole Genome Sequencing in Sickle Cell Disease Patients*
Columbia University (New York)
Preceptors: Dr. Celina Montemayor-Garcia, Dr. Harvey Klein

PM-9 William Giovanini
*ITC Poster Office Management and User Documentation with Database Programming*
University of Maryland, College Park (Maryland)
Preceptor: Ms. Sharon McDowney

PM-10 Anna Goff
*Hospital-based Survey of Patients’ and Families’ Experiences with Ethical Questions: Preliminary Results*
Case Western Reserve University (Ohio)
Preceptors: Dr. Marion Danis, Dr. Christine Grady

PM-11 Julie Goldberg
*Assessment of Communication in Traumatic Brain Injury (TBI): Sex-related Differences in Conversation*
George Washington University (District of Columbia)
Preceptor: Mr. Adam Politis

PM-12 Smita Gopalakrishnan
*Analysis of EEG Activity in Children With and Without Cerebral Palsy during a Cued Drumming Task*
Arizona State University (Arizona)
Preceptors: Dr. Thomas Bulea, Dr. Diane Damiano

PM-13 Nikhil Goyal
*Secure Digital Data Management Interface for Cancer Trials: ENABLE 3.0*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Les Folio, Dr. Huy Do

PM-14 Jonthan Ham
*Behavioral Analysis of an Upper Limb Task in Children With and Without Bilateral Cerebral Palsy*
Northern Virginia Community College (Virginia)
Preceptors: Dr. Diane Damiano, Dr. Thomas Bulea

PM-15 Kimia Heydari
*Challenges Faced by Community Research Workers: Scoping Review*
Columbia University (New York)
Preceptor: Dr. Annette Rid

PM-16 Gazi Inkiyad
Doxorubicin Distribution in Woodchuck Liver Tumors following Transarterial Chemoembolization with Radiopaque Drug-eluting Beads
City College of New York (New York)
Preceptors: Dr. Andrew Mikhail, Dr. Bradford Wood

PM-17 Ethan Kallenberger
Does Blood Warming for Transfusion Increase Hemolysis in Red Blood Cell Concentrate?
Kansas State University (Kansas)
Preceptors: Dr. Kathleen Conry-Cantilena, Dr. Kamille West

PM-18 Charity Lackey
Psychological and Inflammatory Measures of Stress in Adolescent and Emerging Adult Black Females: A Scoping Review
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Gwen Wallen, Dr. Cheryl Giscombe, Dr. Nicole Farmer, Dr. Alyssa Brooks

PM-19 Bo Lan
The Analysis of ACKR1 Genetic Variation and Haplotype Diversity Provided by the 1000 Genomes Project
Tufts University (Massachusetts)
Preceptors: Dr. Kshitij Srivastava, Dr. Willy Flegel

PM-20 Katherine Li
Mass Spectrometric Analysis of 3,5-Diiodothyronine in Serum
Purdue University (Indiana)
Preceptors: Dr. Steven Soldin, Mr. Brian Stolze

PM-21 Jia Liang
Improved Pneumonia Detection Using Machine Learning Based Bone Suppression in Chest Radiographs
University of Tennessee at Knoxville (Tennessee)
Preceptors: Dr. Yuxing Tang, Dr. Ronald Summers, Dr. Ronald Summers

PM-22 Margaret McGurn
Regulation of TNF-alpha-induced Inflammatory Responses in Human Pulmonary Microvascular Endothelial Cells by Resolvin D1
University of Notre Dame (Indiana)
Preceptors: Dr. Anthony Suffredini, Dr. Salina Gairhe
PM-23 Isabella Nelson
*Predictors of Weight Loss during a Ketogenic vs Control Diet Intervention for Alcohol Withdrawal*
University of Pittsburgh (Pennsylvania)
Preceptors: Mrs. Shanna Yang, Dr. Amber Courville, Mrs. Sara Turner

PM-24 Andy Nguyen
*Improving Radiologists' Engagement within RADIS by Aligning Work Assignments with Staff Career Goals*
George Washington University School of Medicine (District of Columbia)
Preceptor: Dr. Jamie Marko

PM-25 Christine Nguyen
*Nursing Considerations for Patients with Chronic Granulomatous Disease Post Stem Cell Transplant*
George Mason University (Virginia)
Preceptors: Ms. Mary Myers, Mr. Paul Wong

PM-26 Rose Pagano
*MRI Energy Deposition (SAR) in Patients’ Post Deep Brain Stimulation Implantation*
Carnegie Mellon University (Pennsylvania)
Preceptors: Dr. Nadia Biassou, Dr. Mohammad Bagheri, Dr. Sunder Rajan

PM-27 Carolyn Rasmussen
*Comparison of Electro cortical Activity during Different Treadmill Walking Conditions in Children With and Without Unilateral Cerebral Palsy*
Indiana University (Indiana)
Preceptors: Dr. Diane Damiano, Dr. Thomas Bulea, Mr. Matthew Short

PM-28 Thomas Risoleo
*Can Granulocyte Therapy Improve Survival in a Canine Model of Sepsis*
Tufts University (Massachusetts)
Preceptors: Dr. Steve Solomon, Ms. Jing Feng, Dr. Charles Natanson

PM-29 Victor Riveiro
*Comparison of Two Inpatient Functional Assessments*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Minal Jain

PM-30 Victor Rong
*Vector Integration Site Analysis of Chimeric Antigen Receptor (CAR) T Cells*
Virginia Commonwealth University (Virginia)
Preceptors: Dr. David Stroncek, Dr. Ping Jin
PM-31 Deepak Salem
*Somatic Mutation Analysis of Bone Marrow Disease Progression in GATA2 Deficiency Using FFPE Samples*
Lake Erie College of Osteopathic Medicine (Pennsylvania)
Preceptors: Dr. Weixin Wang, Dr. Katherine Calvo

PM-32 Aarushi Shah
*Ethical Challenges in Clinical Trials During the 2014-2016 Ebola Epidemic: Humanitarian Perspectives*
Harvard College (Massachusetts)
Preceptor: Dr. Annette Rid

PM-33 Vaani Shah
*Comparative Efficacy of WBC Differentials on an Automated Cell Counter vs. a Flow Cytometer*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Jin Ping, Dr. Sandhya Panch

PM-34 Victoria Shen
*Comparison of Volumetric Measurement versus RECIST 1.1 Measurement in Chordoma*
Northeastern University (Massachusetts)
Preceptor: Dr. Mohammad Bagheri

PM-35 Brianna Smith
*Why Are Teens Crowding Emergency Rooms? Cannabis Induced Psychosis*
Stevenson University (Maryland)
Preceptor: Ms. Diane Lawrence

PM-36 Sai Aditya Sriram
*Pancreas Augmentation on CT Scans for Prediction of Clinical Outcomes*
Rice University (Texas)
Preceptors: Dr. Yingying Zhu, Dr. Ronald Summers

PM-37 Yohan Sumathipala
*Semi-automated RECIST Measurements Show Improved Consistency and Speed*
University of Wisconsin School of Medicine and Public Health (Wisconsin)
Preceptors: Dr. Youbao Tang, Dr. Ronald M. Summers

PM-38 Hannah Tandon
*Botulinum Toxin to Treat Endometriosis-associated Chronic Pelvic Pain: A Double-masked, Placebo-controlled Study*
University of Nebraska Medical Center College of Medicine (Nebraska)
Preceptors: Dr. Pamela Stratton, Dr. Jay Shah, Dr. Barbara Karp
PM-39 Amy Tran
*Do Cultures from Clinical Center International Patients or U.S. Patients Have More Antibiotic Resistance?*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Tara Palmore

PM-40 Luke Tucker
*A User Interface for a Pediatric Knee Exoskeleton*
North Carolina State University (North Carolina)
Preceptors: Dr. Thomas Bulea, Dr. Diane Damiano

PM-41 Sofia Vega
*Analysis of Medication History Accuracy*
University of Florida (Florida)
Preceptors: Dr. Jose Galvez, Ms. Andrea Beri

PM-42 Caroline Wang
*SMURF1 and AKT Regulation of AIP1 Expression in a PHD2-silenced Microvascular Endothelial Cell Model of Pseudohypoxia*
Clark University (Massachusetts)
Preceptors: Dr. Shuibang Wang, Dr. Robert Danner

PM-43 Katherine Wei
*Host Alveolar Macrophage Response to Pneumocystis Murina Surface Proteins MSG and Beta-1,3 Glucan*
University of California, Berkeley (California)
Preceptors: Dr. Shelly Samet, Dr. Joseph Kovacs

PM-44 Michael Wilson
*Modeling Pharmacokinetic FDG Changes in Clinical Trials: Does the Treatment Change Background or Inflammation?*
Florida State University (Florida)
Preceptor: Dr. Mark Ahlman

PM-45 Ting Yang
*Epilepsy and Motherhood: What the Patient Needs to Know*
Oregon Health & Science University (Oregon)
Preceptors: Dr. Eugena Bergvall, Dr. Sara Inati, Mr. Mauricio Campillay

PM-46 Joshua Zarb
*IT Asset Lifecycle*
Montgomery College (Maryland)
Preceptors: Mr. William Hernandez, Mrs. Theresa Eng
PM-47 Kiet Zhou
*Optimization of a High Throughput Genetic Test for Ehlers-Danlos Syndrome in Patients with Congenital Adrenal Hyperplasia*
New York Medical College (New York)
Preceptors: Dr. Qizong Lao, Dr. Deborah Merke

**National Center for Complementary and Integrative Health (NCCIH)**

PM-48 Akiri Brown
*The Effect of Self-reported Stress and Discrimination on Responses to Acute Pain in a Diverse Sample*
E.L. Haynes Public Charter School (District of Columbia)
Preceptors: Mr. Troy Dildine, Dr. Lauren Atlas

PM-49 Uriah Contreras
*Expression and Distribution of Genetically Distinct Neurons Involved in Pain Modulation in the Subnuclei of the Central Amygdala*
Fort Lewis College (Colorado)
Preceptors: Ms. Torri Wilson, Dr. Spring Valdivia, Dr. Yarimar Carrasquillo

**National Cancer Institute (NCI)**

PM-50 Anna Abraham
*Biochemical Characterization of Tyrosyl-DNA-Phosphodiesterase 2 (TDP2) and its Inhibitors*
Thomas S. Wootton High School (Maryland)
Preceptor: Dr. Evgeny Kiselev

PM-51 Sana Ahmad
*Effect of Glucose and Fructose on Tumor Cell Growth and Radiation Response*
Kennesaw State University (Georgia)
Preceptors: Ms. Olivia Preston, Dr. Sarwat Naz, Dr. James Mitchell

PM-52 Ahnaf Khan
*Identifying Novel Immune Cell Subsets in 4T1 Tumor Model through Computational Analysis of scRNA-seq Data*
University of Virginia (Virginia)
Preceptors: Dr. Christine Hollander, Dr. Li Yang

PM-53 Sahana Aiyer
*Investigating the Inhibitory Role of Ac4C in Nuclease-mediated Degradation*
Case Western Reserve University (Ohio)
Preceptors: Dr. Shalini Oberdoerffer, Dr. Masaki Hosogane

PM-54 Jaylene Alvarez
*A Novel Procedure for the Quantitative Recovery of Small Intestine Intraepithelial Lymphocytes*
University of Puerto Rico, Medical Sciences Campus (Puerto Rico)
Preceptors: Dr. Jung-Hyun Park, Dr. Praveen Prakhar

PM-55 Patrick Aquino
*Pseudo Labels Yield Better Mitochondrial Segmentation from FIB-SEM Datasets*
Mount St. Mary’s University (Maryland)
Preceptor: Dr. Kedar Narayan

PM-56 Kaval Aurora
*Exploring Social Determinants of Health (SDOH) in State Comprehensive Cancer Control Plans*
Boston University (Massachusetts)
Preceptor: Dr. Brenda Adjei

PM-57 Pegah Avazpour
*Generation of a Drug Resistant TNIK Mutant to Assess Specificity of Inhibitors in LSCC*
University of Maryland, Baltimore County (Maryland)
Preceptor: Dr. Pedro Torres-Ayuso

PM-58 Justin Azmoodeh
*Enhancing CD8 T Cell Antitumor Efficacy by Modification of Expression of Retinoblastoma Binding Protein 7*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Luca Gattinoni, Dr. Jessica Fioravanti, Mr. Patrick Grandinetti

PM-59 Anav Babbar
*Drug Sensitivity in ReplID Depleted Small Cell Lung Cancer Cell Lines*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Mirit Aladjem, Dr. Sang-min Jang

PM-60 Ascharya Balaji
*Role of Dietary Interventions in the Efficacy of Anti-Pd1 Therapy and the Modification of Tumor Microenvironment*
Mary Baldwin University (Virginia)
Preceptors: Dr. Marie Vetizou, Dr. Giorgio Trinchieri

PM-61 Victoria Bergstein
*Development and Validation of Assays for Sleeping Beauty Transposon System in TCR Gene Therapy*
Dartmouth College (New Hampshire)
Preceptors: Dr. Rachel Beyer, Dr. Adrian Cuenca

**PM-62 Avigail Berkovic**  
*Restoring Vision by Using Optogenetic Gene Therapy to Induce Photosensitivity in Bipolar Cells*  
Dawson College (Non-U.S.)  
Preceptors: Ms. Emily Isko, Dr. Daniel Edelman

**PM-63 Lynn Bi, Brandon Wang**  
*Prolonged ex vivo Animation of Tumor-bearing Liver as the Ideal Tumor Model System*  
Columbia University (New York), University of Wisconsin-Madison (Wisconsin)  
Preceptors: Dr. Jonathan Hernandez, Dr. Tom Pohida, Mr. John Kakareka, Dr. Nicole Morgan

**PM-64 Hassan Bokhari**  
*Analysis of a Risk-associated SNP within the ORF of a Putative IncRNA in Colorectal Cancer Cells*  
Pennsylvania State University (Pennsylvania)  
Preceptors: Dr. Ashish Lal, Ms. Sarah Lazar

**PM-65 Noela Botaka**  
*Evaluating Binding Profiles of Human Antibodies to Carbohydrates*  
University of Louisville (Kentucky)  
Preceptors: Dr. Sebastian Temme, Dr. Jeff Gildersleeve

**PM-66 Stefanie Brizuela**  
*Mutation in Splicing Factor U2AF1 Governs RNA Processing*  
University of California, Santa Cruz (California)  
Preceptors: Dr. Daniel Larson, Dr. Gloria Garcia

**PM-67 Anna Brogan**  
*Mutations in a Scaffolding Protein Attenuate Sporulation in Bacillus subtilis*  
Pennsylvania State University (Pennsylvania)  
Preceptors: Dr. Brandon Anjuwon-Foster, Dr. Kumaran Ramamurthi

**PM-68 Sravani Buddhavarapu, Arnav Sinha, Veda Nagubandi**  
*Detecting Early Response to Immune Checkpoint Inhibitor Therapy Using Metabolic Magnetic Resonance Imaging*  
University of Minnesota (Minnesota), University of Maryland, College Park (Maryland), Georgetown University (District of Columbia)  
Preceptors: Dr. Yu Saida, Dr. Rajani Choudhuri, Dr. John Cook, Dr. Murali Cherukuri

**PM-69 Taylor Burnett**  
*Understanding the Role of P-glycoprotein in Cancer Drug Resistance*  
Hampton University (Virginia)  
Preceptors: Dr. Suresh Ambudkar, Dr. Andaleeb Sajid, Dr. Biebele Abel
PM-70 Natasha Burse  
National Institute of Health Funded Multi-level Studies of Adherence to Treatment and Prevention across Various Chronic Conditions  
Pennsylvania State College of Medicine (Pennsylvania)  
Preceptors: Dr. Janet de Moor, Dr. Erica Breslau, Dr. David Clarke, Dr. Karen Lee

PM-71 Sabrina Cai  
Determining Drug-specific Synthetic Lethality of Combination Cancer Therapies  
Thomas Jefferson High School for Science and Technology (Virginia)  
Preceptors: Dr. Yang Liu, Dr. Chunzhang Yang

PM-72 Nikki Cannon  
Investigation of the Production of and Resistance to Antibiotics in Human Gut Microbiotas of Diverse Populations by Shotgun Metagenomic Analysis  
Potomac State College (West Virginia)  
Preceptors: Dr. John McCulloch, Dr. Giorgio Trinchieri

PM-73 Michael Cardone  
Analysis of the Effect of Depletion of SBNO2 on EWS-FLI1 Transcriptional Activity  
Florida Atlantic University (Florida)  
Preceptors: Dr. Natasha Caplen, Dr. Allison Cross, Mr. Nicholas Aboreden

PM-74 Stephany Carrasco  
Akt Inhibition Promotes foxo1 Activity and the Dark Zone State in Germinal Center B Cells  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Jagan Muppidi, Ms. Anne Albright

PM-75 Ann Chen  
The Metabolic Rewiring of Drug-resistant Melanoma with Therapeutic Potential  
Langley High School (Virginia)  
Preceptor: Dr. Yanlin Yu

PM-76 Brian Chen  
Evaluating the Impacts of Medicaid Expansion on Use and Costs of anti-HER2 Breast Cancer Therapies  
University of California, Berkeley (California)  
Preceptor: Dr. Michael Halpern

PM-77 Chaitali Chitnis  
Deficiency of Mitochondrial Topoisomerase I (TOP1MT) Alters Fat Metabolism Promoting Non-alcoholic Steatohepatitis (NASH)  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Andrea Baechler, Dr. Valentina Factor, Dr. Yves Pommier
PM-78 Krystal Christopher
*Metabolic Syndrome and Stage of Breast Cancer at Diagnosis*
University of Houston (Texas)
Preceptors: Dr. Paige Green, Dr. Jennifer Guida

PM-79 Lily Christou
*Investigating the Interplay of CBFB-RUNX1 and Notch Signaling in Breast Cancer*
National Cathedral School (District of Columbia)
Preceptors: Dr. Navdeep Malik, Dr. Jing Huang

PM-80 Sasha Coates-Park
*The Inhibition of Smad 1/5 Phosphorylation by TGF-Beta*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Christina Stuelten, Dr. Ying Zhang

PM-81 Rachel Cohen
*Developing a Cell Based System to Study Whole Chromosomal Aneuploidy by Using CRISPR/Cas9 Mediated Genome Editing*
Touro College and University System (New York)
Preceptors: Dr. Darawalee Zong, Dr. Wei-Dong Chen, Dr. Thomas Ried

PM-82 Alex Coleman
*Determining How HU Regulates Genes in Escherichia coli*
Northern Virginia Community College (Virginia)
Preceptors: Dr. Subhash Verma, Dr. Sankar Adhya

PM-83 Frank Colon Matos
*Childhood Leukemia Mortality Trends in the USA and Selected Latin American Countries: 2000 to 2015*
Inter American University of Puerto Rico-San German (Puerto Rico)
Preceptor: Dr. Diana Withrow

PM-84 Eve Crompton
*The Significance of p53-Regulated IncRNAs in the Context of Colorectal Cancer*
Sherwood High School (Maryland)
Preceptors: Ms. Sarah Lazar, Dr. Daniel Edelman

PM-85 Michelle Degnin
*Immune Infiltration of Osteosarcoma and Associated Lung Metastasis*
Oregon State University; Carlson College of Veterinary Medicine (Oregon)
Preceptors: Dr. Yu-Chou Tseng, Dr. Jing Huang
PM-86 Neehar Desai
Analysis and Interpretation of the Health Information National Trends Survey (HINTS) Cancer Data
Jesuit High School (Louisiana)
Preceptor: Dr. Richard Moser

PM-87 Selena Ding
Identification and Functional Characterization of Residues Critical to Antiviral Function of IFITM3
University of California, Berkeley (California)
Preceptors: Dr. Alex Compton, Dr. Kazi Rahman

PM-88 Catherine Domingo
Generation of p27 and p21 Knockout Mouse Embryonic Stem Cell Lines by CRISPR/Cas9 Targeting
Chapman University (California)
Preceptors: Dr. Sergio Ruiz Macias, Dr. Teresa Olbrich, Ms. Maria Vega, Ms. Nancy Lee

PM-89 Caleb Eickmann
Characterization of a Novel Phage Growth Inhibitor Present in Carbapenemase-resistant Klebsiella pneumoniae
Brown University (Rhode Island)
Preceptors: Dr. Manoj Rajaure, Dr. Sankar Adhya

PM-90 Sarah Eng
Human Proteomic Datasets Enable Global Analysis of Protein Phosphorylations Associated with CDK1 Activity in Cancer
University of Southern California (California)
Preceptors: Dr. Dunrui Wang, Dr. Douglas Lowy

PM-91 Zachary Farley
Correlates of Sunburn Experiences in CDC's SummerStyles 2018
University of Tennessee at Chattanooga (Tennessee)
Preceptor: Dr. Frank Perna

PM-92 Rivka Farrell
Effects of TNF-α on the Extracellular Matrix of Aggressive Thyroid Cancer Microenvironment and Drug Delivery
Bais Yaakov of Passaic High School (New Jersey)
Preceptors: Dr. Naris Nilubol, Dr. Myriem Boufraqech, Dr. Dipranjan Laha

PM-93 Michael Fei
Inferring Phylogenetic Tree Based on Single Cell Sequencing
Duke University (North Carolina)
Preceptors: Dr. Jianxin Shi, Dr. Xing Hua
PM-94 Sivia Feinstein
*Elucidating the Synergistic Mechanism between Cereblon Modulation and MEK Inhibition in Neuroblastoma*
Darchei Binah (Non-U.S.)
Preceptors: Dr. Marielle Yohe, Dr. Craig Thomas

PM-95 Lia Finch
*Examining Neural Diseases through Mini Brain Organoid with Electron Microscopy*
Walkersville High School (Maryland)
Preceptors: Ms. Ferri Soheilian, Dr. Wei Zheng, Dr. Natalia de Val Alda

PM-96 Cara Fliegel
*Protection from Autoimmunity by Neutralizing the Biological Function of Interleukin 27*
Oakdale High School (Maryland)
Preceptors: Dr. Julio Valencia, Dr. Howard Young

PM-97 Anyen Fon
*Modulating the Response to Immune Checkpoint Blockade through the Regulation of Melanoma Differentiation*
University of Maryland, Baltimore (Maryland)
Preceptors: Dr. Eva Perez-Guijarro, Dr. Glenn Merlino, Dr. Chi-Ping Day

PM-98 Krystal Franco
*Investigating the Impact of DNA-PK Inhibitor NU7441 on CD8+ T Cells*
University of Puerto Rico - Mayagüez (Puerto Rico)
Preceptor: Dr. Amanda Henning

PM-99 Leah Franklin
*Peripheral Blood Immune Cells as a Surrogate for Antitumor Immune Response in Oncology Trials*
University of Maryland, Baltimore County (Maryland)
Preceptors: Mrs. Jane Trepel, Dr. Sunmin Lee, Dr. Min-Jung Lee, Dr. Akira Yuno

PM-100 Elana Friedman
*The Anti-differentiation Noncoding RNA (ANCR) Regulates Breast Cancer Transformation and Metastasis*
Touro College (New York)
Preceptors: Ms. Meghali Goswami, Dr. Daniel Edelman

PM-101 Alexis Fritts
*A Genome-wide Enhancer/Suppressor Screen for Arf1 Interacting Genes in Drosophila melanogaster*
Shepherd University (West Virginia)
PM-102 Madison Fuller
*Characterization of the Effect of NAMPT Inhibition on Cellular Metabolism in Pediatric Rhabdomyosarcoma*
New Mexico State University (New Mexico)
Preceptors: Dr. Sameer Issaq, Mr. Choh Yeung, Dr. Christine Heske

PM-103 Austin Gable
*Structure-Function Determinants of Antiadaptor, IraM, Mediated Regulation of General Bacterial Stress Activator*
University of Cincinnati (Ohio)
Preceptors: Dr. Susan Gottesman, Dr. Arti Tripathi, Ms. Kylie Borden

PM-104 Lavanya Garnepudi
*Repurposing and Characterization of HDAC and Proteasomal Inhibitors to Circumvent EGFR TKI Resistance in Lung Adenocarcinoma*
University of Maryland School of Medicine (Maryland)
Preceptors: Dr. Tapan Maity, Dr. Udayan Guha

PM-105 Vineeth Garnepudi
*DNA Damage-induced Necroptosis in Tumors*
Centennial High School (Maryland)
Preceptors: Dr. Zheng-gang Liu, Dr. Chamila Kadigamuwa

PM-106 Tatiana Garrison
*Xeroderma Pigmentosum and Trichothiodystrophy: A Diagnostic Odyssey*
Howard University (District of Columbia)
Preceptors: Dr. Kenneth Kraemer, Dr. John Digiovanna, Mrs. Deborah Tamura, Dr. Sikandar Khan

PM-107 Laura Gayowski, Josephine Kievsky
*Using Mathematical Modeling to Predict Incidence of Rare Disease*
University of Maryland, College Park (Maryland), University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Randall Johnson, Dr. Brian Luke

PM-108 Heelah Gholian
*Viral Exposure Signatures in Liver Cancer*
Towson University (Maryland)
Preceptors: Dr. Xin W. Wang, Dr. Limin Wang
PM-109 Shoham Ghosh
A Novel miR-331-3p/ADAMTSL3 Axis Enhances Disease Aggressiveness in Resected Pancreatic Cancer Patients
University of Maryland, College Park (Maryland)
Preceptors: Dr. Shouhui Yang, Dr. Perwez Hussain, Dr. Perwez Hussain

PM-110 Calvin Godfrey
Specificity and Performance of Antibodies for CODEX, a New Technology for Multiplex Tissue Imaging
University of Maryland, College Park (Maryland)
Preceptors: Dr. Noemi Kedei, Dr. Jessie Chen

PM-111 Michael Gouzoulis
Mechanisms of NAMPT Inhibitor-induced Apoptosis in Ewing Sarcoma
University of Maryland, College Park (Maryland)
Preceptors: Mr. Choh Yeung, Dr. Christine Heske

PM-112 Archita Goyal
The Impact of a Child's Neurofibromatosis Type 1 (NF1) on the Parents' Relationship
Johns Hopkins University (Maryland)
Preceptors: Dr. Lori Wiener, Ms. Haven Battles, Dr. Brigitte Widemann, Dr. Lori Wiener

PM-113 Benjamin Grove
Unraveling Lineage-specific Transcription Factors That Drive Self-renewal and Differentiation in Neuroblastoma
Franklin and Marshall College (Pennsylvania)
Preceptors: Dr. Carol Thiele, Dr. Man Xu, Ms. Sukriti Bagchi, Ms. Sakereh Carter

PM-114 Rohini Guin
Evaluating the Effect of Drug Combinations in Proteasome Inhibitor-resistant Multiple Myeloma
Emory University (Georgia)
Preceptors: Dr. Snehal Gaikwad, Ms. Anaisa Quintanilla-Arteaga, Dr. Adriana Zingone, Dr. Beverly Mock

PM-115 Nikita Gupta
The Effect of KPT330 and Temozolomide on Radiation Therapy in Glioblastoma
Georgetown University (District of Columbia)
Preceptors: Dr. Jennifer Lee, Dr. Kevin Camphausen

PM-116 William Hajjar
Study of Thymocyte Development and Differentiation into αβ T cells
James Madison University (Virginia)
Preceptors: Dr. Marco Craveiro, Dr. Alfred Singer
PM-117 Nicole Haynes, Lynn Bi
*Investigation of XPO7 as a Therapeutic Target in Cholangiocarcinoma and Ovarian Cancer*
University of Mary Washington (Virginia), Columbia University (New York)
Preceptor: Dr. Jonathan Hernandez

PM-118 Emily He
*The Binding Mechanism of Centromere-binding factor 3 (CBF3) to the Yeast Nucleosome*
Harvard College (Massachusetts)
Preceptors: Dr. Ruifang Guan, Dr. Yawen Bai

PM-119 Bryce Hendren-Santiago
*The Role of Isoleucine 353 of ASAP1 in Linking Phosphoinositide Binding to GAP Activity*
University of Illinois at Urbana-Champaign (Illinois)
Preceptors: Dr. Jian Xiaoying, Dr. Paul Randazzo

PM-120 Alyssa Henriquez
*Investigating the Cell Surface Signaling of Interferon Lambda 4 and its Possible Role in Liver Cancer*
Andrews University (Michigan)
Preceptors: Dr. Ludmila Prokunina-Olsson, Dr. Olusegun Onaboji, Ms. Joselin Vargas

PM-121 Chaz Hinzman
*Characterization of Extracellular Vesicles Derived from Pancreatic Cancer Cells Treated with Transforming Growth Factor-Beta and Radiation Therapy*
Georgetown University Medical Center (District of Columbia)
Preceptors: Mr. Bryce Killingsworth, Dr. Joshua Welsh, Dr. Amrita Cheema, Dr. Jennifer Jones

PM-122 Joseph Holden
*Using CRISPR-Cas9 Genome Editing to Knock Out EPAC1/2 Proteins*
University of Alabama (Alabama)
Preceptors: Dr. Ramiro Iglesias-Bartolome, Dr. James Hoy

PM-123 Jason Hong
*LIM Domain Binding 1 Cooperates with MYCN to Suppress MYCN Amplified Neuroblastoma Cell Proliferation*
Princeton University (New Jersey)
Preceptors: Dr. Zhihui Liu, Dr. Carol Thiele

PM-124 Yasaman Hosseini
*A Portfolio Analysis of Technology Use Involving Sleep and Physical Activity in HBRB Funded Grants*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Kara Hall, Dr. Pat Boyd
PM-125 John Hsu
Detecting Immunomarkers in Nf1 Mutated Mice
Amherst College (Massachusetts)
Preceptors: Dr. Karlyne Reilly, Dr. Souvik Karmakar

PM-126 Chloe Huelsnitz
Spousal Concordance in Genomic Screening Beliefs and Intentions and Spousal Influence on Individuals’ Genomic Screening Intentions
University of Minnesota (Minnesota)
Preceptors: Dr. William Klein, Dr. Jennifer Taber, Dr. Erin Turbitt

PM-127 Julia Huff
Ubiquitination of MHC Class II by the E3 Ligase March-I
Ursinus College (Pennsylvania)
Preceptors: Dr. Paul Roche, Dr. Even Walseng

PM-128 Iris Indig
Targeting Hypoxia Downstream Signaling Protein, CAIX, for CAR-T Cell Therapy against Glioblastoma
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Jing Cui, Dr. Ping Zhuang

PM-129 Alexandra Ipanaque-Guembes
Investigating the Effects of Phosphorylation Mutants of TGFb Receptor I on Cellular Responses Induced by TGFb
Ohio State University (Ohio)
Preceptors: Dr. Ying Zhang, Dr. Birendra Kc

PM-130 Bailey Johnson
Using a Model of Zebrafish Melanoma to Study Brain Metastasis
University of Mary Washington (Virginia)
Preceptor: Dr. Kandice Tanner

PM-131 C. Paige Jones
Functional Validation of Bivalent Genes in MPNST Cells with Epigenetic Approaches
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Jack Shern, Dr. Xiyuan Zhang

PM-132 Ananth Josyula
Cryo-EM Studies of Macromolecular Complexes
Gilman School (Maryland)
Preceptors: Dr. Reinhard Grisshammer, Dr. Jana Ognjenovic, Dr. Joseph Darling
PM-133 Michel Kabbash  
*Examining the Role of Mesothelin in Mouse Lung Adenocarcinoma Development*  
Oakland University William Beaumont School of Medicine (Michigan)  
Preceptors: Dr. Qun Jiang, Dr. Raffit Hassan

PM-134 Melissa Kallarakal  
*Identification of Regulatory Genes Critical for Thymic Epithelial Cell Development*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Avinash Bhandoola, Dr. Jennifer Cowan, Dr. Yongge Zhao

PM-135 Ashwin Kammula  
*Uncovering the Role of DICER1 in Liver Cancer*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Dana Dominguez, Dr. Xin Wang, Dr. Julián Candia

PM-136 Naviya Kapadia  
*Rapid Identification and Modification of T-Cell Receptors Recognizing Tumor Neoantigens*  
Harker School (California)  
Preceptors: Dr. James Yang, Dr. Kenichi Hanada, Mr. Nick Zhao

PM-137 Megana Kasavaraju  
*TNF Induces GM-CSF Production through TNF Receptor 2 in CD4 T Cells*  
Virginia Commonwealth University (Virginia)  
Preceptor: Dr. Muhammad Alam

PM-138 Priya Katyal  
*Genomic Landscape of Patients’ Tumor Infiltrating Lymphocytes: Pre, During, and Post Selective TIL Therapy*  
St. Stephens and St. Agnes School (Virginia)  
Preceptor: Dr. Todd Prickett

PM-139 Neal Kewalramani  
*Computer Simulation of the Micro-dose Calibrator*  
University of Maryland, College Park (Maryland)  
Preceptor: Dr. Stephen Adler

PM-140 Laila Khorasani  
*The Contribution of Transcription Factor IRF-6 to Sex-based Differences in CD4+ T-Cell Functions*  
University of California, Los Angeles (California)  
Preceptors: Dr. Vanja Lazarevic, Dr. Yuanyuan Gao
PM-141 Caleb Kim
*Spatial Mapping of Immune Cells in 4T1 Mouse Tumors Treated with Irradiation and Anti-inflammatory agents*
Winston Churchill High School (Maryland)
Preceptor: Dr. Stephen Lockett

PM-142 Nadia Kirmani
*Development of Novel Inhibitors of SED8 Methyltransferase That Promote p53 Tumor Suppressor Protein Reactivation*
Duke University (North Carolina)
Preceptors: Dr. Harichandra Tagad, Dr. Victor Clausse, Dr. Ettore Appella

PM-143 Zoey Kline
*Chemotherapeutic Drug Screening to Target Stem Cell Induced Ras Tumors in Drosophila Kidney*
Fairfield Area High School (Pennsylvania)
Preceptor: Dr. Shree Ram Singh

PM-144 Sruthi Kodali
*Analysis of Molecular Differences between Endothelium-specific CD47-Knockout and Wild Type (WT) Mice*
College of William and Mary (Virginia)
Preceptors: Dr. David Roberts, Dr. Kun Dong

PM-145 Amitesh Kotwal
*Functional Proteogenomic Screens in Multiple Myeloma*
Georgetown University (District of Columbia)
Preceptors: Dr. Ryan Young, Dr. Louis Staudt

PM-146 Bradley Krivit
*Probing Lamin-Chromatin Interactions by Mutational Analysis in vitro*
Georgetown University (District of Columbia)
Preceptors: Dr. Andria Schibler, Dr. Tom Misteli

PM-147 Benjamin Lee
*Using Optical Tweezers to Map the Mechanical Properties of Cancer Cells*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Woong So, Dr. Kandice Tanner

PM-148 Hanbin Lee
*3D Printing as a Tool to Visualize Cell Biology at the Nanoscale*
Urbana High School (Maryland)
Preceptor: Dr. Kedar Narayan
PM-149 Bryan Li  
*Optimization of ChIP-seq for FFPE Samples*  
Montgomery Blair High School (Maryland)  
Preceptor: Dr. Fan Yang

PM-150 Christina Li  
*Meta-analysis of Gene Expression Data for Metastatic Breast Cancer*  
University of Michigan (Michigan)  
Preceptor: Dr. Margaret Cam

PM-151 Haoran Li  
*Differential Effectiveness of Cancer-Targeting Drugs in 3D Culture*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Chih-Shia Lee, Dr. Ji Luo

PM-152 Winston Li  
*Longitudinal Analysis of Renal Preservation in Patients with Hereditary Kidney Cancer*  
Winston Churchill High School (Maryland)  
Preceptor: Dr. Mark Ball

PM-153 Emily Liang  
*Comparing Strategies of Training Deep Learning Models for Cervical Cancer Screening*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Kai Yu, Dr. Mark Schiffman

PM-154 Leah Liebman  
*Determining Difference in Growth Rate between Parental Cell Line and Vandetanib Resistant Line in Medullary Thyroid Carcinoma*  
Bnos Yisroel (Maryland)  
Preceptors: Dr. John Glod, Mr. Christian Okafor, Dr. Robert Murphy, Ms. Sophia Khan

PM-155 Zhi-Wei Lin  
*Quantifying Nivolumab and Pembrolizumab Using ELISA*  
University of North Carolina at Chapel Hill (North Carolina)  
Preceptors: Dr. Cody Peer, Dr. William Figg

PM-156 Lauren Loebach  
*Assessment of Clinical and Biomarkers of Response to Immune Checkpoint Inhibitor Therapy*  
Sherwood High School (Maryland)  
Preceptor: Dr. Julius Strauss

PM-157 Elliot Lowe  
*Functional Implications of LRRC15 in Osteosarcoma Cells*  
Towson University (Maryland)
Preceptors: Dr. Sanjit Mukherjee, Dr. Paul Meltzer

**PM-158 Michelle Lu**  
*Dynamic 18F-DCFPyL PET/CT Imaging of Primary Prostate Cancer in Clinically High-risk Patients*  
University of California, Los Angeles (California)  
Preceptors: Dr. Liza Lindenberg, Dr. Esther Mena Gonzalez, Dr. Ilhan Lim

**PM-159 Adam Luo**  
*Investigating the Hsp70-ZFX Chaperone-Client Interaction in Castration-resistant Prostate Cancer*  
River Hill High School (Maryland)  
Preceptors: Dr. Frank Echtenkamp, Dr. Leonard Neckers

**PM-160 Matthew Lynberg**  
*Depletion of SCAMP3, a Mutant EGFR Target, Accelerates Tumor Proliferation and Increases EGFR-TKI Resistance in Lung Adenocarcinoma*  
University of California, Santa Barbara (California)  
Preceptors: Dr. Abhilash Venugopalan, Dr. Udayan Guha

**PM-161 Chelsea Maccow**  
*Regulation of the Actin Cytoskeleton by a BAR Domain-containing Protein, ASAP1*  
University of North Carolina at Charlotte (North Carolina)  
Preceptors: Ms. Anjelika Gasilina, Dr. Paul Randazzo

**PM-162 Sanna Madan**  
*Predicting Response to Immune Checkpoint Blockade Therapy with Transfer Learning*  
University of Maryland, College Park (Maryland)  
Preceptor: Dr. Eytan Ruppin

**PM-163 Frances Angela Maher**  
*Investigating RNA-Platinum Binding in Cisplatin Resistant Cells*  
Brandeis University (Massachusetts)  
Preceptors: Dr. Michael Gottesman, Dr. Sachi Horibata

**PM-164 Amry Majeed**  
*Histone Deacetylase Inhibitor Entinostat Increases PD-L1 Protein Expression in Small Cell Lung Cancer Cells*  
Sidney Kimmel Medical College at Thomas Jefferson University (Pennsylvania)  
Preceptors: Dr. Azam Ghafoor, Dr. Anish Thomas, Dr. Yilun Sun

**PM-165 Jessica Malow**  
*Engineering Liver Cancer Targeted GPC3 CAR T-Cell Therapy*  
University of California, Berkeley (California)  
Preceptors: Dr. Mitchell Ho, Dr. Dan Li
PM-166 Nicole Malow  
*The Role of CD47 in Erythroid Differentiation*  
University of California, Berkeley (California)  
Preceptors: Dr. Rajdeep Banerjee, Dr. David Roberts

PM-167 Maraya Maynor  
*A Role Of Valosin-containing Protein (Vcp)/p97 in Repair Of Topoisomerase-mediated DNA Damage*  
Hampton University (Virginia)  
Preceptors: Dr. Yilun Sun, Dr. Keli Agama

PM-168 Kayla McDonald  
*Elucidating the Modification Status of tRNAs in Response to Environmental and Metabolic Stress*  
Spelman College (Georgia)  
Preceptors: Dr. Pedro Batista, Dr. Christina Fitzsimmons, Dr. Mariana Mandler

PM-169 Jason McFadden  
*Evaluation of IRF4 Gene Translocations in the Differential Diagnosis of Uncommon Hematopoietic Neoplasms*  
Dartmouth College (New Hampshire)  
Preceptors: Dr. Svetlana Pack, Dr. Neval Ozkaya, Dr. Elaine Jaffe

PM-170 Pedro X. Medina  
*Analyzing Polymicrobial Interactions between Pseudomonas aeruginosa and Staphylococcus aureus*  
University of Puerto Rico Arecibo (Puerto Rico)  
Preceptors: Dr. Anupama Khare, Dr. Tiffany Zarrella

PM-171 Shira Mencer  
*DNA Re-replication in Cells Overexpressing CDT1*  
Bnos Yisroel of Baltimore (Maryland)  
Preceptors: Dr. Mirit Aladjem, Dr. Haiqing Fu, Dr. Christophe Redon

PM-172 Marisa Morakis  
*Precision Medicine: Integration of DNA Methylation Profiling, FISH, DNA and RNA Sequencing into a Clinical Diagnosis*  
Bucknell University (Pennsylvania)  
Preceptors: Dr. Svetlana Pack, Dr. Zied Abdullaev

PM-173 Jake Munch  
*Elucidating the Role of Flotillin-2 on the Growth of HER2-Amplified Breast Cancer*  
University of Texas at Dallas (Texas)  
Preceptors: Dr. David Wisniewski, Dr. Stanley Lipkowitz
PM-174 Pujita Munnangi  
*Characterization of the Metastatic Niche in the Human Liver: Optimizing Sample Preparation for Advanced Imaging Techniques*  
Rice University (Texas)  
Preceptors: Dr. Kirsten Remmert, Dr. Jonathan Hernandez

PM-175 Ryan Murphy  
*Does Adrenal Venous Sampling Predict a Resolution of Hypertension after Adrenalectomy for Primary Hyperaldosteronism?*  
Dickinson College (Pennsylvania)  
Preceptors: Dr. Naris Nilubol, Dr. Dana Dominguez

PM-176 Veda Nagubandi, Sravani Buddhavarapu, Arnav Sinha  
*Ionizing Radiation (X-Rays) Induces Senescence in Cancer Cells*  
Georgetown University (District of Columbia), University of Minnesota (Minnesota), University of Maryland, College Park (Maryland)  
Preceptors: Dr. Chandra Nagineni, Dr. Rajani Choudhuri, Dr. Murali Cherukuri, Dr. James Mitchell

PM-177 Elyse Nguyen  
*Analysis of the Role of Aminoacyl tRNA Synthetase Genes in Global Protein Synthesis and mRNA Specific Regulation of Translation in Cancer Cells*  
Virginia Commonwealth University (Virginia)  
Preceptors: Dr. Dipak Poria, Dr. Esta Sterneck

PM-178 Jessica Nguyen  
*Re-programming of Fibroblast into Multipotent Stem Cells Using CD47 Antagonists*  
James Hubert Blake High School (Maryland)  
Preceptors: Dr. Sukhbir Kaur, Mr. Kyle Cicalese, Dr. David Roberts

PM-179 Emmanuel Nyong  
*Determining the Intracellular Location of Zirconium-89 after Labeling with Zirconium-89 Oxine Cell Tracking Agent for Positron Emission Tomography.*  
University of Texas at San Antonio (Texas)  
Preceptors: Dr. Noriko Sato, Dr. Peter Choyke

PM-180 Deborah Ofosu  
*A Screen of SCLC Cell Lines for a Drug Combinatory Treatment*  
Lehman College (New York)  
Preceptors: Dr. Haobin Chen, Dr. Anju Kumari, Dr. David Schrump

PM-181 Daniel Oh  
*Characterization of Kaposi’s Sarcoma Herpesvirus and Human Circular RNAs during Infection*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Joseph Ziegelbauer, Dr. Takanobu Tagawa, Dr. Anna Serquiña

PM-182 Christian Okafor
The Effects of MDR1 Inhibitors on the Growth Rate of Medullary Thyroid Cells in Combination with Vandetanib
Towson University (Maryland)
Preceptors: Dr. John Glod, Ms. Sophia Khan, Dr. Alex Pemov

PM-183 Qusay Omran
Identification of Small Molecules Targeting G-quadruplexes in the mTOR and n-MYC Promoter Regions
Yale University (Connecticut)
Preceptors: Dr. Mo Yang, Dr. John Schneekloth

PM-184 Samrat Pathak
Studying Interaction of Arf1 GTPase with Arf GTPase Activating Protein ASAP1
John F. Kennedy High School (Maryland)
Preceptors: Dr. Paul Randazzo, Dr. Neeladri Roy

PM-185 Batsheva Paul
Evaluating Therapeutic Agents for Hereditary Leiomyomatosis and Renal Cell Cancer-associated Renal Cell Carcinoma
University of Connecticut (Connecticut)
Preceptors: Ms. Susana Najera, Dr. Daniel Edelman

PM-186 Havisha Pedamallu
Exploring the Non-canonical Function of Programmed Death-Ligand 1 (PD-L1) in Lung Cancer
Washington University in St. Louis (Missouri)
Preceptors: Dr. Brid Ryan, Mr. Chris Grant

PM-187 Rahul Pemmaraju
Analysis of Amplification Patterns in Fusion-positive Rhabdomyosarcoma
Rutgers University (New Jersey)
Preceptors: Dr. Wenyue Sun, Dr. Frederic Barr

PM-188 Isabel Perera
Differentiation of the Optic Cup Organoid in Humans and Mice by TEM Imaging
Urbana High School (Maryland)
Preceptors: Ms. Christina Burks, Ms. Ziqiu Wang, Ms. Holly Chen, Mr. Anand Swaroop

PM-189 Abbigale Perkins
Novel Regulators of General Stress Responses in Escherichia coli
Howard University (District of Columbia)
Preceptors: Dr. Nadim Majdalani, Dr. Jiandong Chen, Dr. Erin Wall, Dr. Susan Gottesman

PM-190 Kyleigh Petersen
*Investigating the Importance of PHB in T-cell Survival and Differentiation*
College of Charleston (South Carolina)
Preceptor: Dr. Devikala Gurusamy

PM-191 Annie Pierce
*Transition Readiness of Adolescents and Young Adults with Neurofibromatosis Type 1*
George Washington University (District of Columbia)
Preceptors: Dr. Kari Struemph, Dr. Staci Martin, Dr. Pamela Wolters, Mrs. Mary Anne Tamula

PM-192 Karthik Pittala
*The Functional Role of microRNA-497 in Malignant Pleural Mesothelioma (MPM)*
University of Michigan (Michigan)
Preceptors: Dr. Chuong Hoang, Dr. Nathanael Pruett

PM-193 Madison Plaster
*Identification of Potent Reactive Oxygen Species-generating Enzymes from Marine Aqueous Extracts*
University of Akron (Ohio)
Preceptor: Dr. Carter Mitchell

PM-194 Anjali Poe
*The Medical Implications of Continued Tobacco Use after Cancer Diagnosis: An Audiocast for SRNT-U*
Williams College (Massachusetts)
Preceptor: Dr. Stephanie Land

PM-195 Christopher Pondoc
*Detection of Centers of Mitosis with the U-Net Architecture*
Frederick High School (Maryland)
Preceptors: Dr. Yanling Liu, Dr. Christian Suloway

PM-196 Hannah Prensky
*RNA/DNA Hybrid Constructs Targeting Anti-apoptotic Pathways in Epithelial-derived Solid Tumor Carcinomas*
Barnard College (New York)
Preceptors: Dr. Lorena Parlea, Dr. Bruce Shapiro

PM-197 Gabrielle Puller
*Identifying DnaJ Residues Involved in Substrate Binding and Specificity*
Virginia Polytechnic Institute and State University (Virginia)
Preceptors: Dr. Sue Wickner, Dr. Shannon Doyle
PM-198 Avigayil Rabinowitz
Adeno-associated Viral Gene Therapy to Treat a Mouse Model of Methylmalonic Acidemia
University of Maryland, College Park (Maryland)
Preceptors: Dr. Jessica Schneller, Dr. Daniel Edelman

PM-199 Apurva Raghu
Defining Liver Zonation by Organelle Distribution
University of Maryland, College Park (Maryland)
Preceptors: Mr. Timothy Qi, Dr. Daniel Feliciano, Dr. Natalie Porat-Shliom

PM-200 Rashika Rahman
Database Management for Virtual Tissue Repository in SEER program
Northwest High School (Maryland)
Preceptors: Dr. Alison Van Dyke, Dr. Yao Yuan

PM-201 Kristin Recker
Assessing the Effects of Microbiota-derived Metabolites on Tumor Growth
University of Florida (Florida)
Preceptors: Dr. Romina Goldszmid, Mr. Khiem Lam, Dr. Romina Araya, Mrs. Quanyi Chen

PM-202 Lawrence Redmond
Identifying Distinct Malaria Complications, Including Endemic Burkitt Lymphoma, Using Malaria Symptoms and Biomarkers
Emory University (Georgia)
Preceptors: Dr. Sam Mbulaiteye, Dr. Sally Peprah, Dr. Barry Graubard

PM-203 Marisa Reynolds
Establishing and Characterizing a Mouse Prostate Cancer Bone Metastasis Model with Lucap 136 PDX
Michigan State University College of Human Medicine (Michigan)
Preceptors: Dr. Juan Yin, Dr. Kathleen Kelly

PM-204 Nyree Riley
Glutamine Metabolism Is a New Therapeutic Target in Thyroid Cancer
University of Georgia (Georgia)
Preceptors: Dr. Myriem Boufraqech, Dr. Naris Nilubol

PM-205 Howard Rong
The Hop1 Protein Influences Meiotic Recombination
University of Maryland, College Park (Maryland)
Preceptors: Dr. Michael Lichten, Dr. Anura Shodhan
PM-206 Rachel Rutstein  
‘Can I Live Without My Stomach?’: Case Reports of Prophylactic Total Gastrectomy in Families with Hereditary Gastric Cancer Syndromes  
Touro College for Women (Non-U.S.)  
Preceptors: Dr. Kathleen Calzone, Mrs. Grace-Ann Fasaye, Dr. Jeremy Davis

PM-207 Sahil Sahni  
Transcriptomic Analysis of Mesenchymal Stem Cells Undergoing Osteoblastic Differentiation  
McGill University (Non-U.S.)  
Preceptors: Dr. Paul Meltzer, Dr. Jack Zhu, Dr. Yonghong Wang

PM-208 Pamela Sanchez  
Dietary Intake and Biliary Tract Cancer Risk in the U.S. 2003-2006  
University of Florida (Florida)  
Preceptors: Dr. Kevin Dodd, Dr. Jill Koshiol, Dr. Nancy Emenaker

PM-209 Dana Schaar  
Second Malignancies in Patients with Chronic Graft-Versus-Host Disease  
Georgetown University (District of Columbia)  
Preceptor: Dr. Steven Pavletic

PM-210 Aviva Schwartz  
The Effect of LKB1 Knockout on Tight Junction and Mitochondria Morphology in Mouse Hepatocytes.  
Yeshiva University (New York)  
Preceptors: Ms. Megan Stefkovich, Dr. Suehelay Acevedo-Acevedo, Dr. Natalie Porat-Shliom

PM-211 Matthew Seebald  
DDB2 Knockdown Induces Radiation Resistance in GBM Cells  
University of Chicago (Illinois)  
Preceptors: Dr. Julianna DeSousa, Dr. Kevin Camphausen

PM-212 Christopher Sesi  
Systematic Analysis of CD19 CAR T-cell Related Neurotoxicity in Children and Young Adults with Acute Lymphoblastic Leukemia  
Midwestern University (Arizona)  
Preceptor: Dr. Nirali Shah

PM-213 Pal Shah  
Global Tobacco Cessation Practices in the Context of Cancer Treatment  
University of Illinois at Chicago (Illinois)  
Preceptor: Dr. Stephanie Land
PM-214 Shruti Shah  
*Identification of HIV-2 Vif-CBFbeta Interaction Determinants*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Krista Delviks-Frankenberry, Dr. Vinay Pathak

PM-215 Aleena Shahab  
*Effects of Methotrexate on Cytokine Production by Macrophages in the Context of Murine Autoimmunity*  
Urbana High School (Maryland)  
Preceptors: Dr. Howard Young, Ms. Megan Hess

PM-216 Ahjeetha Shankar  
*Establishment of Patient-derived Mesothelial Cell Lines*  
Brown University (Rhode Island)  
Preceptors: Dr. Nathanael Pruett, Dr. Chuong Hoang

PM-217 Aman Shankardass  
*Non-coding RNAs as Biomarkers for Radiation Biodosimetry*  
Case Western Reserve University (Ohio)  
Preceptors: Dr. Moly Aryankalayil, Ms. Shannon Martello, Dr. Norman Coleman, Ms. Sunita Chopra

PM-218 Arnav Sinha, Sravani Buddhavarapu, Veda Nagubandi  
*Imaging Assessment of Physiological Changes in Tumors after Treatment with Hypoxia Activated Prodrug*  
University of Maryland, College Park (Maryland), University of Minnesota (Minnesota), Georgetown University (District of Columbia)  
Preceptors: Dr. Shun Kishimoto, Dr. Rajani Choudhuri, Dr. John Cook, Dr. Murali Cherukuri

PM-219 Benjamin Smith  
*Electron Microscopy Analyzes Macrophages in Mouse Lung Tissue*  
Walkersville High School (Maryland)  
Preceptors: Dr. Kunio Nagashima, Dr. Gongping Shi, Dr. Yinling Hu, Dr. Natalia De Val Alda

PM-220 Hannah Smith  
*Pediatric Chordoma: Findings of the First NIH Inaugural Chordoma Clinic*  
St. Mary's College of Maryland (Maryland)  
Preceptors: Dr. Brigitte Widemann, Dr. Taryn Allen, Dr. Margarita Raygada, Mr. Maran Ilanchezhian

PM-221 Julianna Solomon  
*Motor Function of Children with Neurofibromatosis Type 1 on a Natural History Study*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Andrea Gross, Dr. Scott Paul
PM-222 Rashna Soonavala
*When Cancer Patient Experiences and Health Plan Quality Indicators Are Misaligned: A Review of the "Getting Care Quickly" CAHPS® Quality Measure and Emergency Department Use*
University of Michigan (Michigan)
Preceptor: Dr. Roxanne Jensen

PM-223 Nadav Sprague
*Evaluation of an Environmental and Health Education Program for Minority Youth*
Washington University in St. Louis (Missouri)
Preceptor: Dr. David Berrigan

PM-224 Neya Sterling
*The Utility of Paired 68Ga-DOTATATE PET/CT or NM Octreoscan and 18FDG PET/CT forPredicting Malignant Potential of Neuroendocrine Tumors in Patients with MEN1*
Northeast Ohio Medical University (Ohio)
Preceptors: Dr. Samira Sadowski, Dr. Jenny Blau

PM-225 Ian Stukes
*Characterization of Zebrafish Homologs of the Human ABCG2 Gene and Localization to theBlood-Brain Barrier*
University of Wisconsin-Madison (Wisconsin)
Preceptors: Dr. Michael Gottesman, Dr. Robert Robey, Ms. Andrea Robinson

PM-226 Emily Styslinger
*Role of Human P-glycoprotein in Chemoresistance*
Colgate University (New York)
Preceptors: Dr. Sabrina Lusvarghi, Dr. Suresh Ambudkar

PM-227 Amanda Sugrue
*Targeting Metabolism as a Potential Therapeutic Strategy in Kidney Cancer*
Heidelberg University (Ohio)
Preceptors: Dr. Sameer Issaq, Dr. Ramaprasad Srinivasan

PM-228 William Sullivan
*Effect of Mesothelin Expression on the Adherence of Pancreatic Cancer Cells to Peritoneal Membrane*
Yale University (Connecticut)
Preceptors: Dr. Christine Alewine, Dr. Leela Avula, Ms. Xianyu Zhang, Ms. Sarah Joseph

PM-229 Abigail Svoysky
*What Controls the Unusual Torsional State of Telomeres?*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Rahul Thadani, Dr. Julia Cooper
PM-230 Michael Talley
Structural and Kinetic Characterization of Desb, an N-Hydroxylase in Desferrioxamine B Biosynthesis
Towson University (Maryland)
Preceptors: Ms. Danielle Needle, Dr. David Waugh

PM-231 Abhirami Thaivalappil
Medicinal Plant Extracts as Modulators of Multidrug Transporters
University of Maryland, College Park (Maryland)
Preceptors: Dr. Biebele Abel, Dr. Megumi Murakami, Dr. Suresh Ambudkar

PM-232 Michael Timmer
Evaluating Patient Reported Cognitive Symptoms in Participants of the NOB Natural History Study
St. Mary's College of Maryland (Maryland)
Preceptors: Dr. Terri Armstrong, Ms. Elizabeth Vera

PM-233 Alexandra Toscano
Prospective Simulated Artificial Intelligence Workflow Improves Report Value in Clinical Trials while Saving Radiologists’ Time
University of Maryland, College Park (Maryland)
Preceptors: Dr. James Gulley, Dr. Les Folio, Dr. Huy Do

PM-234 Timmy Tran
Gene Enhancers in Pleural Mesothelioma
Virginia Commonwealth University (Virginia)
Preceptors: Dr. Chuong Hoang, Dr. Nathanael Pruett

PM-235 Tashinga Tsokodayi
Epigenetic Activation of Immune Genes in Small Cell Lung Cancer Using Histone Deacetylase Inhibitor
University of Maryland Eastern Shore (Maryland)
Preceptors: Dr. Azam Ghafoor, Dr. Weixin Wang, Dr. Katherine Calvo

PM-236 Arielle Tycko
Using Genetically-engineered Myeloid Cells (GEMys) in Combination with Other Cancer Therapies Hinders Tumor Growth and Metastasis
Walt Whitman High School (Maryland)
Preceptors: Dr. Daniel Beury, Dr. Sabina Kaczanowska, Dr. Rosandra Kaplan

PM-237 Shreya Vinjamuri
GRP56 Regulates T-cell Differentiation
Thomas Jefferson High School for Science and Technology (Virginia)
Preceptors: Dr. Chuan Wu, Dr. Girak Kim

PM-238 Saniya Wadhwa
*Identification of RNA Binding Proteins That Direct RNA Localization*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Stavroula Mili, Dr. Tianhong Wang

PM-239 Jack Walker
*Databasing the Frederick National Lab Partnership Development Office Contacts*
Urbana High School (Maryland)
Preceptors: Dr. Maggie Scully, Dr. Vladimir Popov, Ms. Victoria Brun

PM-240 Katharine Walker-Bawa
*Alternative Fixation Techniques for Enhanced Histology and Biomolecular Preservation*
George Washington University (District of Columbia)
Preceptors: Dr. Stephen Hewitt, Dr. Joon-Yong Chung

PM-241 Alexandra Webster
*Making and Testing an Immunotoxin That Kills Myeloma Cells*
Tufts University (Massachusetts)
Preceptors: Dr. Tapan Bera, Dr. Ira Pastan

PM-242 Kevin Webster
*Visualizing Heterotypic Cellular Interactions in Thick Tissues Using Expansion Microscopy*
McDaniel College (Maryland)
Preceptors: Dr. Maira Alves Constantino, Dr. Kandice Tanner, Dr. Zayd Khaliq

PM-243 Aliza Weiss
*Current Landscape of Eribulin in Advanced Soft Tissue Sarcoma: A Systematic Review.*
Bais Yaakov of Passaic High School (New Jersey)
Preceptors: Dr. Alice Chen, Dr. Rafeh Naqash

PM-244 Lily Widdup
*Assessing APOL1 Risk Allele Status in Nigerians*
Wellesley College (Massachusetts)
Preceptors: Dr. Cheryl Winkler, Mrs. Elizabeth Binns-Roemer

PM-245 Haley Wilt
*Structural Analysis of the FMN Riboswitch Aptamer Domain in the Absence of Ligand*
Washington College (Maryland)
Preceptors: Dr. Jason Stagno, Dr. Yun-Xing Wang

PM-246 Abigail Wittenberg, Camryn Isemann, Isra Tariq
*Cationic Lipids and RNAi Therapeutics: Effects of PEGylation on Gene Downregulation*
Urbana High School (Maryland), Oakdale High School (Maryland), Hood College (Maryland)
Preceptor: Dr. Anu Puri

PM-247 Fem Woodruff
*Development of a Screening Protocol to Generate Reactive Species for Photo-crosslinking Applications*
Cornell University (New York)
Preceptors: Dr. Martin Schnermann, Dr. Ek Raj Thapaliya

PM-248 Jennifer Xue
*Comparison of Various Osmium Tetroxide-based Staining Techniques and Comparison of Computational Modeling Methods for Characterizing Viral Nanoparticles*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Natalia de Val Alda, Mr. Kunio Nagashima, Mr. Htet Khant

PM-249 Bennett Yang
*Role of Thyroid Hormone in THP-1 Monocyte to Macrophage Differentiation*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Sunmi Park, Dr. Sheue-yann Cheng

PM-250 Lila Yang
*Characterization of CAR T-Cell Therapy-related Cytopenias in Children and Young Adults with ALL*
New York Institute of Technology College of Osteopathic Medicine (New York)
Preceptor: Dr. Nirali Shah

PM-251 Avanish Yendluri
*Characterizing Antiproliferative Activities of GSTP1 Inhibitors on Thymoma and Thymic Carcinoma Tumor Cell Lines*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Udayan Guha, Dr. Xu Zhang, Mr. Khoa Nguyen

PM-252 Ornela Yossa Nganpe
*High-Throughput Drug Screen Identifies a Drug Combination Which Specifically Targets CDK1/2/5/9 and HDAC1/3*
Towson University (Maryland)
Preceptors: Dr. Beverly Mock, Dr. Tyler Peat, Ms. Nana Gyabaah-Kessie

PM-253 Joshua Yudkin
*The Impact of the 2010 Patient Protection and Affordable Care Act (ACA) on Colorectal Cancer Screening: A Systematic Literature Review*
University of Texas Health Science Center at Houston (Texas)
Preceptor: Dr. Paul Doria-Rose
PM-254 Amy X. Zhang  
*Biologically-informed Bayesian Modeling of Cancer Cell Line Drug Sensitivity*  
Pennsylvania State University (Pennsylvania)  
Preceptors: Dr. Keith Hughitt, Dr. Beverly Mock

PM-255 Amy Zhang  
*Tuning of NK-specific HLA-C Expression by Alternative mRNA splicing*  
University of California, Berkeley (California)  
Preceptors: Dr. Stephen Anderson, Dr. Hongchuan Li, Mr. Joseph Goodson-Gregg

PM-256 Isaac Zhao  
*Integrative Analysis on Environmental Exposures and Tumor Biology Using Epigenetic Biomarkers*  
Brown University (Rhode Island)  
Preceptors: Dr. Brid Ryan, Dr. Emily Rossi

PM-257 Richard Zhu  
*Inhibition of Adult T-Cell Lymphoma with CDK 4/6 Inhibitors*  
Austin College (Texas)  
Preceptor: Dr. Sarvesh Kumar

**National Cancer Institute – Division of Cancer Epidemiology and Genetics (NCI – DCEG)**

PM-258 Omar Ahmed  
*Identifying Clonal Hematopoiesis of Indeterminate Potential in Patients with Severe Aplastic Anemia*  
Georgia Institute of Technology (Georgia)  
Preceptors: Dr. Shahinaz Gadalla, Dr. Bari Ballew

PM-259 Marie Brodsky  
*Participant-facing Risk Modeling for Cancer Precision Prevention*  
Montgomery Blair High School (Maryland)  
Preceptor: Dr. Jonas Almeida

PM-260 Kelly Butler  
*Evaluating Viral Etiology of Bladder Cancer through Analysis of Mutations in FGFR3*  
Columbia University (New York)  
Preceptors: Ms. Nina Rao, Dr. Rouf Banday, Dr. Ludmila Prokunina-Olsson
PM-261 Logan Cho
Chronotype, Sleep, and Meal Timing: Findings from the National Health and Nutrition Examination Survey (NHANES), 2015-2016
Brown University (Rhode Island)
Preceptors: Dr. Neil Caporaso, Dr. Barry Graubard

PM-262 Laura De Ravin
Gene Therapy of Adenosine Deaminase 2 in Human CD34+ Cells Using CRISPR-Cas9 Technology
University of Maryland, College Park (Maryland)
Preceptors: Dr. Oskar Schnappauf, Dr. Uimook Choi

PM-263 Courtney Dill
Uncovering the Dark Matter of Pancreatic Cancer by Assessing Non-coding Regulatory Variations
Morehouse School of Medicine (Georgia)
Preceptors: Dr. Laufey Amundadottir, Dr. Jun Zhong

PM-264 Brenna Douthitt
Germline Genetic Variation in Three Multiplex Bladder Cancer Pedigrees
Vassar College (New York)
Preceptors: Dr. Alex Pemov, Dr. Douglas Stewart

PM-265 Catherine Du
Mutational Signature Portal (mSigPortal)
Carnegie Mellon University (Pennsylvania)
Preceptors: Dr. Tongwu Zhang, Dr. Tere Landi

PM-266 Naomi Eluojierior
Monthly Trends during 2012 in Occupational Dose for Medical Staff Performing/Assisting with FGIPs in the United States
Prince George’s Community College (Maryland)
Preceptor: Dr. David Borrego

PM-267 Michelle Fang
The Role of IFNL4 Genotype in Hepatic Inflammation and Fibrosis Due to Chronic Hepatitis C
University of Maryland, College Park (Maryland)
Preceptors: Dr. Sarah Jackson, Dr. Thomas O’Brien

PM-268 James Karabin
A Comparative Analysis of Deaths Due to External Causes of Mortality in OECD Member Countries, 2001-2015
Arizona State University (Arizona)
Preceptors: Dr. Yingxi Chen, Dr. Amy Berrington
PM-269 Delma Mbulaiteye  
*Identification of Functional Germline Variants in the Bladder Cancer Associated GWAS Locus at 20p12.2*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Ludmila Prokunina, Dr. Rouf Banday, Mrs. Adeola Obajemú

PM-270 Alison Nichols  
*Prophylactic Mastectomies in Women with Li Fraumeni Syndrome*  
University of Maryland College Park (Maryland)  
Preceptor: Dr. Jennifer Loud

PM-271 Anastasia Polkovnichenko  
*Racial Patterns in Colorectal Cancer Incidence: A Non-parametric Assessment*  
University of Virginia (Virginia)  
Preceptors: Dr. Philip Rosenberg, Dr. Brittny Davis

PM-272 Megan Powell  
*Application of Digital Pathology for Comparative Studies of Tumor Immune Infiltration in Different Populations*  
Williams College (Massachusetts)  
Preceptors: Dr. Montserrat García-Closas, Dr. Mustapha Abubakar, Dr. Thomas Ahearn

PM-273 Tim Ring  
*Using CRISPR-dCas9-DNMT3A to Explore the Role of IFNL4 in Epigenetic Reprogramming in Cancer Cells*  
Georgetown University (District of Columbia)  
Preceptors: Dr. Olusegun Onabajo, Dr. Ludmila Prokunina-Olsson

PM-274 Emily Riseberg  
*Associations between Blood DNA Methylation and Estrogen Metabolism*  
Tufts University (Massachusetts)  
Preceptors: Dr. Gretchen Gierach, Dr. Clara Bodelon

PM-275 Emily Spangler  
*Exposure to Particulate Matter Air Pollution and Risk of Gastrointestinal Cancers: A Systematic Review*  
Roanoke College (Virginia)  
Preceptors: Ms. Natalie Pritchett, Dr. Sanford Dawsey, Dr. Rena Jones, Ms. Alicia Livinski

PM-276 Maya Spaur  
*Exposure Assessment of Drinking Water Contaminants among Agricultural Health Study Participants*  
Johns Hopkins University (Maryland)
Preceptor: Dr. Mary Ward

PM-277 Victor Tran
Functional Analysis of Putative Splice Variants in Dyskeratosis Congenita Patients via Exon Trapping
Virginia Polytechnic Institute and State University (Virginia)
Preceptors: Dr. Seth Brodie, Mr. Joseph Boland, Dr. Sharon Savage

PM-278 Sarah Van Alsten
The Association between Metabolic Syndrome and Inflammation: A Cross-sectional Analysis of 110 Circulating Biomarkers
Washington University in St. Louis (Missouri)
Preceptors: Dr. Minkyo Song, Dr. Charles Rabkin

PM-279 Emily Wu
Multiple Imputation by Chained Equations with Applications to the Agricultural Health Study
University of Richmond (Virginia)
Preceptors: Dr. Sung Duk Kim, Dr. Laura Beane Freeman, Dr. Paul Albert

PM-280 Corey Young
Potential Health Disparities in Eligibility for Lung Cancer Screening
Morehouse School of Medicine (Georgia)
Preceptors: Dr. Hormuzd Katki, Dr. Rebecca Landy

National Institute on Minority Health and Health Disparities (NIMHD)

PM-281 Alia Alhomsi
Correlates of Self-efficacy for Coping with Breast Cancer Treatment among Low-acculturated Latinas
George Mason University (Virginia)
Preceptor: Dr. Anna Nápoles

PM-282 Kathleen Dang
Trends in Youth Exposure to Tobacco and E-cigarette Advertising: Variations by Social Determinants and Tobacco Use
University of North Carolina at Chapel Hill (North Carolina)
Preceptor: Dr. Kelvin Choi

PM-283 Azure Erskine
Evidence-based Assessment of Barriers to Breast Cancer Screening among African American Women
Howard University (District of Columbia)
Preceptors: Dr. Faustine Williams, Ms. Bonita Salmeron, Ms. Patricia Timothee
PM-284 Thomas Freitag  
**Substance Use and Abuse Among Gay, Lesbian, and Bisexual Racial and Ethnic Minorities Experiencing Sexual Orientation Discrimination**  
University of Pittsburgh (Pennsylvania)  
Preceptors: Dr. Julia Chen-Sankey, Dr. Kelvin Choi, Mrs. Danielle Duarte

PM-285 Leah Orozco  
**Young Adult Smokers’ Recall of Smoking Cessation Campaigns and Subsequent Cessation: Variation by Race and Ethnicity**  
College of the Holy Cross (Massachusetts)  
Preceptor: Dr. Kelvin Choi

PM-286 Maria Reyes  
**Associations of Emotional Support and Cultural Factors with Benefit Finding among Spanish Speaking Latina Breast Cancer Survivors**  
California State University, Monterey Bay (California)  
Preceptors: Dr. Anna Napoles, Mr. Cristian Escalera

PM-287 Taylor Robinson  
**SmokeFreeBody: An Examination of Smoking Cessation Behavioral Change Techniques (BCTs) on Twitter**  
University of Pittsburgh (Pennsylvania)  
Preceptors: Ms. Charmaine Chan, Dr. Kristyn Kamke, Dr. Sherine El-Toukhy

PM-288 Angela Wang  
**Time to “Digitally” Listen: Characteristics of Smoking Cessation Tweets**  
Duke University (North Carolina)  
Preceptors: Dr. Sherine El-Toukhy, Ms. Charmaine Chan

**National Insitute on Nursing Research (NINR)**

PM-289 Nana Adjoa Mensah Afful  
**Differentiating Human Induced Pluripotent Stem Cells into Myoblasts: A Fast-track Approach**  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Lawal Tokunbor, Dr. Katy Meilleur

PM-290 Erica Holland  
**The Effects of Probiotics on the Microbiome and Health of Healthy Children**  
Fort Valley State University (Georgia)  
Preceptors: Ms. Alexis Franks, Dr. Paule Joseph
PM-291 Natalia Iannarino
*Biological Mediators of Fat-taste: Implications for Obesity*
University of Dayton (Ohio)
Preceptors: Dr. Rosario Jaime-Lara, Dr. Paule Joseph

PM-292 Amanda Jiang
*The Effects of Mindfulness-based Interventions on Military Service Members with Trauma-related Symptoms*
Smith College (Massachusetts)
Preceptor: Ms. Heather Rusch

PM-293 Devin Ohlson
*Development of Virtual Reality Environments for experimentation and Training in Health Care*
Case Western Reserve University (Ohio)
Preceptors: Dr. Patti Brennan, Mr. William Kistler, Dr. John Ostuni

PM-294 Kevin Shaffman
*Exosomes as Diagnostic and Prognostic Biomarkers in Traumatic Brain Injuries*
Monterey Peninsula College (California)
Preceptors: Dr. Vivian Guedes, Mr. Jordan Peyer, Dr. Jessica Gill

PM-295 Vincent Sinfuego
*Can Virtual Avatars Enhance Presence in Virtual Reality Enough to Influence Health-related Behavior?*
Duke University (North Carolina)
Preceptors: Dr. Patti Brennan, Dr. John Ostuni, Mr. William Kistler

PM-296 Emma Walter
*Validation of Electrolyte Reference Standard for Sweat Patch Biomarker Testing*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Lichen Xiang, Dr. Wendy Henderson

OD High School Scientific Training and Enrichment Program (HiSTEP)

PM2-157 Joachim Ambaw
*My Summer Experience in HiSTEP at NIH*
James H. Blake High School (Maryland)
Preceptor: Dr. Kristen Zukosky

PM2-158 Aiden Benyarku
*My Summer Experience in HiSTEP at NIH*
Eleanor Roosevelt High School (Maryland)
Preceptor: Dr. Kristen Zukosky
PM2-159 Jamil Bonilla
*My Summer Experience in HiSTEP at NIH*
Hayfield Secondary School (Virginia)
Preceptor: Dr. Kristen Zukosky

PM2-160 Amy Chen
*My Summer Experience in HiSTEP at NIH*
Academy of Health Sciences at PGCC (Maryland)
Preceptor: Dr. Kristen Zukosky

PM2-161 Talia Chicas
*My Summer Experience in HiSTEP at NIH*
Wheaton High School (Maryland)
Preceptor: Dr. Kristen Zukosky

PM2-162 Kuds Desta
*My Summer Experience in HiSTEP at NIH*
John F. Kennedy High School (Maryland)
Preceptor: Dr. Kristen Zukosky

PM2-163 Ayantu Feyissa
*My Summer Experience in HiSTEP at NIH*
John F. Kennedy High School (Maryland)
Preceptor: Dr. Kristen Zukosky

PM2-164 Aniya Green
*My Summer Experience in HiSTEP at NIH*
Baltimore Leadership School For Young Women (Maryland)
Preceptor: Dr. Kristen Zukosky

PM2-165 Jamir Grier
*My Summer Experience in HiSTEP at NIH*
Washington Leadership Academy (District of Columbia)
Preceptor: Dr. Kristen Zukosky

PM2-166 Matin Haghighi Ara
*My Summer Experience in HiSTEP at NIH*
Colonel Zadok Magruder High School (Maryland)
Preceptor: Dr. Kristen Zukosky

PM2-167 Michael Houck
*My Summer Experience in HiSTEP at NIH*
Washington Leadership Academy PCS (District of Columbia)
Preceptor: Dr. Kristen Zukosky

**PM2-168 Fatmata Jalloh**  
*My Summer Experience in HiSTEP at NIH*  
John F Kennedy High School (Maryland)  
Preceptor: Dr. Kristen Zukosky

**PM2-169 Lilian Martinez**  
*My Summer Experience in HiSTEP at NIH*  
James Hubert Blake High School (Maryland)  
Preceptor: Dr. Kristen Zukosky

**PM2-170 Cynthia Moya**  
*My Summer Experience in HiSTEP at NIH*  
Seneca Valley High School (Maryland)  
Preceptor: Dr. Kristen Zukosky

**PM2-171 Lana Nguyen**  
*My Summer Experience in HiSTEP at NIH*  
Montgomery Blair High School (Maryland)  
Preceptor: Dr. Kristen Zukosky

**PM2-172 Ellee Noonan-Shueh**  
*My Summer Experience in HiSTEP at NIH*  
James Hubert Blake High School (Maryland)  
Preceptor: Dr. Kristen Zukosky

**PM2-173 Hasset Nurelegne**  
*My Summer Experience in HiSTEP at NIH*  
James Hubert Blake High School (Maryland)  
Preceptor: Dr. Kristen Zukosky

**PM2-174 Amarachi Oguguo**  
*My Summer Experience in HiSTEP at NIH*  
Academy of Health Sciences at PGCC (Maryland)  
Preceptor: Dr. Kristen Zukosky

**PM2-175 Ketsia Pierrelus**  
*My Summer Experience in HiSTEP at NIH*  
John F. Kennedy High School (Maryland)  
Preceptor: Dr. Kristen Zukosky

**PM2-176 Chris Provido**  
*How a Summer in HiSTEP at NIH Developed Me*
Charles Herbert Flowers Highschool (Maryland)
Preceptor: Dr. Kristen Zukosky

PM2-177 Jessica Rosales
*My Summer Experience in HiSTEP at NIH*
Capital City Public Charter School (District of Columbia)
Preceptor: Dr. Kristen Zukosky

PM2-178 Justin Shi
*My Summer Experience in HiSTEP at NIH*
James Hubert Blake High School (Maryland)
Preceptor: Dr. Kristen Zukosky

PM2-179 Blyss Swan
*My Summer Experience in HiSTEP at NIH*
Benjamin Banneker Academic High School (District of Columbia)
Preceptor: Dr. Kristen Zukosky

PM2-180 Trinity White
*The HiSTEP Summer Experience at NIH*
Northwestern High School (Maryland)
Preceptor: Dr. Kristen Zukosky

PM2-181 Redeit Woldebirhan
*My Summer Experience in HiSTEP at NIH*
Springbrook High School (Maryland)
Preceptor: Dr. Kristen Zukosky