# NIH Summer Research Program

**Poster Day - August 10, 2017**

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**NOTE:** the complete program for Summer Poster Day 2017, including poster titles, can be found at [https://www.training.nih.gov/assets/2017_Summer_Poster_Day_Program.pdf](https://www.training.nih.gov/assets/2017_Summer_Poster_Day_Program.pdf).
National Cancer Center (NCI)

AM-001. Nicholas Aboreden
Using CRISPR interference to determine the significance of candidate regulatory elements in Fusion Positive Rhabdomyosarcoma
Liberty University (Virginia)
Preceptors: Dr. Berkley Gryder, Dr. Javed Khan

AM-002. Beimnet Abraha
Determine the Role of the Enzyme Endothelial Nitric Oxide Synthase in the Protection from Lung Metastasis Induced by Beta-Mannosylceramide
Montgomery College (Maryland)
Preceptor: Dr. Anja Bloom

AM-003. Max Ackerman
Assessment of Oral Health Literacy Among African Americans in Washington, D.C.
University of Illinois at Chicago (Illinois)
Preceptor: Dr. Nancy Emenaker

AM-004. Deepti Agnihotri
Modelling the Synergy of IFN-gamma and IL-6 in the Tumor-Macrophage Microenvironment
Duke University (North Carolina)
Preceptors: Dr. Grégoire Altan-Bonnet, Dr. Andrew Belmonte

AM-005. Sylvana Aho
Evaluating the ability of short human centrioles to form appendages
University of Maryland, College Park (Maryland)
Preceptors: Dr. Jadranka Loncarek, Dr. Dong Kong

AM-006. Jonathan Alexander, Sean Alexander, Chana Levine
Database Construction and Usage for Patient Demographic Analysis
East Coweta High School (Georgia), East Coweta High School (Georgia), Lander College for Women, Touro (New York)
Preceptors: Dr. Alice Chen, Dr. Geraldine O'Sullivan, Dr. Naoko Takebe

AM-007. Sean Alexander, Seroh Chang
Biomarkers That Predict for Entry in Early Clinical Trials
East Coweta High School (Georgia), Rutgers University (New Jersey)
Preceptors: Dr. Alice Chen, Dr. Geraldine O'Sullivan, Dr. Naoko Takebe
AM-008. Ibrahim Alsomairy
Novel Therapies Targeting Androgen Receptor Variants in an in vitro Model of Castrate Resistant Prostate Cancer
Osbourn Park Senior High School (Virginia)
Preceptors: Dr. Michael Moses, Dr. Len Neckers

AM-009. Naveen Ambati
Investigating the Cytoplasmic Role of RBM10 as a Translational Regulator in Lung Cancer
University of Virginia (Virginia)
Preceptors: Dr. Murali Palangat, Dr. Daniel Larson

AM-010. Klara Ambaye
The Effects of Fixation Time on the Quality of Masson Trichrome and Reticulin Staining
University of Maryland, College Park (Maryland)
Preceptors: Mr. Michael Newford, Dr. Mohammad Mahboob

AM-011. Meghan Anderman
Inhibitors of the SRC oncprotein have greater antitumor activity in DLC1-positive tumors than in DLC1-negative tumors.
Northern Michigan University (Michigan)
Preceptors: Dr. Brajendra Tripathi, Dr. Douglas Lowy

AM-012. Megan Andres
Identification of SOX11 as a novel oncogene in Neuroblastoma
University of North Georgia (Georgia)
Preceptors: Dr. Carol Thiele, Dr. Deblina Banerjee

AM-013. Bhargav Arimilli
High Resolution 1H-NMR Spectroscopy Reveals Altered Metabolism in Aggressive, Patient-Derived Fumarate Hydratase-Deficient Kidney Cancer Cells
University of Texas at Dallas (Texas)
Preceptors: Dr. Murali Cherukuri, Dr. Dan Crooks, Dr. Kazu, Yamamoto, Dr. W. Marston Linehan

AM-014. Danielle Arons
Assessing the Effects of Mesothelin on Intraperitoneal Metastasis of Pancreatic Cancer
University of Maryland, College Park (Maryland)
Preceptor: Dr. Christine Alewine

AM-015. Rayann Atway
It's no Gim-MYC: Genetic Effects of MYC in Prostate Cancer Cells
Youngstown State University (Ohio)
Preceptors: Dr. Nichelle Whitlock, Dr. Adam Sowalsky
AM-016. Ognenka Avramovska
*Kinetochore Dynamics Throughout the Cell Cycle*
Emory University (Georgia)
Preceptors: Dr. Daniël Melters, Dr. Yamini Dalal

AM-017. Duha Awad
*N-MYC splicing; a novel mechanism of TSP1-CD47 signaling in acute T cell leukemia*
Baltimore City Community College (Maryland)
Preceptors: Dr. Sukhbir Kaur, Dr. David Roberts

AM-018. Asma Azam
*Understanding the Role of RNA Localization on Protein Distribution and Function*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Stavroula Mili, Dr. Tianhong Wang

AM-019. Nithin Bagal
*Targeting Mouse CD47 with CRISPR-Cas9*
Thomas Jefferson High School For Science and Technology (Virginia)
Preceptors: Dr. Pulak Nath, Dr. David Roberts

AM-020. Erol Bahadiroglu
*Information Theoretic Method for Robust Automatic Compensation of Flow Cytometry Data*
University of Florida (Florida)
Preceptors: Dr. Gregoire Altan-Bonnet, Dr. Amir Erez

AM-021. Tsige Bahta
*Unraveling the Role of ABC Transporter, P-glycoprotein, in Multidrug Resistance of Cancer Cells*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Suresh Ambudkar, Dr. Shahrooz Vahedi

AM-022. Julia Balmaceda
*The Dbf4-Cdc7 kinase complex regulates Psh1-mediated proteolysis of centromeric histone H3 variant to prevent chromosomal instability (CIN)*
University of Kansas (Kansas)
Preceptors: Dr. Munira Basrai, Dr. Jessica Eisenstatt, Dr. Wei-Chun Au

AM-023. Simona Bazelon
*Using Adeno-Associated Viral Gene Therapy as Treatment for Hemophilia B*
Bais Yaakov Eva Weiner High School (Maryland)
Preceptors: Ms. Jessica Schneller, Dr. Daniel Edelman
AM-024. Nicole Bedanova
Developing the next generation of iPSC cell-based immunotherapies
Thomas Wootton High School (Maryland)
Preceptors: Dr. Nicholas Restifo, Dr. Raul Vizcardo

AM-025. Titas Bera
New shark single domain antibody-based immunotoxins targeting CD22 for cancer therapy
The College of Wooster (Ohio)
Preceptors: Dr. Hejiao Bian, Dr. Mitchell Ho

AM-026. Jessica Bernstein
Challenges in Evaluation of Plexiform Neurofibromas in Patients with NF1 on Clinical Trials
Walter Johnson High School (Maryland)
Preceptors: Ms. Trish Whitcomb, Dr. Andrea Gross, Dr. Brigitte, Widemann, Ms. Amanda Carbonell

AM-027. Rachel Bernstein
Novel cytogenetic and molecular genetic findings in Acute Erythroid Leukemia can define prognostic groups.
Atara Girls High School (Ohio)
Preceptors: Dr. Jaira Ferreira de Vasconcellos, Dr. Daniel Edelman

AM-028. Gabriela Beug
Evaluation of combination therapy in medullary thyroid cancer
German School Washington, D.C. (Maryland)
Preceptors: Dr. Leonard Neckers, Mrs. Kristin Beebe

AM-029. Michelle Boettler
Exploring the mechanism for Pomalidomide-induced upregulation of cell surface markers in KSHV-infected cells
Ohio State University (Ohio)
Preceptors: Dr. David Davis, Dr. Robert Yarchoan

AM-030. Carlo Bosques
Probing the role of tissue mechanics in diverse extracellular matrix environments
University of Puerto Rico, Mayagüez Campus (Puerto Rico)
Preceptors: Dr. Colin Paul, Dr. Kandice Tanner, Dr. Jack Staunton

AM-031. Philip Brauer
Intratumor Heterogeneity Impacts Treatment Response in Rectal Carcinoma
Colgate University (New York)
Preceptors: Dr. Rudiger Meyer, Dr. Darawalee Wangsa, Dr. Thomas Ried
AM-032. Elizabeth Brauneis
*Genomic instability and aneuploidy of hepatocellular carcinomas (HCC) in patients with metabolic risk factors*
Oberlin College (Ohio)
Preceptors: Ms. Irianna Torres, Dr. Kerstin Heselmeyer-Haddad, Dr. Thomas, Ried, Ms. Juliane Friemel

AM-033. Jacob Broome
*NiH Chronic Graft Versus Host Disease Consensus Criteria: Comparison of Old and New*
Virginia Polytechnic Institute and State University (Virginia)
Preceptor: Dr. Steven Pavletic

AM-034. Patricia Bunda
*Role of GNAQ Mutations in Cutaneous Melanoma*
University of California, Los Angeles (California)
Preceptors: Dr. Helen Michael, Dr. Antonella Sassano, Dr. Glenn Merlino

AM-035. Alvin Cao
*Assessment of the Rapid Evolving Residues of Interferon Induced Transmembrane Protein 3 (IFITM3) During Virus-Host Interplay*
Chantilly Highschool (Virginia)
Preceptors: Dr. Scarlett Shi, Dr. Alex Compton

AM-036. Rachel Carter
*Interactions of Ferroptosis Inducers with ATP-Binding Cassette Transporters*
George Mason University (Virginia)
Preceptors: Dr. Michael Gottesman, Dr. Robert Robey

AM-037. Samuel Casellas
*Understanding Top2-induced DNA Breaks Through Protein Interaction Studies*
Walter Johnson High School (Maryland)
Preceptor: Dr. Andre Nussenzweig

AM-038. Alexis Catalano
*Flotillin 2 Interacts with the EGF Receptor and Regulates its Activity and Degradation*
University of Virginia (Virginia)
Preceptors: Dr. Stanley Lipkowitz, Dr. Mariya Liyasova

AM-039. Geetha Mariah Cawthon
*Investigation of Nicotinamide Phosphoribosyltransferase (NAMPT) Inhibition in Bladder Cancer*
George Washington University (District of Columbia)
Preceptors: Dr. Piyush Agarwal, Dr. Mamatha Garige
AM-040. Shin Mei Chan
Can human-specific and mouse-specific p53 isoforms rescue replicative senescence?
Stanford University (California)
Preceptors: Dr. Izumi Horikawa, Dr. Curtis Harris

AM-041. Seroh Chang
Comparison of Responders in Singlet vs. Doublet Phase 1 Trials
Rutgers University (New Jersey)
Preceptors: Dr. Geraldine O'Sullivan Coyne, Dr. Alice Chen, Dr. Naoko Takebe

AM-042. Jocelyn Chen
Elucidating Circadian Rhythm Gene Bmal1 as a Metastasis Modifier
Northwest High School (Maryland)
Preceptors: Dr. Ngoc-Han Ha, Dr. Kent Hunter

AM-043. Jamie Cheng
Building a Cell Based System to Study Aneuploidy by Using CRISPR/Cas 9 Mediated Genome Editing
Winston Churchill High School (Maryland)
Preceptors: Dr. Wei-dong Chen, Dr. Thomas Ried

AM-044. Jeffrey Chu
Identifying transcription factors on mTOR promoter
Emory University (Georgia)
Preceptors: Dr. Beverly Mock, Dr. Shuling Zhang, Mr. Daniel Connors

AM-045. Hyunsoo Chung
An unexpected requirement for the cytokine IL-7 in the survival and homeostasis of NKT cells in peripheral tissues
Columbia University in the City of New York (New York)
Preceptor: Dr. J. Hyun Park

AM-046. Shalva Cohen
Evaluation of PD-L1 Expression in the Spectrum of Renal Cell Carcinoma and it's Role in Diagnosis and Treatment
Bnos Yisroel of Baltimore (Maryland)
Preceptors: Dr. W. Marston Linehan, Dr. Maria J. Merino

AM-047. Cedric Cole
The Abscopal Effect – A Quantitative Analysis of Tumor Nodule Volumes of an Adult T-Cell Leukemia / Lymphoma Patient
Howard University College of Medicine (District of Columbia)
AM-048. Cameron Crouch, Vincent Allen, Catherine Liu
Clinical Informatics with an intelligent cloud-based voice service and Serverless Computing
Harding University (Arkansas), University of Maryland College Park (Maryland), University of Michigan Ann Arbor (Michigan)
Preceptors: Mr. Waleed Osman, Mr. Brent Coffey, Mr. Tony Fu

AM-049. Madeleine Curtis
Describing the rationale to bring pediatric Diffuse Intrinsic Pontine Glioma (DIPG) drugs to trial
Oakton High School (Virginia)
Preceptor: Dr. Kathy Warren

AM-050. Marshall Darby
Spicy - Natural Product Isolation from Sichuan Pepper
Middletown High School (Maryland)
Preceptors: Dr. John Beutler, Dr. Dongdong Wang, Dr. Sarah Long

AM-051. Noelle Dayal
Second generation DNA Seq to demonstrate conservation of Mt DNA in a clonal mammary epithelial population
Georgetown University (District of Columbia)
Preceptors: Dr. Jabril Johnson, Dr. Lauren Ragle, Dr. Corinne, Boulanger, Dr. Gilbert Smith

AM-052. Jayson de Guzman
Role of ABC Transporter P-glycoprotein in Cancer Chemoresistance
University of California, San Francisco (California)
Preceptors: Dr. Andaleeb Sajid, Dr. Suresh Ambudkar

AM-053. Julianie de la Cruz
The Role of YAP in Endothelial Cell Proliferation and Migration
University of Puerto Rico (Puerto Rico)
Preceptors: Dr. Giovanna Tosato, Dr. Lisa Ritchey

AM-054. Sean Deleon
Construction of Nucleosomal Arrays with Alternative Structure
George Mason University (Virginia)
Preceptors: Dr. Bing-Rui Zhou, Dr. Yawen Bai

AM-055. Ella Drach
Using CRISPR/Cas9 as Gene Therapy Treatment for Cystic Fibrosis
Prospect Park Yeshiva (New York)
Preceptors: Ms. Laura Marler, Dr. Daniel Edelman
AM-056. Matthew Driban
*T Cell Receptor Beta rearrangements determine the clonality of genetically engineered leukemia*
Pennsylvania State University (Pennsylvania)
Preceptor: Dr. Peter Aplan

AM-057. Anna Duemler
*Mechanistic insights into the formation of in vitro derived neoplasms*
Pennsylvania State University (Pennsylvania)
Preceptors: Dr. Christina Annunziata, Dr. Daniel Green

AM-058. Noah Earland
*Functional Evaluation of Interferon Lambda 4 Protein using Bioinformatic Analysis and Site-Directed Mutagenesis*
Southern Methodist University (Texas)
Preceptors: Dr. Ludmila Prokunina-Olsson, Dr. Olusegun Onabajo

AM-059. Danielle Ebelle
*Understanding Proteasome for Novel Cancer Therapeutics*
Virginia Union University (Virginia)
Preceptors: Dr. Vinidhra Sridharan, Dr. Kylie Walters

AM-060. Emily Ehlerding
*Nanotechnology in cancer: Limitless possibilities*
University of Wisconsin - Madison (Wisconsin)
Preceptors: Dr. Piotr Grodzinski, Dr. Christina Liu

AM-061. Michelle Fang
*Inflammatory Disease and C-Reactive Protein in Relation to Therapeutic Ionizing Radiation exposure in the US Radiologic Technologists*
Thomas Sprigg Wootton High School (Maryland)
Preceptors: Dr. Mark Little, Dr. Alina Brenner

AM-062. Sivia Feinstein
*Mechanism of Therapeutic Efficacy of Arsenic in Acute Promyelocytic Leukemia*
Bnos Yisroel of Baltimore (Maryland)
Preceptors: Dr. Sarah Clatterbuck Soper, Dr. Daniel Edelman

AM-063. Amber Feng
*Development of an inhibitor of YAP1 transcriptional activity*
Emory University (Georgia)
Preceptors: Dr. Ramiro Iglesias-Bartolome, Ms. Jeannie Park, Dr. Pilar Pedro
AM-064. Michaela Flipping
Validation of Clinical FISH Tests for Detection of c-MET gene Amplification and ROS1 gene rearrangement in Lung Cancer
Benjamin Banneker Academic High School (District of Columbia)
Preceptor: Dr. Svetlana Pack

AM-065. Anyen Fon
Molecular Characterization of Immune Infiltration in Mouse Melanoma Tumors in Response to Immune Checkpoint Blockade
Prince George's Community College (Maryland)
Preceptors: Dr. Eva Perez Guijarro, Dr. Glenn Merlino

AM-066. Meir Friedenberg
Formal Computational Modelling of Cancer Metabolism
University of Maryland, College Park (Maryland)
Preceptor: Dr. Orieta Celiku

AM-067. Sai Abhishek Gangineni
Whole Exome Sequencing Analysis Workflows on Cancer Genomics Cloud
Poolesville High School (Maryland)
Preceptors: Dr. KanakaDurga Addepalli, Dr. Sean Davis, Dr. Steve Tsang

AM-068. Caleb Getahun
Inflammasome Signal Activation in Mouse Bone Marrow-Derived Macrophage
Poolesville High School (Maryland)
Preceptors: Dr. Zheng-gang Liu, Dr. Swati Choksi, Dr. Hyung Joon Kwon

AM-069. Mitchell Gillard
The Effect of CHK1 Inhibition on CCNE1 Expression and DNA Repair Proteins in Ovarian Cancer
Stony Brook University School of Medicine (New York)
Preceptors: Dr. Jayakumar Nair, Dr. Jung-Min Lee

AM-070. Abhigya Giri
Antitumor activity of SRC Kinase Inhibitors in Type I Papillary Renal Cell Carcinoma
University of Maryland, College Park (Maryland)
Preceptors: Dr. Roma Pahwa, Dr. Carole Sourbier, Dr. Ramaprasad Srinivasan

AM-071. Haley Golding
Expression of sphingosine-1-phosphate receptor 1 in B cell lymphoma
Howard University (District of Columbia)
Preceptors: Dr. Stefania Pittaluga, Dr. Elaine Jaffe
AM-072. Christian Gonsalves
*Single Genome Sequencing to Determine The Effect of Immune Reconstitution Inflammatory Syndrome on Clonal Expansion of HIV Infected Cells*
University of the West Indies (Non-U.S.)
Preceptors: Dr. Camille Lange, Dr. Frank Maldarelli

AM-073. Reet Goraya, Amina Siddiqui
*P-16 expression in low and high grade squamous intraepithelial lesions in cervical/vaginal samples*
Richard Montgomery High School (Maryland), West Springfield High School (Virginia)
Preceptors: Dr. Armando Filie, Mrs. Patricia Fetsch

AM-074. Michael Gouzoulis
*Combination treatment of Ewing sarcoma cell lines using Wee1 inhibitor MK-1775 and HDAC inhibitor Panobinostat*
University of Maryland, College Park (Maryland)
Preceptors: Mr. Choh Yeung, Ms. Anna Gibson, Dr. Christine Heske

AM-075. Monica Gouzoulis
*Effects of Atorvastatin on HIV Populations*
University of Maryland, College Park (Maryland)
Preceptors: Ms. Elizabeth Anderson, Dr. Frank Maldarelli

AM-076. Nikhil Gowda
*Developing a computational pipeline for the analysis of Single-cell RNA-Seq data*
St. Bonaventure University (New York)
Preceptors: Dr. Maggie Cam, Dr. Vishal Kopadre, Mr. Parthav Jailwala

AM-077. Nikhil Goyal
*Semi-automated Digital Data Management in Oncology Clinical Trials, Utilizing ENABLE 2.0 (Exportable Notation and Bookmark List Engine)*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Andrea Apolo, Dr. Les Folio

AM-078. Megha Guggari
*Targeting the Survival of TFE3-fusion Kidney Cancer Cells*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Carole Sourbier

AM-079. Daniel Gulko
*Mechanisms of Non-Bulky, Oxidative DNA Damage-Mediated Transcriptional Mutagenesis*
Stevens Institute of Technology (New Jersey)
AM-080. Nikita Gupta  
**Targeting Ataxia-Telangiectasia Mutated to Enhance the Radiation Response of Glioblastoma**  
Holton-Arms School (Maryland)  
Preceptors: Dr. Jennifer Lee, Dr. Kevin Camphausen

AM-081. Anna Gurney  
*Evaluating epigenetic markers in diffuse midline gliomas using multitissue arrays*  
Emory University (Georgia)  
Preceptors: Dr. Martha Quezado, Dr. Astin Powers

AM-082. Nana Gyabaah-Kessie  
*Proteosome Inhibition Resistance in Multiple Myeloma*  
Eleanor Roosevelt High School (Maryland)  
Preceptors: Dr. Snehal Gaikwad, Dr. Beverly Mock

AM-083. Chenchen Handler  
*Evaluation of Stability and Reproducibility of CD4 Quantitation in Beckman-Coulter CytotrolTM Control Cells*  
Thomas A Edison (Virginia)  
Preceptors: Dr. Linda Weaver, Dr. Mary Alice Stetler-Stevenson, Dr. Lili Wang

AM-084. Catherine Harvey  
*The Cas9/sgRNA Complex as a Restriction Enzyme*  
College of William and Mary (Virginia)  
Preceptors: Dr. Michael Lichten, Dr. Jasvinder Ahuja

AM-085. Marwan Hawari  
*Exploring the Contribution of the Nucleocapsid Domain of HIV-1 Gag to RNA Binding Specificity*  
University of North Carolina at Chapel Hill (North Carolina)  
Preceptors: Dr. Alan Rein, Dr. Mauricio Comas Garcia, Ms. Demetria Harvin

AM-086. Audrey Heffner  
*Identifying Conserved Residues in Yeast Hsp70 for Interaction with J-Proteins and Hsp90*  
University of Maryland, College Park (Maryland)  
Preceptor: Dr. Sue Wickner

AM-087. Paul Higgins  
*Attracting Immune Cells to the Tumor Microenvironment*  
Montgomery College (Maryland)  
Preceptors: Dr. Mark Gilbert, Dr. Amber Giles, Ms. Heather Sonnemann
AM-088. Jessica Ho
*TERT Promoter Mutations in Primary CNS Tumors*
University of Georgia (Georgia)
Preceptors: Dr. Hye-Jung Chung, Dr. Liqiang Xi, Dr. Mark Gilbert, Dr. Mark Raffeld

AM-089. Pui Yan Ho
*miR-142-3p targets CLIC4 and regulates its expression in multiple cell types*
University of California, Davis (California)
Preceptors: Dr. Brandi Carofino, Dr. Stuart Yuspa

AM-090. Sandra Hong
*Understanding the Success and Sustainability of the NCCCP/Community Network Program Partnership*
Johns Hopkins University (Maryland)
Preceptors: Ms. Brenda Adjei, Ms. Mary Anne Bright

AM-091. Alex Hruska
*Engineering the in vivo tissue microenvironment*
Northeastern University (Massachusetts)
Preceptors: Dr. Colin Paul, Dr. Jack Staunton, Dr. Kandice Tanner

AM-092. Allan Huang
*Visualization of Splenic Germinal Centers in ThPOK-deficient Mice*
Columbia University, College of Physicians and Surgeons (New York)
Preceptors: Dr. Remy Bosselut, Dr. Melanie Vacchio

AM-093. Becky Huang
*Low-dose Radiation Therapy for Local Control in Adult T-cell lymphoma/leukemia*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Jennifer Jones

AM-094. Rebecca Hutman
*Cortical Spreading Depolarization Contributes to Neuronal Death in the Ischemic Penumbra*
Bnos Yisroel of Baltimore (Maryland)
Preceptors: Dr. Christina Ross, Dr. Daniel Edelman

AM-095. Robert Hwang
*The role of TRAF-binding domains in CD40-mediated Ig class switching*
Sioux City North High School (Iowa)
Preceptors: Dr. Richard Hodes, Dr. Ying Lu, Dr. Jeffrey Chiang
AM-096. Deborah Jack
Kaposi Sarcoma Herpesvirus (KSHV) Shedding in Saliva of Patients with KSHV-Associated Malignancies
Howard University College of Medicine (District of Columbia)
Preceptor: Dr. Thomas Uldrick

AM-097. Miranda Jackson
Automating data extraction from published literature with specific focus on rare variants and diseases
Saint Vincent College (Pennsylvania)
Preceptors: Mrs. Uma Mudunuri, Mrs. Hue Reardon

AM-098. Anusha Jailwala
Defining the Role of Loss-of-Function Mutations in the Oncogene SRC in Ovarian and Endometrial Cancers
Northwest High School (Maryland)
Preceptors: Dr. John Brognard, Dr. Christina Young, Mrs. Katherine Nyswaner

AM-099. Katrina Jang
Farnesoid X Receptor (FXR) Activation Regulates Intestinal Ceramide Synthesis
University of California, Los Angeles (California)
Preceptor: Dr. Chad Brocker

AM-100. Joy Jiang
How Specific is Hu3S193, an Anti-Lewis Y Antibody in Phase II Clinical Trials?
Brown University (Rhode Island)
Preceptors: Dr. Jeffrey Gildersleeve, Ms. Natalie Flanagan

AM-101. Joy Johnson
Phage Resistance Mechanisms of Multidrug Resistant Klebsiella pneumoniae
University of California, San Diego (California)
Preceptors: Dr. Shayla Hesse, Dr. Manoj Rajaure, Dr. Sankar Adhya

AM-102. Catherine Jones
Detection of Amplification and Rearrangement of the PD-L1 Gene in different types of B-cell Lymphomas
Thomas S. Wootton High School (Maryland)
Preceptors: Dr. Svetlana Pack, Dr. Elaine Jaffe, Ms. Shannon, Skarshaug, Dr. Zied Abdullaev

AM-103. Nicholas Kalinowski
Inhibition of Nf-kb by Tumor Initiating Cell Targeting Drugs
McLean School (Virginia)
Preceptors: Dr. Christina Annunziata, Ms. Michelle Ozaki, Mr. Franklin Ning
AM-104. Anusha Kambala
Impact of Inhibiting Glutamine Metabolism with DON Prodrugs on Tumor Growth in Canine Glioma: A Comparative Approach to Brain Tumor Research
University of Maryland, College Park (Maryland)
Preceptors: Dr. Amy LeBlanc, Ms. Christina Mazcko, Dr. Ling Ren

AM-105. Eli Kane
Relationship of Cytokines to Neurotoxicity Following CAR-T Cell Therapy in Patients with Relapsed/Refractory ALL
University of Maryland, College Park (Maryland)
Preceptor: Dr. Nirali Shah

AM-106. Julia Kepley
Development of a High-Dimensional Extracellular Vesicle (EV) Profile Pipeline for Clinical Samples
Towson University (Maryland)
Preceptor: Dr. Jennifer Jones

AM-107. Jee Hun Kim
Molecular mechanisms that prevent mislocalization of centromeric histone H3 variant CENP-A and chromosomal instability (CIN) in human cells
Colgate University (New York)
Preceptors: Dr. Munira Basrai, Dr. Roshan Shrestha, Ms. Grace Ahn

AM-108. Madeline Kim
Basal and Induced Expression of Endogenous Retroviruses in Malignant Pleural Mesothelioma
University of Chicago (Illinois)
Preceptors: Ms. Julie Hong, Dr. David Schrump

AM-109. Margot Kim
Schweinfurthin Toxicity on Malignant Peripheral Nerve Sheath Tumor Cells
Vanderbilt University (Tennessee)
Preceptors: Dr. Karlyne Reilly, Mr. Robert Tuskan

AM-110. Timothy King
Regulation of IL-8 expression by Lysyl Oxidase in Anaplastic Thyroid Cancer
Howard University College of Medicine (District of Columbia)
Preceptors: Dr. Myriem Boufraqech, Dr. Electron Kebebew

AM-111. Jessica Kline
The CSF-1R inhibitor, Pexidartinib, alters the immune microenvironment in embryonal rhabdomyosarcoma
AM-112. Melissa Kolick, Laura Trilling
*The Relationship between p-AKT and p-mTOR Expression in Pancreatic Cancer and Clinical Outcomes*
Salisbury University (Maryland), Winthrop University (South Carolina)
Preceptor: Dr. Astin Powers

AM-113. Sai Aparna Konde
*Molecular Subtypes of Hepatocellular Carcinoma Linked to Plk1 Signaling*
Baylor University (Texas)
Preceptors: Dr. Xin Wang, Dr. Jinping Liu

AM-114. Laurie Kostecka
*Conditional expression of endogenous HRASG12D and KRASG12D alleles in primary keratinocytes reveals a dose dependent requirement for tumor formation*
University of Tampa (Florida)
Preceptors: Ms. Alicia Mizes, Dr. Christophe Cataisson, Dr. Stuart Yuspa

AM-115. Bella Kotlyar
*Exploring the Association between Coffee Consumption and Leukocyte Telomere Length*
Yale University (Connecticut)
Preceptors: Dr. Erikka Loftfield, Dr. Neal Freedman, Dr. Rashmi Sinha

AM-116. Uma Krishnan
*Identification and Characterization of Microbes using the Cancer Genomics Cloud*
Pooleville High School (Maryland)
Preceptors: Dr. Steve Tsang, Dr. KanakaDurga Addepalli, Dr. Sean Davis

AM-117. Randolph Larsen
*Constructing an Improved Blood-Brain Barrier Model Using Endothelial Cells Derived from Induced Pluripotent Stem Cells*
St. Mary's College of Maryland (Maryland)
Preceptors: Dr. Lin Xiao, Dr. Anurag Paranjape, Dr. Patricia Steeg

AM-118. Sarah Baila Lazar
*Uncovering dormant replication origins in human cells*
Ateres Bnos Yerushalayim (Non-U.S.)
Preceptors: Dr. Cristophe Redon, Dr. Mirit Aladjem
AM-119. Quynh Le  
*Evaluating Novel Drug Combinations Targeting Pediatric Sarcoma Cellular Metabolism*  
University of Maryland, Baltimore County (Maryland)  
Preceptors: Dr. Sameer Issaq, Dr. Lee Helman

AM-120. Alycia Lee  
*Identification of Regulatory Elements Directing the Expression of Foxn1 in Thymic Epithelial Cells and Keratinocytes*  
Wissahickon High School (Pennsylvania)  
Preceptors: Dr. Avinash Bhandoola, Dr. Brian Larsen

AM-121. Katharyn Lee  
*Mechanistic Investigation of the Role of DRD1 in Lung Cancer*  
Indiana University (Indiana)  
Preceptors: Dr. Leila Toulabi, Dr. Brid Ryan

AM-122. Rebecca Lee  
*Roles of Tumor Suppressors in Breast Cancer Metastasis*  
University of Pennsylvania (Pennsylvania)  
Preceptors: Dr. Zhiguang Xiao, Dr. Li Yang

AM-123. Nicole Leggiero  
*Life Can Change in an Instant*  
Towson University (Maryland)  
Preceptors: Dr. Terri Armstrong, Dr. Mark Gilbert, Ms. Elizabeth Vera

AM-124. Hiwot Lema  
*Effects of MAP Kinase inhibition in RAS Mutated Neuroblastoma*  
University of Maryland, College Park (Maryland)  
Preceptor: Dr. Marielle Yohe

AM-125. Chana Devora Levine  
*Comparison of Various Outside Molecular Assays to Internal Assays for Patients on MATCH and MPACT trials*  
Lander College for Women, Touro College (New York)  
Preceptors: Dr. Alice Chen, Dr. Naoko Takebe, Dr. Geraldine Helen O'Sullivan Coyne

AM-126. Audrey Ling  
*Novel epidermal growth factor receptor (EGFR) mutation in advanced thymic carcinoma*  
Dickinson College (Pennsylvania)  
Preceptors: Dr. Arun Rajan, Dr. Udayan Guha, Dr. Mark, Raffeld, Dr. Liqiang Xi
AM-127. Cameron Lingenfelter
*Investigating the Interaction of Circadian Rhythm Protein BMAL1 and Metastasis Modifier Protein BRD4SF*
College of William and Mary (Virginia)
Preceptors: Dr. Ngoc-Han Ha, Dr. Kent Hunter

AM-128. Avery Liou
*Impact of Stromal Cell Phenotypic Switching on Immune Cells*
Montgomery Blair High School (Maryland)
Preceptors: Dr. Sabina Kaczanowska, Dr. Rosandra Kaplan

AM-129. Jacob Liskoos
*Screening for hepatotoxicity of HTS hits*
Tufts University (Massachusetts)
Preceptors: Dr. Girma Woldemichael, Dr. Emad Darvishi

AM-130. William Liu
*Investigating the Mechanisms Underlying SOX9-Mediated Survival of p53 Defective Osteosarcoma Cells*
Richard Montgomery High School (Maryland)
Preceptors: Dr. Jing Huang, Dr. Hualong Yan

AM-131. Sydney Loria
*Identification of Novel N-Myc Protein Co-Factor Implicated in High-Risk Neuroblastoma*
Colgate University (New York)
Preceptors: Dr. Zhihui Liu, Dr. Carol Thiele

AM-132. Jana Lu
*Dietary intake of nutrients associated with one carbon metabolism and endometrial cancer risk: an analysis in the NIH-AARP Diet and Health cohort study*
Duke University (North Carolina)
Preceptors: Dr. Britton Trabert, Dr. Kara Michels

AM-133. Nelson Madera
*Oncogenic Activation of AGO2 in Hepatocellular Carcinoma*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Hien Dang, Dr. Xin Wang

AM-134. Rebekah Madrid
*Activity of CDK and NAMPT inhibitors used in combination in Ewing sarcoma cell lines*
Montclair State University (New Jersey)
Preceptors: Ms. Anna Gibson, Dr. Christine Heske
AM-135. Reyneir J. Magee

Regulation of NFAT 1 Signaling in T-Cells by Phosphorylation of Serine 79
Howard University (District of Columbia)
Preceptors: Dr. Muhammad S. Alam, Dr. Jonathan D. Ashwell

AM-136. Ruchika Mahapatra

Analyzing the role of AUF1 and MCPIP-1 in Dicer-1 protein regulation in Kaposi's sarcoma-associated herpesvirus
Mission San Jose High School (California)
Preceptors: Dr. Joseph Ziegelbauer, Dr. Insun Kook, Dr. Anna Serquina

AM-137. Esther Maidoh

The Organization and Role of Non-Muscle Myosin II Isoforms in Secretory Granule Integration in vivo.
University of Maryland, College Park (Maryland)
Preceptors: Dr. Seham Ebrahim, Dr. Roberto Weigert

AM-138. Zanaib Malik

Regulation of galactose promoters P1 & P2 by GalR HU, and cAMP-CRP complex
University of Maryland, Baltimore (Maryland)
Preceptors: Dr. Dale Lewis, Dr. Sankar Andya

AM-139. Karra Manier

Don't Ask, Don't Tell: Incidence and Impact of Altered Body Image in Head and Neck Cancer and Brain Tumor Patients
Howard University College of Medicine (District of Columbia)
Preceptors: Dr. Terri Armstrong, Dr. Lindsay Rowe, Dr. Mark, Gilbert, Ms. Judy Welsh

AM-140. Erin Markle

Assessing the Roles of Sphingomyelin in Retroviral Production and Infectivity via N-SMase Inhibition
Colorado State University (Colorado)
Preceptors: Dr. Alex Compton, Dr. Saliha Majdoul

AM-141. Jessica Martin

Thrombospondin-1 regulate histones H3K4 and H3K27 modification in Jurkat T cells
Eleanor Roosevelt High School (Maryland)
Preceptors: Dr. Sukhbir Kaur, Dr. David Roberts

AM-142. Monica Masterson

Therapeutic strategies for targeting malignant peripheral nerve sheath tumors
University of Rochester (New York)
Preceptor: Dr. Jack Shern
AM-143. Sarah Mathew  
*Inhibition of Lactate Dehydrogenase in Cancer: A Promising Target for Enhanced Radiosensitivity*  
Princeton University (New Jersey)  
Preceptors: Dr. James B. Mitchell, Dr. Sarwat Naz  

AM-144. Rebecca Matthews  
*Combinatorial Cloning with Gateway Technology™ Yields Recombinant DNA for Multiple Hosts*  
University of Maryland, College Park (Maryland)  
Preceptors: Mrs. Carissa Grose, Dr. Dominic Esposito  

AM-145. Isabella Meerzaman  
*Breast Cancer: Risk, Carcinogenesis, and Prevention*  
Thomas Alva Edison High School (Virginia)  
Preceptor: Dr. Barbra Dunn  

AM-146. Somil Mehta  
*Investigating the Interaction between Tissue Inhibitor of Metalloprotease-2 (TIMP-2) and Integrin Alpha 3 Beta1 Ectodomain*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Ananda Chowdhury, Dr. William Stetler-Stevenson  

AM-147. Sheindel Meister  
*The Efficacy of the Pharmacological Chaperone Pyrimethamine in the Treatment of Tay-Sachs Disease*  
Bnos Yisroel of Baltimore (Maryland)  
Preceptors: Mrs. Meg Goswami, Dr. Daniel Edelman  

AM-148. Shoshana Menken  
*The use of cancer vaccines to target the cancer testis antigen NY-ESO-1 in melanoma patients*  
Bnos Yisroel of Baltimore (Maryland)  
Preceptors: Ms. Emily King, Dr. Daniel Edelman  

AM-149. Elizabeth Messineo, Arjun Guthal  
*Expression of Bile Acid Receptors in Liver Sinusoidal Endothelial Cells: A Proposed Mechanism for Anti-Tumor Immunity in Mouse Livers*  
Vanderbilt University (Tennessee), Thomas Wootton High School (Maryland)  
Preceptors: Dr. Tim Greten, Dr. Chi Ma, Dr. Qiong Fu  

AM-150. Charlotte Anne Miller  
*The Effect of DNA-pk Inhibition on the Radioresponse of Glioblastoma*  
Holton-Arms School (Maryland)
Preceptors: Dr. Jennifer Lee, Dr. Kevin Camphausen

**AM-151. Hope Miller**  
*Using CRISPR to Knock Out Interferon-gamma Receptor One on Tumor Cells*  
University of Maryland, Baltimore County (Maryland)  
Preceptors: Dr. Ken-ichi Hanada, Mr. Nick Zhao

**AM-152. Nooshin Mirza Nasiri**  
*Changes In Expression Of Drug Resistance-Associated Genes After Chronic Drug Treatment In A Model Of Kaposi Sarcoma*  
University of North Texas (Texas)  
Preceptors: Dr. Fatima Ali-Rahmani, Dr. Rebert Robey, Dr. Michael Gottesman

**AM-153. Wardah Mohammed**  
*Optimizing lentiviral CRISPR delivery systems*  
Catholic university of America (District of Columbia)  
Preceptor: Dr. Berkley Gryder

**AM-154. Caroline Moon**  
*Development of A New and Rapid Fixation/Sterilization Protocol for High-Risk Infected Tissue*  
Virginia-Maryland College of Veterinary Medicine (Virginia)  
Preceptors: Dr. Joon Chung, Dr. Stephen Hewitt

**AM-155. Sriya Movva**  
*The link between sphingolipid metabolism and the increased survival of IDH1 mutated glioma patients*  
Vanderbilt University (Tennessee)  
Preceptors: Dr. Mioara Larion, Mr. Tyrone Dowdy, Ms. Alejandra, Cavazos Saldana, Dr. Victor Ruiz Rodado

**AM-156. Diego Munoz**  
*Validation of a zebrafish xenograft model system for gene expression analysis of human cancer*  
University of Maryland, College Park (Maryland)  
Preceptors: Ms. Alexus Devine, Ms. Chaunte Lewis, Dr. Kandice Tanner

**AM-157. Tanzeem Naqvi**  
*NO-mediated Kynurenine/AHR Signaling Enhances Disease Progression in Pancreatic Cancer*  
University of Maryland, Baltimore County (Maryland)  
Preceptors: Dr. Perwez Hussain, Dr. Limin Wang, Dr. Peijun He, Dr. Shouhui Yang

**AM-158. Shivani Nellore**  
*Some cancer associated K-Ras mutants can have gain of function even when bound to GDP*  
North Oldham High School (Kentucky)
AM-159. Dalena Nguyen  
*Use of Health Behavior Theory and Conceptual Models in Funded Team-based Cancer Care Delivery Grants*  
Columbia University Mailman School of Public Health (New York)  
Preceptors: Dr. Sallie Weaver, Ms. Veronica Chollette

AM-160. Eric Nguyen  
*The Effect of Oncogenic KRAS Expression on TRAIL Sensitivity in Breast Cancer Cell Lines*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Stanley Lipkowitz, Mr. Samuel Gilbert, Dr. Yoshimi, Greer, Ms. Donna Voeller

AM-161. Taivan Odzorig  
*The Biochemical and Structural Study of AAA+ p97 inhibitors*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Wai-Kwan Tang, Dr. Di Xia

AM-162. Foyinsola Olaloye  
*The Contribution of Bacterial Response Genes in Skin Tumorigenesis in Ikkalpha Conditional Knocksouts Using Genetically Engineered Modified Mice.*  
Frostburg State University (Maryland)  
Preceptors: Dr. Yinling Hu, Mrs. Jami Willette Brown

AM-163. Maria Magdalena Ortiz  
*Detection and Enumeration of Circulating Tumor Cells in blood using Flow Cytometry protocol*  
San Francisco State University (California)  
Preceptors: Dr. Maria Olga Hernandez, Dr. Xin Wei Wang

AM-164. Albert Owusu-Ansah  
*The Regulation of TNFR by TREM2 in Bone Marrow Macrophages.*  
University of Maryland, Eastern Shore (Maryland)  
Preceptors: Dr. Marieli Gonzalez-Cotto, Dr. Daniel Mcvicar

AM-165. Teresa Ozga  
*CD47 morpholino antisense may target miRNA to make cells radioresistant through exosome influx*  
Eleanor Roosevelt High School (Maryland)  
Preceptors: Dr. Sukhbir Kaur, Dr. David Roberts

AM-166. Bhuvana Pandalai  
*Thymus-derived glucocorticoids in T cell development*  
Poolesville High School (Maryland)
AM-167. Adam Park
*T-cells targeting mutated self-antigens can be more effective than those targeting non-mutated self-antigens in adoptive immunotherapy of B16 melanoma.*
Bethesda-Chevy Chase High School (Maryland)
Preceptors: Dr. Zhiya Yu, Dr. Ken-ichi Hanada, Dr. Nicholas Restifo

AM-168. Nathaniel Patel
*Analysis of Hair Proteins in Patients with Trichothiodystrophy*
Howard University College of Medicine (District of Columbia)
Preceptors: Dr. Kenneth Kraemer, Dr. John DiGiovanna, Dr. Lisa Jenkins

AM-169. Joseph Paul
*Xeroderma pigmentosum patient from Morocco with XPC founder mutation*
Howard University (District of Columbia)
Preceptors: Dr. Kenneth Kraemer, Dr. Sikandar Khan

AM-170. Madeline Perez
*Impact of Cognitive Symptoms on Health and Function in Primary Brain Tumor Patients*
Columbia University (New York)
Preceptors: Dr. Terri Armstrong, Ms. Elizabeth Vera, Dr. Mark Gilbert

AM-171. Alejandro Perez-Albela
*Elucidating the Role of BAP1 in the Tumorigenesis of Clear Cell Renal Cell Carcinoma*
Montgomery College (Maryland)
Preceptors: Dr. Marston Linehan, Dr. David Wei, Dr. Christopher, Ricketts, Dr. Ming-Hui Wei

AM-172. Nancy Qin
*Radiation Induced Non-Coding RNAs after Whole Body Irradiation in Mice*
Cornell University (New York)
Preceptors: Dr. Moly Aryankalayil, Mr. Joel Levin

AM-173. Apurva Raghu, Erik Paletzki
*Differential Transcription Factor Binding to Complementary DNA Sequences*
Poolesville High School (Maryland), Washington-Lee High School (Virginia)
Preceptor: Dr. Charles Vinson

AM-174. Robin Raley
*Evaluating the role of CCAAT/enhancer binding protein delta in the endoplasmic reticulum stress response of breast cancer cells*
University of Arkansas (Arkansas)
Preceptors: Dr. Esta Sterneck, Dr. Namratha Sheshadri
AM-175. Yuval Raviv
*Evaluating TGF-beta Effect on Breast Cancer Stem Cells by the Single-Cell Western System*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Binwu Tang, Dr. Jin-Qiu Chen, Dr. Lalage Wakefield

AM-176. Peter Raymond-Smiedy
*When Mutant Chaperones Attack: Mutations of RNA Chaperone Hfq that are Worse than No Hfq*
Onondaga Community College (New York)
Preceptors: Dr. Susan Gottesman, Dr. Kumari Kavita

AM-177. Emily Reagle
*Isostichopin: Initial Studies on a Potent Cytotoxic Protein from the Cookie Dough Sea Cucumber Isosticopus badionotus*
Oakdale High School (Maryland)
Preceptors: Dr. Carter Mitchell, Dr. Barry O'Keefe

AM-178. Bianca Regnauuld
*To investigate the effect of therapeutic SIRPFc on breast cancer stem cells via next generation RNA sequencing*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Sukhbir Kaur, Dr. David Roberts

*Improved workflows for cryo-EM structure determination*
Bethesda-Chevy Chase High School (Maryland), Montgomery Blair High School (Maryland), Thomas Jefferson High School for Science and Technology (Virginia), Thomas Jefferson High School for Science and Technology (Virginia), Seneca Valley High School (Maryland)
Preceptors: Dr. Oleg Kuybeda, Ms. Tai Wei Guo, Dr. Lesley, Earl, Dr. Sriram Subramaniam

AM-180. Christopher Richard
*Assessing the effects of ECM components on TIMP2 function.*
St. Mary's College of Maryland (Maryland)
Preceptors: Dr. David Peeney, Dr. William Stetler-Stevenson

AM-181. Maria Rincon
*Trends in Disparities of Health-Related Quality of Life in Medicare Advantage Beneficiaries (1998-2014)*
Yale School of Public Health (Connecticut)
Preceptor: Dr. Erin Kent
AM-182. James Rogers  
_Evaluation of Small Nucleotide and Structural Variants in Rare CNS Tumors_  
Tulane University (Louisiana)  
Preceptors: Dr. Terri Armstrong, Dr. Mark Glibert

AM-183. Mia Rosenfeld  
_Investigating epigenetic biomarkers of lung cancer_  
University of North Carolina Wilmington (North Carolina)  
Preceptors: Dr. Ana Robles, Dr. Delphine Lissa, Dr. Curtis Harris

AM-184. Tetyana Rudenko  
_3D-Printing Physical Phantoms for the Radiation Exposure Assessment of Overweight and Obese Patients_  
Montgomery College (Maryland)  
Preceptors: Dr. Matthew Mille, Dr. Choonsik Lee

AM-185. Sahil Sahni  
_The Regulation of ETS Transcription Factor Expression_  
Wheaton High School (Maryland)  
Preceptors: Dr. Natasha Caplen, Dr. Nirmalya Sen, Dr. Allison Cross

AM-186. David Jose Salas  
_On the roles of signal relay in neutrophil rolling, adhesion and extravasation_  
California State University, Dominguez Hills (California)  
Preceptors: Dr. Bhagawat Subramanian, Dr. Carole Parent

AM-187. Rodrigo Sandon  
_TIMP2 Inhibits Tumor Growth in the Mouse Model of Lewis Lung Carcinoma_  
Watkins Mill High School (Maryland)  
Preceptors: Dr. William Stetler-Stevenson, Dr. Sarvesh Kumar

AM-188. Aviva Schwartz  
_The effects of targeted therapy drug, Sacituzumab Govitecan, on patients with pretreated metastatic triple negative breast cancer_  
Bnos Yisroel of Baltimore (Maryland)  
Preceptors: Dr. Ritu Chaudhary, Dr. Daniel Edelman

AM-189. Amanda Sciorillo  
_Protein Partners of Allelic Varients in the mTOR HEAT Domains_  
Marymount University (Virginia)  
Preceptors: Dr. Patty Wiley, Mr. Zaw Phyo, Dr. Shuling, Zhang, Dr. Beverly Mock
AM-190. Ematu Sesay
A comparison of copy number variations at the 1p36.3 region between African Americans and European Americans with non-small cell lung cancer
High Point High School (Maryland)
Preceptors: Dr. Khadijah Mitchell, Dr. Elise Bowman, Dr. Brid Ryan

AM-191. Taresh Sethi
ARID1A as a regulator of the DNA damage response and implications for drug sensitivity: A Clinical and Translational Study
Stanford University (California)
Preceptors: Dr. Anish Thomas, Dr. Yves Pommier

AM-192. Thiagarajan Sezhian
Development of a HIF2Alpha Inhibitor to Modulate Hypoxia Signaling in Tumor Cells
SUNY Downstate School of Medicine (New York)
Preceptors: Dr. Zhengping Zhuang, Dr. Herui Wang, Ms. Qi Song

AM-193. Hamzah Shah
New antibody-drug conjugates targeting glypican-3 for liver cancer therapy
Wootton High School (Maryland)
Preceptors: Dr. Ying Fu, Dr. Bryan Fleming, Dr. Mitchell Ho

AM-194. Myeshia Shelby
The effects of LMP 744 treatment on protein localization
Howard University (District of Columbia)
Preceptors: Dr. Peter Cheney, Dr. Keli Agama

AM-195. Victoria Shen
A Novel Volumetric Analysis of Chordomas Improves Tumor Size Estimation
River Hill High School (Maryland)
Preceptors: Dr. Deric Park, Dr. Mohammadhadi Bagheri

AM-196. Brandon Shim
FIB-SEM imaging and 3D reconstructions reveal DNA packaging intermediates during B. subtilis sporulation
Cornell University (New York)
Preceptors: Dr. Kedar Narayan, Dr. Sriram Subramaniam

AM-197. Twan Sia
Clonal Expansion of HIV Infected Cells In Vivo
Swarthmore College (Pennsylvania)
Preceptor: Dr. Stephen Hughes
AM-198. Gurbani Singh
Medication Adherence in Pediatric Patients with Neurofibromatosis Type 1 on a Phase II Clinical Trial
Thomas S. Wootton High School (Maryland)
Preceptors: Dr. Andrea Gross, Dr. Brigitte Widemann

AM-199. Jonathan Smisson
Subcellular localization of Metadherin in Malignant Pleural Mesothelioma (MPM)
George Washington University (District of Columbia)
Preceptors: Dr. Chuong Hoang, Dr. Nathanael Pruett

AM-200. William Smith
Primary to Metastatic Tumor Relationships based on Specific DNA Methylation and Gene Expression
Yale University (Connecticut)
Preceptors: Dr. Maxwell Lee, Dr. Howard Yang, Mrs. Chin-Hsien Tai

AM-201. Eshaan Soman
Preparation and Characterization of Lipid Nanoparticles Containing Photodynamic Therapy Drugs
Hillsborough High School (New Jersey)
Preceptors: Dr. Anu Puri, Dr. Mathias Viard

AM-202. Kevin Spiekermann
Functional Divergence amongst Activated T Cells is Enforced through Cytokine Competition
University of California, San Diego (California)
Preceptors: Dr. Ratnadeep Mukherjee, Dr. Grégoire Altan-Bonnet

AM-203. Meredith Srour
Using Protease Reporters to Track Apoptosis in Murine Carcinomas
Dartmouth College (New Hampshire)
Preceptor: Dr. Duane Hamilton

AM-204. Brittany Stewart
Identifying Novel Viral Genomes from Genetic Dark Matter
Tarleton State University (Texas)
Preceptors: Dr. Christopher Buck, Mr. Michael Tisza, Dr. Alberto Peretti, Ms. Nicole Welch

AM-205. Carolyn Subramaniam
Coupling the Fate and Function of T cells with Mitochondrial Uncoupling Protein 2
Montgomery Blair High School (Maryland)
Preceptors: Dr. Madhusudhanan Sukumar, Dr. Nicholas Restifo
AM-206. Eric Sun  
*Single cell analysis on the role of macroH2A1.2 on DNA replication stress response*  
Thomas Jefferson High School for Science and Technology (Virginia)  
Preceptors: Dr. Philipp Oberdoerffer, Dr. Andy Tran  

AM-207. Abigail Svoysky  
*Approaches to Locating the BRD4 Kinase Domain*  
Charles E. Smith Jewish Day School (Maryland)  
Preceptors: Ms. Jocelyn Weissman, Dr. Dinah Singer  

AM-208. Amin Tafti  
*Examination of the Arf GAP ARAP2 Binding to the Adaptor Protein APPL1*  
Temple University (Pennsylvania)  
Preceptors: Dr. Ruibai Luo, Dr. Paul Randazzo  

AM-209. Julia Tager  
*Implementing Palliative Care Standards in the Pediatric Oncology Setting: Challenges and Opportunities*  
University of Massachusetts, Amherst (Massachusetts)  
Preceptor: Dr. Lori Wiener  

AM-210. Christopher Tao  
*Is Water Pipe Smoking Safer Than Cigarette Smoking? A Comparison of Cytokines Released After Exposure in In Vitro and In Vivo*  
River Hill High School (Maryland)  
Preceptors: Dr. Ying Xiong, Dr. Jason Foley, Dr. David, Schrump, Dr. Haobin Chen  

AM-211. Bethelihem Tebase  
*Development of a bioluminescence assay system for detection of ABCB1 and ABCG2 inhibition*  
Northwestern High School (Maryland)  
Preceptors: Dr. Michael Gottesman, Ms. Andrea Robinson, Dr. Robert Robey  

AM-212. Aishat Tepede  
*The Connection between Calcium Intake and Prostate Cancer*  
University of Illinois at Urbana-Champaign (Illinois)  
Preceptor: Dr. Tanya Agurs-Collins  

AM-213. Pranaya Terse  
*Downstream Effector Mechanisms of the Synthetic Immune Defense Regulatory Peptide RP-182 in Macrophages*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Udo Rudloff, Dr. Rushikesh Sable
AM-214. Garrett Tisdale
Unsupervised Clustering of Transcriptional Bursting Data Reveals General Principles of Gene Expression Heterogeneity
Boise State University (Idaho)
Preceptors: Dr. Daniel Larson, Dr. Yihan Wan

AM-215. Leann To
Genetic screen for factors involved in sRNA regulation in E. coli
University of Oklahoma (Oklahoma)
Preceptors: Dr. Jiandong Chen, Dr. Susan Gottesman

AM-216. Jack Tsintolas
MYF6 Expression In Hairy Cell Leukemia
University of Maryland, College Park (Maryland)
Preceptors: Dr. Evgeny Arons, Mr. Mark Sokolsky

AM-217. Julian Urbina
Dissecting the interactions of Arf1 GTPase with Arf GTPase-activating proteins using chemical cross-linking
Benjamin Banneker Academic High School (District of Columbia)
Preceptors: Dr. Neeladri Roy, Dr. Paul Randazzo

AM-218. Nicholas Verdini
Development of an IL7R CAR T-cell therapy for pediatric T-cell acute lymphoblastic leukemia
Emmanuel College (Massachusetts)
Preceptors: Dr. Terry Fry, Dr. Haiying Qin

AM-219. Sara Verschleisser
Epstein-Barr Virus Deregulation of MYC and BCL2L11 in B Cells Contributes to the Genesis of Burkitt's Lymphoma
Yeshiva of Greater Washington (Maryland)
Preceptors: Ms. Andrea Kennard, Dr. Daniel Edelman

AM-220. Preet Walia
Immune Microenvironment of Pediatric Diffuse Intrinsic Pontine Gliomas
University of Toronto (Non-U.S.)
Preceptors: Dr. Kathy Warren, Dr. Martha Quezado, Ms. Anna, Gurney, Dr. Astin Powers

AM-221. Katharine Walker-Bawa
Characterization of the Histological and Molecular Properties Conferred by the Addition of Guanidine Thiocyanate to a Buffered Alcohol-Based Fixative
George Washington University (District of Columbia)
Preceptors: Dr. Stephen Hewitt, Dr. Joon-Yong Chung
AM-222. Chaoyang Wang

Niclosamide Exerts Anti-Cancer Stemness Activity in Preclinical Models of Pancreatic Cancer: A Role in the Adjuvant Setting
University of Maryland, College Park (Maryland)
Preceptors: Dr. Yansong Bian, Dr. Udo Rudloff, Dr. Dandan Li

AM-223. Hannah Warshawsky

The Effects of Truncated APC Fragments on Colorectal Cancer
University of Maryland, College Park (Maryland)
Preceptor: Mr. Markus Brown

AM-224. Perel Wein

Comparing Attention Deficit Hyperactivity Disorder Medications, Methylphenidate and Dexamphetamine, in Treatment of Obesity
Hebrew Theological College (Illinois)
Preceptors: Ms. Sarah Deasy, Dr. Daniel Edelman

AM-225. Timothy Westlake

Polo-like kinase Cdc5 mediated phosphorylation of Cse4 regulates faithful chromosome segregation
Cornell University (New York)
Preceptors: Dr. Prashant K. Mishra, Dr. Munira A. Basrai

AM-226. Lea Widemann

Overcoming resistance to BET-bromodomain inhibition via small-molecule recruitment of protein degradation machinery
University of Maryland, College Park (Maryland)
Preceptors: Dr. Berkley Gryder, Dr. Javed Khan

AM-227. Michael Williams

Financial Burden on Cancer Patients
University of Michigan (Michigan)
Preceptors: Dr. Michelle Mollica, Dr. Ann Geiger

AM-228. Anna Word

Improved method of single-cell epigenome analysis
Vanderbilt University (Tennessee)
Preceptor: Dr. Giovanna Tosato

AM-229. Daniel Wu

Resource Oversupply in Carcinogenesis: Modelling a Common Theme in Diverse Risk Factors
Timber Creek High School (Florida)
AM-230. Jessica Wu
Quantifying Endogenous Downstream Targets of p53 using Single Molecule RNA FISH
Johns Hopkins University (Maryland)
Preceptors: Dr. Eric Batchelor, Dr. Marie Harton

AM-231. Maggie Wu
Assessing HPV Vaccination Coverage in States with and without School-Entry Federal Mandates
University of Pennsylvania (Pennsylvania)
Preceptor: Dr. Nancy Emenaker

AM-232. Qixin Wu
Targeting Nrf2 Mediated Antioxidative Pathway to Suppress IDH1 Mutated Glioma
Johns Hopkins University (Maryland)
Preceptors: Dr. Chunzhang Yang, Dr. Yang Liu, Dr. Yanxin Lu

AM-233. Clarissa Xia
A Functional Comparison of Rex-Orf1 in Different Subtypes of HTLV-1
Richard Montgomery High School (Maryland)
Preceptors: Dr. Genoveffa Franchini, Dr. Dai Fujikawa

AM-234. Jane Xie
Investigating the role of Smurf2 phosphorylation on DNA damage response
University of Maryland, College Park (Maryland)
Preceptors: Dr. Liu-Ya Tang, Dr. Ying Zhang

AM-235. Avanish Yendluri
Characterizing APOBEC3G Mutants and Their Ability to Block HIV-1 Retroviral Replication
Poolesville High School (Maryland)
Preceptors: Dr. Vinay Pathak, Dr. Krista Frankenberry

AM-236. Ornela Yossa Nganpe
Cell death mechanism of a G-quadruplex stabilizing drug
James Hubert Blake High School (Maryland)
Preceptors: Mr. Zaw Phyo, Mr. Daniel Connors, Ms. Sayeh, Gorjifard, Dr. Beverly Mock

AM-237. Helen Zhang
PERK Signaling Mediates the Resistance to BRAF Inhibitors in Melanoma with Impaired PTEN
Walt Whitman High School (Maryland)
Preceptors: Dr. Yanlin Yu, Dr. Glenn Merlino
AM-238. Amy Zhong
Structural investigation of TMEM205, an integral membrane protein involved in cisplatin resistance
Thomas Sprigg Wootton High School (Maryland)
Preceptors: Dr. Di Xia, Dr. Xiaoyun Bai

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

AM-239. Colin Adler
Usual adult occupation and risk of prostate cancer in West African men: The Ghana Prostate Case Control Study
Emory University (Georgia)
Preceptor: Dr. Stella Koutros

AM-240. Ngozi Alia
Analysis of Racial Cancer Disparities in Breast Cancer, Colorectal Cancer, and Prostate Cancer with a focus on Prostate Cancer and Vitamin D
Frostburg State University (Maryland)
Preceptors: Dr. Tracy Layne, Dr. Demetrius Albanes

AM-241. Riyadh Atrah
Exploring the effect of mir-577 and mir-3130-5p in pancreatic cancer
University of Nevada, Las Vegas (Nevada)
Preceptors: Dr. Ashley Jermusyk, Dr. Laufey Amundadottir

AM-242. Andrea Ayers
Oophorectomy and risk of primary liver cancer and fatty liver disease among women in the UK Clinical Practice Research Datalink
George Washington University (District of Columbia)
Preceptors: Dr. Jessica Petrick, Dr. Katherine McGlynn

AM-243. Arash Delavar
Prospective study of ultraviolet radiation exposure and risk of cataracts in the United States
Washington University in St. Louis (Missouri)
Preceptor: Dr. Elizabeth Cahoon

AM-244. Sarah Groover
Risk factors for hepatitis delta virus infection in The Gambia
Oklahoma State University (Oklahoma)
Preceptors: Dr. Thomas O'Brien, Dr. Parag Mahale
AM-245. Summer Harvey
Association of Life Course Obesity and Endometrial Cancer Risk: A Systematic Review and Meta-Analysis
University of Virginia (Virginia)
Preceptors: Dr. Megan Clarke, Dr. Nicolas Wentzensen

AM-246. Jessica Islam
Cancers Averted Among HIV-Infected Adults during the Modern ART Era
University of North Carolina at Chapel Hill, Gillings School of Global Public Health (North Carolina)
Preceptor: Dr. Meredith Shiels

AM-247. Emahlea Jackson
Long Term Stability of Oral Microbiome Samples
Seattle Pacific University (Washington)
Preceptors: Dr. Emily Vogtmann, Dr. Christian C. Abnet

AM-248. Victoria Kennerley
Colorectal Cancer Incidence Patterns in United States Counties and States, 2000-2014
University of Florida (Florida)
Preceptors: Dr. Philip Rosenberg, Dr. Pavel Chernyavskiy

AM-249. Sarah Kim
Comparison of normal tissue dose for prone and supine setups for breast radiotherapy
Clarksburg High School (Maryland)
Preceptor: Dr. Choonsik Lee

AM-250. Soyun Kim
Multi-locus analysis of HPV16 genome reveals new loci associated with cervical cancer
Georgetown University (District of Columbia)
Preceptor: Dr. Kai Yu

AM-251. Hela Koka
Characteristics of Chinese women stratified by breast cancer subtypes
University of Maryland, College Park (Maryland)
Preceptor: Dr. Rose Yang

AM-252. Daniel Muldoon
Androgen Therapy Modulates Lipid Particle Numbers in Dyskeratosis Congenita
School of Public Health, University of Minnesota (Minnesota)
Preceptor: Dr. Payal Khincha
AM-253. Ashley Pantaleao
*It's just in the cards that you're dealt: Lessons on living with LFS from adolescent/young adult children and their parents*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Mark Greene, Ms. Jennifer Young, Dr. Allison, Werner-Lin, Dr. Maria Isabel Achatz

AM-254. Jessica Rothman
*Immunoglobulin-related profiles and outcomes in relatives of familial Waldenström macroglobulinemia cases*
American University (District of Columbia)
Preceptors: Dr. Ruth Pfeiffer, Dr. Mary McMaster

AM-255. Gabriella Schito
*Functional Characterization of a Putative Novel Gene in Relation to Bladder Cancer*
Howard Community College (Maryland)
Preceptors: Dr. Rouf Banday, Dr. Ludmila Prokunina-Olsson

AM-256. Atara Siegel
*Rate of prophylactic mastectomy in germline Tp53 mutation carriers*
University at Albany, State University of New York (New York)
Preceptors: Ms. Renee Bremer, Dr. Payal Khincha, Dr. Maria, Achatz, Dr. Jennifer Loud

AM-257. Sophie Smith
*Do Androgen Receptor Inhibitors Promote Progression of Prostate Cancer to Therapy-Resistant Stage?*
Middlebury College (Vermont)
Preceptor: Dr. Kalpit Shah

AM-258. Kelsey Stidd
*Young Onset Melanoma in Melanoma-Prone Families*
University of South Florida (Florida)
Preceptor: Dr. Alisa Goldstein

AM-259. Joselin Vargas
*Evaluation of functional impact of natural protein-changing polymorphisms of IFNL4 in relation to infection and cancer*
Stony Brook University (New York)
Preceptors: Dr. Lumila Prokunina-Olsson, Mrs. Adeola Obajemu

AM-260. Ishmael Williams
*Addressing Pancreatic Malignancy: International Rates of Pancreatic Cancer*
Howard University (District of Columbia)
Preceptors: Dr. Rachael Stolzenberg-Solomon, Dr. Vanessa Gordon-Dseagu
National Eye Institute (NEI)

AM-261. Samuel Bennett
Stem Cell-Derived Exosomes as a Potential Glaucoma Treatment
Brown University (Rhode Island)
Preceptors: Dr. Ben Mead, Dr. Stanislav Tomarev

AM-262. Kaifa Boyce
Temporal Characterization of Exosomes Isolated From Differentiated Human Retinal Pigment Epithelial Cells
University of Maryland (Maryland)
Preceptors: Mr. Todd Duncan, Mr. William Samuel, Mr. T. Michael Redmond

AM-263. Julia Chertkof, Anne Warburton
In Vivo Approaches to Increase Pigmentation and In Vitro Tools for Drug Screening for Albinism
Bethesda Chevy Chase High School (Maryland), Stone Ridge School (Maryland)
Preceptors: Dr. Ramakrishna Alur, Dr. Tiziana Cogliati, Dr. Brian Brooks

AM-264. Tony Duckworth
Comparison of apically or basolaterally secreted exosomes secreted by human retinal pigment epithelial cells
Mississippi College (Mississippi)
Preceptors: Dr. T. Michael Redmond, Dr. William Samuel, Mr. Todd, Duncan, Dr. R. K. Kutty

AM-265. Nikhil Etikela
Enhanced Neural Network Analysis of Morphometrics in Stem Cell Derived Retinal Pigment Epithelial Cells
Hopkins School (Connecticut)
Preceptors: Dr. Nathan Hotaling, Dr. Kapil Bharti

AM-266. Fatima Gomez
Post-translation modification of RPE65 by palmitoylation: Identification of modified cysteines using Acyl-RAC assay
White Swan High School (Washington)
Preceptors: Dr. Michael Redmond, Dr. Sheetal Uppal, Dr. Eugenia Poliakov

AM-267. Rohini Kallianpur
Gene Expression in Embryonic Mouse and Zebrafish Eyes
R.L. Turner High School (Texas)
Preceptor: Dr. Vijay Kalaskar

AM-268. Esther Kim
A Histology Comparison of Wild Type and Degenerative Retina Models Through Development
Johns Hopkins University (Maryland)
Preceptors: Mr. Thad Whitaker, Dr. Anand Swaroop

AM-269. June Hee Kim  
*The eye of the beholder: Individual differences in color preferences*  
Wellesley College (Massachusetts)  
Preceptors: Dr. Bevil Conway, Dr. Jeremy Wilmer

AM-270. Brandon Klein  
*Segmentation and Quantitative Analysis of Choroidal Vasculature in Eyes with Age-Related Macular Degeneration*  
Loyola Marymount University (California)  
Preceptors: Dr. Wai Wong, Dr. Catherine Cukras, Dr. Tiarnan Keenan

AM-271. Hima Konduru  
*Aryl Hydrocarbon Receptor (AhR) Signaling Enhances Effector Function of gamma delta T cells*  
Walter Johnson High School (Maryland)  
Preceptors: Dr. Anthony St Leger, Dr. Rachel Caspi

AM-272. Adam Lazere  
*Neuron-Microglia Interactions Underlying Microglial Homeostasis*  
Oberlin College (Ohio)  
Preceptors: Dr. Yikui Zhang, Dr. Wai Wong

AM-273. Choyhee Lin  
*Improving Training of Artificial Intelligence Based Texture and Intensity Analysis of Induced Pluripotent Stem Cell Derived Retinal Epithelial Cells*  
Sidwell Friends School (District of Columbia)  
Preceptors: Dr. Nathan Hotaling, Dr. Kapil Bharti

AM-274. Anagha Lokhande  
*Alternative splicing of USH1C in the human retina and its role in Usher syndrome*  
Brown University (Rhode Island)  
Preceptors: Mr. Benjamin Fadl, Dr. Anand Swaroop

AM-275. Daniel Lulli  
*Characterization of Pigment Epithelium-derived Factor Variants*  
Bowdoin College (Maine)  
Preceptor: Dr. Patricia Becerra

AM-276. Alejandra Maiz  
*SLCO1B1 & ABCG2 Genes, Statin Use and Age-Related Cataract*  
University of Illinois at Chicago (Illinois)  
Preceptors: Dr. Emily Chew, Ms. Elvira Agron, Dr. Tiarnan Keenan
AM-277. Karina Navarro
Bedside to Bench: Linking Novel Human Syndromes to Loss of Function Alleles with CRISPR/Cas9
Boston University (Massachusetts)
Preceptor: Dr. Robert Hufnagel

AM-278. Tamir Odzorig
Visualization of Bioprinted Ocular Tissue Using Immunostaining
Walter Johnson High School (Maryland)
Preceptors: Dr. Minjae Song, Mr. Russell Quinn, Dr. Kapil Bharti

AM-279. Nicole Pannullo
Protein-Protein Interactions of RPE65
Rochester Institute of Technology (New York)
Preceptors: Dr. Eugenia Poliakov, Dr. Michael Redmond

AM-280. Natalia Santiago
Characterization of Recombinant Human and Mouse Pigment Epithelium-derived Factor Receptor generated by Different Expression Systems.
Inter American University of Puerto Rico (Puerto Rico)
Preceptors: Ms. Jeanee Bullock, Dr. Preeti Subramanian, Dr. Patricia Becerra

AM-281. Jayram Sastry, Adriana Grewe
Vessel Pericyte Dropout: An Initial Event in the Development of Age-Related Macular Degeneration (AMD)
Saint Albans School (District of Columbia), Walter Johnson High School (Maryland)
Preceptors: Dr. Mones Abu-Asab, Ms. Heba Mohammed

AM-282. Esika Savsani
Characterization of Ganglion Cell Markers in the Mouse Retina
Richard Montgomery High School (Maryland)
Preceptors: Dr. Tudor Badea, Dr. Manvi Goel

AM-283. Devrat Shah
Flow Cytometry Analysis of Immune Cells During Treatment of Uveitis with Ustekinumab
University of California, Los Angeles (California)
Preceptor: Dr. Lotta Utriainen

AM-284. Bindu Srinivasa
Modulation of Gut Microbiome by Antibiotic Treatment
Thomas Jefferson High School for Science and Technology (Virginia)
Preceptors: Dr. Yingyos Jittayasothorn, Dr. Ryan Salvador, Dr. Rachel Caspi
AM-285. Peter Stewart  
*Using Machine Learning and Visomic Data Analysis to Predict and Understand Retinal Diseases*  
Howard University College of Medicine (District of Columbia)  
Preceptors: Dr. Kapil Bharti, Dr. Nathan Hotaling

AM-286. Emile Vieta Ferrer  
*Expression of Zinc Finger Protein 503 (Zfp503/Nlz2) in Mouse Eye*  
San Juan Bautista School of Medicine (Puerto Rico)  
Preceptors: Dr. Brian Brooks, Dr. Elangovan Boobalan

AM-287. Jennifer Zhu  
*Cone-Specific Gene Expression in the Mammalian Retina*  
Winston Churchill High School (Maryland)  
Preceptors: Mr. Vincent Kunze, Dr. Wei Li

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

AM-288. Briana Cervantes  
*Identification of NEMO lysine mutants resistant to TNF-induced A20-dependent proteasomal degradation*  
Florida International University (Florida)  
Preceptors: Dr. Eric Hanson, Dr. Younglang Lee

AM-289. Navid Chowdhury  
*Epigenesis: A Tool to Bridge the Bench and the Computational Analysis for Massive Parallel Sequencing*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Vittorio Sartorelli, Dr. Kyung Dae Ko, Dr. Stefania Dell'Orso

AM-290. Daria Coffield  
*Longitudinal study of disease expression in patients with Ankylosing Spondylitis*  
Howard University (District of Columbia)  
Preceptor: Dr. Michael Ward

AM-291. Naomi Colton  
*Genetic deletion of Interferon-alpha receptor restores normal Interferon-gamma responses in T-bet-deficient CD4 T cells*  
Norfolk State Univeristy (Virginia)  
Preceptors: Dr. Yohei Mikami, Dr. John O'Shea
AM-292. Katie Fairhurst  
*Regulation of Circadian Immune Response in the Sepsis Model*  
Thomas S. Wootton High School (Maryland)  
Preceptors: Dr. Richard Siegel, Dr. Sarah Geiger, Ms. Taylor, Farley, Ms. Francoise Meylan

AM-293. Keyanna Franklin  
*X-ray Crystal Structure of HIV-1 Rev with an RNA Inhibitor of RRE Binding*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Altaira Dearborn, Dr. Elif Eren, Dr. Paul, Wingfield, - Dearborn, Altaira (NIH/NIAMS) [F]

AM-294. Jazz Jacobs  
*The effect of time-restricted feeding on metabolic and inflammatory pathways*  
Stevenson University (Maryland)  
Preceptors: Dr. Sarah Geiger, Dr. Richard Siegel

AM-295. Somin Kim  
*Disease mechanisms in monogenic autoinflammatory syndromes caused by defects in mRNA splicing*  
Emory University (Georgia)  
Preceptors: Dr. Eric Hanson, Dr. Richard Siegel

AM-296. Kathleen Marinelli  
*Characterization of True versus Pseudo Stenoses within the Subclavian and Axillary Arteries in Large Vessel Vasculitis*  
Creighton University (Nebraska)  
Preceptor: Dr. Peter Grayson

AM-297. Victoria Mischley  
*Chemical Chaperones Down Regulate Endoplasmic Reticulum Stress In Vitro in a Rat Model of Spondyloarthritis*  
University of South Florida (Florida)  
Preceptors: Dr. Elham Navid, Dr. Robert Colbert

AM-298. Tiffani Najadifar  
*Clinical Spectrum of a Rare Primary Immunodeficiency Syndrome*  
University of Pittsburgh (Pennsylvania)  
Preceptor: Dr. Heidi Kong

AM-299. Rachel Patterson  
*Examination of PLCG2 in human immune dysregulation*  
Saint Louis University (Missouri)  
Preceptor: Dr. Michael Ombrello
AM-300. Mary Rostom
*Identification of Possible RNA Targets of HLX*
University of Pittsburgh (Pennsylvania)
Preceptors: Dr. Markus Hafner, Dr. Dimitrios Anastasakis

AM-301. Talia Solomon
*In Vivo Identification of FUBP Interactions with DNA*
Carnegie Mellon University (Pennsylvania)
Preceptors: Dr. Markus Hafner, Dr. Dimitrios Anastasakis

AM-302. Mitchell Wong
*Defining Transcription Factor Networks in Mammalian Immune Cells*
Herricks High School (New York)
Preceptors: Mr. Evan Stevens, Dr. Rafael Casellas, Dr. Kyong-Rim Kieffer-Kwon

AM-303. Tiffany Ybarra
*Optimization of Multi-Color Cytometry for Comprehensive Immunophenotyping to Assess Immune System Alterations*
California State University, Los Angeles (California)
Preceptor: Dr. Massimo Gadina

National Institute of Dental and Craniofacial Research (NIDCR)

AM-304. Kendra Clark
*Characterization of Keratin 5 and Keratin 14 in adult mice salivary glands*
The University of Mississippi Medical Center (Mississippi)
Preceptors: Dr. Belinda Hauser, Dr. Matthew Hoffman

AM-305. Eric Coy
*Protective factors against oral health decline in alcohol use disorder patients*
Towson University (Maryland)
Preceptors: Dr. Robert Range, Dr. Nancy Diazgranados, Dr. Janice Lee

AM-306. Michael Cruciger
*Anti-Angiogenesis Medication-Related Osteonecrosis of the Jaw: A Review of 55 Cases and Summary of the Literature*
Columbia University (New York)
Preceptor: Dr. Bob Range

AM-307. Tarek Ellis
*The Function of Neurotrophins and Their Receptors In Progenitors In the Developing Salivary Gland*
Georgia State University (Georgia)
Preceptors: Dr. Alejandro Chibly, Dr. Matthew Hoffman

AM-308. Ross Giglio
Comparison of Serum-Free and Xeno-Free Media to FBS-Media for Bone Marrow Stromal Cell Culture
University of Pittsburgh (Pennsylvania)
Preceptors: Dr. Vamsee Myneni, Dr. Eva Mezey

AM-309. Shaimar Gonzalez
Characterizing branching morphogenesis of mouse embryonic salivary gland and lung
University of Texas Health Science Center at San Antonio (Texas)
Preceptors: Dr. Kenneth Yamada, Dr. Shaohe Wang

AM-310. Nicholas Hong
The Role of Bone Marrow Stromal Cell (BMSC) Derived Hepcidin on Hematopoietic Stem Cells (HSCs)
George Walton Comprehensive High School (Georgia)
Preceptors: Dr. Vamsee Myneni, Dr. Eva Mezey

AM-311. Paula Muñoz
Role of Fibrin in Spontaneous Periodontitis in Mice
Columbia University College of Dental Medicine (New York)
Preceptors: Dr. Lakmali Silva, Dr. Niki Moutsopoulos, Dr. Thomas Bugge

AM-312. Mansoor Safder
Biology of AAV Transduction
University of Missouri, Kansas City School of Dentistry (Missouri)
Preceptor: Dr. Jay Chiorini

AM-313. Ryoko Takeuchi
The G protein-coupled receptor Gpr115 regulates tooth mineralization process
Niigata university (Non-U.S.)
Preceptors: Dr. Yoshi Yamada, Dr. Yuta Chiba, Dr. Tomoko Ikeuchi

AM-314. Jessica Yin
Transforming Growth Factor Beta for innate lymphoid cell survival
University of Maryland, College Park (Maryland)
Preceptors: Dr. Xia Yang, Dr. Cheryl Chia, Dr. Wanjun Chen

AM-315. Qingcong Zeng
Profile of Immunological Markers in Chronic Graft-versus-host Disease Induced Murine Parotid Salivary Glands
AM-316. Jack Zhao, Isabel Eisendrath
*Characterizations of Highly Expressed Genes in Pancreatic Islets*
Winston Churchill High School (Maryland), Walter Johnson High School (Maryland)
Preceptors: Dr. Tao Cai, Dr. Paul Liu, Dr. Richard Leapman

AM-317. Sophia Zic
*Microscopic Analysis of Chronic Graft-Versus-Host Disease Therapeutic Response in Oral Buccal Mucosa to 0.05% Clobetasol Oral Rinse Treatment*
Poolesville High School (Maryland)
Preceptor: Dr. Jacqueline Mays

**National Library of Medicine (NLM)**

AM-318. Shriya Beesam
*Discovering Mechanistic Explanations for Mutational Signatures*
Plano East Senior High School (Texas)
Preceptors: Dr. Teresa Przytycka, Dr. Yoo-Ah Kim, Dr. Damian Wojtowicz

AM-319. Tiffany Callahan
*Community Detection in Tri-Partite Pediatric Networks*
University of Colorado Denver Anschutz Medical Campus (Colorado)
Preceptor: Dr. Olivier Bodenreider

AM-320. Katherine Du
*Understanding the Diversity of Acetyltransferases*
Thomas Jefferson High School for Science and Technology (Virginia)
Preceptors: Dr. L. Aravind, Dr. Lakshminarayan Iyer, Dr. A Max, Burroughs, Dr. Gurmeet Kaur

AM-321. Jerry Gu
*Establishing tissue surface characteristics to render digitized anatomical structures for an open-source imaging-based 3D structure library*
University of Toronto (Non-U.S.)
Preceptor: Ms. Anne Altemus

AM-322. Soyoung Hong
*Bibliographic Information Extraction from Biomedical Journal Articles Using the Deep Learning Algorithm*
Montgomery Blair High School (Maryland)
Preceptors: Dr. Jongwoo Kim, Mr. Michael Gill, Dr. George Thoma
AM-323. Swan Htun
Integrated Analysis of Cancer Mutations and Drug-Gene Interactions for Targeted Therapy
Santa Fe College (Florida)
Preceptors: Dr. Yoo-Ah Kim, Dr. Teresa Przytycka

AM-324. Vanessa Martinez
Developing Short Names for laboratory tests that are short and attractive to clinicians
University of Massachusetts, Amherst (Massachusetts)
Preceptor: Dr. Clement McDonald

AM-325. Golnaz Moallem
Detecting and Segmenting White Blood Cells in Microscopy Images of Thin Blood Smears
Texas Tech University (Texas)
Preceptors: Dr. Stefan Jaeger, Dr. Sameer Antani, Dr. George, Thoma, Dr. Mahdieh Poostchi

AM-326. Max Rosen
Semi Probabilistic Sequence Alignment with a Compositional Adjustment
McGill University (Non-U.S.)
Preceptor: Dr. Yi-Kuo Yu

AM-327. Alex Rubio
MiCId GUI: A Toolbox for Microorganism Classification, Identification and Metaproteomics Analysis
Virginia Tech (Virginia)
Preceptor: Dr. Gelio Alves

AM-328. Nikhil Sardana
Deep Learning for Alzheimer's Data Classification
Thomas Jefferson High School for Science and Technology (Virginia)
Preceptor: Mr. Rodney Long

AM-329. Daniel Schaffer
What are the Protein Domains in Wolframin, an Endoplasmic Reticulum Protein Mutated in a Monogenic Form of Diabetes?
Montgomery Blair High School (Maryland)
Preceptors: Dr. Max Burroughs, Dr. Laks Iyer, Dr. Aravind Iyer

AM-330. Priscilla Seah
Engaging the Public: Experimentation of Multimodal Visual Media to Communicate Antimicrobial Resistance
University of Maryland, College Park (Maryland)
Preceptors: Ms. Anne Altemus, Dr. Jeff Day
AM-331. Chandler Watson
*CRISPR protospacer islands in viral genomes*
Stanford University (California)
Preceptors: Dr. Yuri Wolf, Mr. Sergey Shmakov

AM-332. Annie Zhao
*Mutational signatures in potential non-B DNA structures within breast cancer*
Montgomery Blair High School (Maryland)
Preceptors: Dr. Teresa Przytycka, Dr. Damian Wojtowicz, Dr. Yoo-Ah Kim

**Clinical Center (CC)**

LCH-001. David Alfon
*Computer-Based Training for Performance Improvement: A Total Quality Management solution in the Department of Perioperative Medicine*
Duke University School of Nursing (North Carolina)
Preceptor: Ms. Norma Street

LCH-002. Sarah Ayvazov
*The Effect of Ionizing Radiation on hESCs and Their Competition with Non-Irradiated Cells*
New York University (New York)
Preceptors: Ms. Irina Panyutin, Dr. Igor Panyutin, Dr. Ron Neumann

LCH-003. Courtney Battles
*Carney Complex: Genetics, Case Study, and the Nursing Role in Disease Management*
Duquesne University (Pennsylvania)
Preceptors: Dr. Paul A. Wong, Mrs. Mary Myers

LCH-004. Rachel Bellisle
*Neurological Effects of Robotic Knee Extension Assistance During Walking in Children with Cerebral Palsy*
University of Rhode Island (Rhode Island)
Preceptors: Dr. Thomas Bulea, Dr. Diane Damiano

LCH-005. Isabel Canfield
*Characteristics and Outcomes of a Capacity-to-Consent Assessment Service*
Oberlin College (Ohio)
Preceptor: Dr. Marion Danis

LCH-006. Hannah Clark
*Correlating Motion Analysis with Upper Extremity Functional Tasks in Children with Giant Axonal Neuropathy*
University of Evansville (Indiana)
Preceptors: Dr. Mina Jain, Dr. Cristiane Zampieri-Gallagher
LCH-007. Sara Constand
Retroactive Analysis of Bone Mineral Density on Computed Tomography
Duke University (North Carolina)
Preceptor: Ms. Lauren Kim

LCH-008. Brian DeLaurentis
Piloting a Social Work Psychosocial Acuity Scale in the Clinical Center
Manhattan College (New York)
Preceptor: Ms. Jeasmine Aizvera

LCH-009. Marcia Des Jardin
Correlating C4 complement component gene variations to clinical manifestations in a large congenital adrenal hyperplasia cohort
Upstate Medical University (New York)
Preceptors: Dr. Qizong Lao, Dr. Ashwini Mallappa, Dr. Deborah Merke

LCH-010. Abhiksha Desai
Differentiation of Clear Cell Renal Cell Carcinoma from Oncocytoma by Whole Lesion Volumetric Analysis of Multiparametric MRI
University of Maryland, College Park (Maryland)
Preceptors: Dr. Ashkan Malayeri, Ms. Uyen Hoang, Mr. Faraz Farhadi, Dr. Moozhan Nikpanah

LCH-011. Nisha Dhebaria
Dash Board
University of Maryland, College Park (Maryland)
Preceptor: Mr. Robert Mekelburg

LCH-012. Nathaniel Edisis
Optimization of Thermochromic Paint Formulation for Exact Measurement of Temperature for Therapeutic Ultrasound Exposures for Bone Cancer Therapy
Georgetown Day School (District of Columbia)
Preceptors: Dr. Ayele Negussie, Dr. Bradford Wood

LCH-013. Quentin Eustace
Testicular Adrenal Rest Tumors: Sonographic detection and characterization
University of Tennessee, Knoxville (Tennessee)
Preceptor: Dr. Jamie Marko

LCH-014. Shannon Exley
Social, motor, and ADL abilities and caregiver assist across the lifespan of Smith-Magenis Syndrome
American University (District of Columbia)
Preceptors: Ms. Hanna Hildenbrand, Ms. Michaele Smith, Ms. Ann Smith

LCH-015. Kendal Ezell
Loading and Characterization of Drug-eluting Radiopaque Beads for Transarterial Chemoembolization of Liver Tumors
Texas A&M University (Texas)
Preceptors: Dr. Andrew Mikhail, Dr. Bradford Wood

LCH-016. Jessica Fentress
Associations between Variety of Dietary Intake at a Buffet Meal and Energy, Macronutrient Intake, and Body Composition
Tennessee Technological University (Tennessee)
Preceptors: Ms. Shanna Bernstein, Dr. Amber Courville

LCH-017. Meheret Gebreegziabher
The Oral and Gut Microbiomes of Patients Undergoing Treatment for Severe Alcohol Use Disorder and Inflammatory Skin Conditions.
University of Maryland, Baltimore County (UMBC) (Maryland)
Preceptors: Ms. Sarah Mudra, Dr. Nancy Ames

LCH-018. Leah Gober
Assessment and thermodynamic modulation of A-delta and C fiber thermonociception and pharmacologic modulation
Mercer University School of Medicine (Georgia)
Preceptors: Dr. Michael Iadarola, Dr. Andrew Mannes, Dr. Matt, Sapio, Mr. Stephen Raithek

LCH-019. Jillian Granados
How to make Writing Problem-Oriented Clinical Notes in CRIS Fun and Easier by having a Problems List just a Click Away.
Montgomery College (Maryland)
Preceptors: Dr. David Herion, Mr. Bertram Brown, Dr. G Tom Brown

LCH-020. Spencer Grissom
Validation of a New Bioinformatics Pipeline to Predict an Extended Red Blood Cell Phenotype from Next Generation Sequencing Data
University of Maryland, College Park (Maryland)
Preceptors: Dr. David Stroncek, Dr. Celina Montemayor Garcia

LCH-021. Oscar Guillama
Assessing Differences in Eligibility of 177- Lu-DOTATATE Treatment in Patients with Neuroendocrine Tumors Based on Comparison of In-111-OctreoScan and Ga-68-DOTATATE PET/CT Findings.
San Juan Bautista School of Medicine (Puerto Rico)
Preceptor: Dr. Corina Millo
LCH-022. Devon Gulley  
What's new in CRIS? NoteCetera: A tool that makes finding lab results a click away!  
Highland View Academy (Maryland)  
Preceptor: Dr. David Herion

LCH-023. Megan Haymond  
Implications of Neonatal Abstinence Syndrome (NAS) on child development to neonates born to mothers with Opioid Use Disorder (OUD)  
Cedarville University (Ohio)  
Preceptors: Ms. Diane Lawrence, Ms. Anne Fejka, Mr. Frank Rodriguez

LCH-024. Natalie Hong  
New Doxorubicin Loading Method for PMMA Bone Cement  
Carnegie Mellon University (Pennsylvania)  
Preceptors: Dr. Ayele Negussie, Dr. Venkatesh Krishnasamy, Dr. Bradford Wood

LCH-025. Katherine Irimata  
Estimation of correlation coefficient in data with repeated measures  
Arizona State University (Arizona)  
Preceptors: Dr. Xiaobai Li, Dr. Paul Wakim

LCH-026. Courtney Johnson  
Developing Effective Strategies for Recruitment & Registration of Healthy Children in Research  
Arizona State University (Arizona)  
Preceptor: Mrs. Melanie Webb

LCH-027. Emily Jung  
Pregnant Women's Views about the Ethics of Prenatal Whole Genome Sequencing  
Harvard University (Massachusetts)  
Preceptor: Mr. Benjamin Berkman

LCH-028. Jessica Kain  
CD25 Expression on Mast Cells in Hypereosinophilic Syndrome Patients  
University of Virginia (Virginia)  
Preceptors: Dr. Irina Maric, Dr. Xiaoping Sun, Mrs. Jamie Hahn

LCH-029. Juna Khang, Jennifer Strong  
The Effects of an ACTH Stimulation Test on TSH and Thyroid Hormones  
Williams College (Massachusetts), University of Maryland, College Park (Maryland)  
Preceptor: Dr. Steven Soldin
LCH-030. Yeo Eun Kim
Comprehensive Mass Spectrometry Based Peptidomics in Maternal Circulation
Cornell University (New York)
Preceptor: Dr. Zhen Zhao

LCH-031. David Kulp
Characterization of an adrenal adenoma in a patient with congenital adrenal hyperplasia
Emory University (Georgia)
Preceptors: Dr. Vipula Kolli, Dr. Deborah Merke

LCH-032. Hillary Liu
Nucleotide substitutions in 5.7 kb of the ACKR1 gene among African American individuals with benign ethnic neutropenia: a case-control study
University of Virginia (Virginia)
Preceptors: Dr. Kshitij Srivastava, Dr. Bill Flegel

LCH-033. Josephine Makanjuola
Understanding the Nigeria Implementation Science Alliance: The Path Towards Eliminating Mother-to-Child Transmission of HIV
University of Maryland, Baltimore (Maryland)
Preceptors: Ms. Cecelia Henry, Dr. Paul Wong, Ms. Mary Myers

LCH-034. Andrew McManus, Nasha Elavia
Effect of Cryopreservation on Chimeric Antigen Receptor (CAR) T-Cell Phenotype and Function.
University of Miami (Florida), Ziauddin Medical College (Non-U.S.)
Preceptors: Dr. Sandhya Panch, Dr. David Stroncek

LCH-035. Kathryn Middleton
Concordance between MRI findings and Neuropsychological Test Performance
Wake Forest University (North Carolina)
Preceptors: Ms. Katelyn Garcia, Mr. Brian Moore, Dr. John, Dsurney, Dr. Leighton Chan

LCH-036. Chase Morgan
IQGAP3 and Ras: An investigation of isoform specificity in signaling
Columbia University (New York)
Preceptors: Dr. Andrew Hedman, Dr. David Sacks

LCH-037. Luis Perez Valencia
Screening an Ebola Virus Glycoprotein Peptide Library for Induction of Lymphocyte Apoptosis
Connecticut College (Connecticut)
Preceptors: Dr. Daniel Chertow, Dr. Jason Kindrachuk, Ms. Eliana Jacobson
LCH-038. Benjamin Pesante  
*Feasibility of Functional Electrical Stimulation of Knee Extensor Muscles during Walking in Children with Cerebral Palsy.*  
Catholic University of America (District of Columbia)  
Preceptors: Dr. Thomas Bulea, Dr. Diane Damiano

LCH-039. Kathryn Peterson  
*Familial Gastrointestinal Carcinoid Tumor: Disease Process and Nursing Implications*  
Towson University (Maryland)  
Preceptors: Mr. Paul Wong, Mrs. Mary Myers

LCH-040. Robert Pourier  
*Prevalence and correlates of craving and relapse following inpatient treatment for severe alcohol use disorder*  
Yale University (Connecticut)  
Preceptors: Dr. Alyssa Brooks, Dr. Gwenyth Wallen

LCH-041. Samuel Remedios  
*Machine Learning Applications for Magnetic Resonance Brain Imaging*  
Middle Tennessee State University (Tennessee)  
Preceptors: Dr. John Butman, Dr. Dzung Pham, Dr. Snehashis Roy

LCH-042. Bonita Salmeron  
*Analysis of trends in Social Work discharge data at the NIH Clinical Center: A two year comparison*  
College of Wooster (Ohio)  
Preceptor: Mrs. Jeasmine Aizvera

LCH-043. William Schultheis  
*Estimating a Scanner Transfer Function by Optimized Simulations Matching the Image of a Line Source*  
Princeton University (New Jersey)  
Preceptor: Dr. Roberto Maass-Moreno

LCH-044. Brian Stocksdale  
*Correlation of neuroradiologic findings in patients with cardiac myxomas*  
Drexel University College of Medicine (Pennsylvania)  
Preceptor: Dr. Nadia Biassou

LCH-045. Jennifer Strong, Juna Khang  
*After ACTH Stimulation 11-deoxycortisol Appears to Be Superior to Cortisol for the Diagnosis of Adrenal Disease*  
University of Maryland, College Park (Maryland), Williams College (Massachusetts)  
Preceptor: Dr. Steven Soldin
LCH-046. Jennifer Tan
Evaluating the Risk of Blood Transfusion-Transmitted Zika, Dengue and Chikungunya Viruses in a Vulnerable Patient Population
University of California, Berkeley (California)
Preceptors: Dr. Valeria De Giorgi, Dr. Robert Allison

LCH-047. Sabrina Thapar
Identification of Pneumocystis Species in Different Mammalian Hosts
Winston Churchill High School (Maryland)
Preceptors: Dr. Joseph Kovacs, Dr. Liang Ma, Dr. Ousmane Cisse

LCH-048. Andie Weiser-Schlesinger
Hydrocortisone Improved Survival and Hemodynamics in Rats Challenged with Anthrax Cell Wall Peptidoglycan
Livingston Senior High School (New Jersey)
Preceptors: Dr. Cui Xizhong, Dr. Steven Solomon

LCH-049. Ray Weng
Anthrax Lethal Toxin and Edema Toxin Have Different Effects on Lungs in an Isolated Rat Lung Perfusion Model
Montgomery Blair High School (Maryland)
Preceptor: Dr. Xizhong Cui

LCH-050. Autumn Weyant
Spironolactone-induced Degradation of the TFIH Core Complex XPB Subunit Suppresses Inflammation in Human Pulmonary Artery Endothelial Cells
Princeton University (New Jersey)
Preceptors: Dr. Li-Yuan Chen, Dr. Edward Dougherty, Dr. Robert, Danner, Dr. Jason Elinoff

National Center for Advancing Translational Sciences (NCATS)

LCH-051. Shelley Austin
High-throughput profiling and discovery of small molecule inhibitors of NanoLuciferase
Elon University (North Carolina)
Preceptors: Dr. Matthew D. Hall, Ms. Dorian Cheff, Dr. Min Shen

LCH-052. Rohith Battina
Metarrestin, a compound that reduces perinucleolar compartments (PNC) and increases autophagy in a metastatic prostate cancer model
University of Maryland, College Park (Maryland)
Preceptors: Mr. Chris Dextras, Dr. Marc Ferrer
LCH-053. Claire Chen
_Laplacian Spectra of Molecular Graphs_
Thomas S. Wootton High School (Maryland)
Preceptor: Mr. Dac-Trung Nguyen

LCH-054. Carina Danchik
_Repurposing Drugs for ADPKD: Assay Development and High-throughput Screening_
Franciscan University of Steubenville (Ohio)
Preceptor: Dr. Natalia Martinez

LCH-055. Emmett George
Virginia Polytechnic Institute and State University (Virginia)
Preceptors: Dr. Kenneth Wilson, Dr. Juan Marugan

LCH-056. Robert Huang
_RNAi knockdown of nuclear receptor co-repressor 1 genes in malignant breast cancer cell lines affects cell invasion_
Poolesville High School (Maryland)
Preceptors: Dr. Jiaqi Fu, Dr. Madhu Lal

LCH-057. Timothy Jackson
_Design of a New Micro-Volume Dispenser Workstation_
Franciscan University of Steubenville (Ohio)
Preceptors: Dr. Bolormaa Baljinnyam, Mr. Eric Wallgren

LCH-058. Inci Kadribegic
_Improving Self-Renewal of Human Pluripotent Stem Cells by Replacing Recombinant Proteins with Small Molecules_
Trakya University Faculty Of Medicine (Non-U.S.)
Preceptors: Dr. Ilyas Singec, Ms. Pinar Ormanoglu

LCH-059. Sarita Lee
_Do Drug Combinations that Show Similar Activities also Show Similar Synergies?_
University of California, Los Angeles (California)
Preceptors: Dr. Rajarshi Guha, Dr. Lu Chen

LCH-060. Joyce Ma, Abigail Chen
_Identification of Compounds that Induced Apoptosis_
Poolesville High School (Maryland), French International School (Maryland)
Preceptors: Dr. Menghang Xia, Mrs. Srilatha Sakamuru, Dr. Ruili Huang
LCH-061. Valerie Nguyen  
**QSAR Modeling to Predict ADME Properties of Chemical Compounds**  
Centreville High School (Virginia)  
Preceptors: Dr. Alexey Zakharov, Mr. Dac-Trung Nguyen

LCH-062. Davi Pettinato  
*Identification of antibacterial compounds*  
Franciscan University of Steubenville (Ohio)  
Preceptor: Dr. Dorjbal Dorjsuren

LCH-063. Peter Rainwater  
*Design and Synthesis of Chemical Tools for Elucidation of Mechanism of Action and Binding Site: PNC and Huntington Projects*  
Franciscan University (Ohio)  
Preceptors: Dr. Jason Rohde, Dr. Samarjit Patnaik

LCH-064. Samuel Solomon  
*The Development and Validation of a High throughput Cell-Based Acetylcholinesterase Assay Using Mouse N2A*  
Massachusetts Institute of Technology (Massachusetts)  
Preceptors: Dr. Menghang Xia, Dr. Shuaizhang Li

LCH-065. Justin Szajek  
*MOLVEC : Molecular Optical Line Vectorization of Extracted Chemicals*  
Our Lady of Good Counsel (Maryland)  
Preceptors: Mr. Dac-Trung Nguyen, Mr. Tyler Peryea

LCH-066. Benjamin Tran  
*QSAR Modeling for Tox21 Assay Outcomes*  
Our Lady of Good Counsel High School (Maryland)  
Preceptors: Dr. Alexey Zakharov, Mr. Dac-Trung Nguyen

LCH-067. Dean Walters  
*High-throughput screening of drug libraries to identify novel inhibitors of cytosine methylation*  
Bluffton University (Ohio)  
Preceptors: Dr. Bolormaa Baljinnyam, Mr. Michael Ronzetti

LCH-068. Brooke Whitehill  
*Generation of stable cell lines expressing cas9 for CRISPR high-throughput screening*  
Franciscan University of Steubenville (Ohio)  
Preceptors: Dr. Madhu Lal, Dr. Krystyna Mazan-Mamczarz

LCH-069. Scott Woodgate, Victor Novichkov, Nathan Miller
Follow-Up Order Tracking System: The Amazon of NCATS
James Madison University (Virginia), Thomas Wotton High School (Maryland), Virginia Tech (Virginia)
Preceptor: Mr. Tim Mierzwa

National Center for Complementary and Integrative Health (NCCIH)

LCH-070. Marilyn Frank
Visualization of Peptidergic Neurons in Intact Tissue
Red Cloud High School (South Dakota)
Preceptors: Dr. Alexander Chesler, Dr. Arnab Barik, Mr. James Thompson

LCH-071. Shara Grant
Relations of State and Trait Anxiety to Physiological and Self-Report Responses During a Pain Cue Reversal Task
Virginia Polytechnic Institute and State University (Virginia)
Preceptors: Dr. Elizabeth Necka, Dr. Lauren Atlas

LCH-072. Sara Hong
Spontaneous Nociceptive Responses and Changes in Affective Behavior in a Mouse Model of Neuropathic Pain
Poolesville High School (Maryland)
Preceptors: Ms. Torri Wilson, Dr. Helena Ahn, Dr. Yarimar Carrasquillo

LCH-073. Daniel H. McDermott, Karl A. Neumann
The Role of Uncertainty: Racial Differences in Acute Pain
University of Arizona (Arizona), McGill University (Non-U.S.)
Preceptors: Dr. Elizabeth Necka, Mr. Troy Dildine, Dr. Lauren Y. Atlas

LCH-074. Carlos Melendez
How Expectations Affect Perception Across Sensory Domains: Pain and Taste
University of Maryland, College Park (Maryland)
Preceptors: Dr. Dominik Mischkowski, Ms. Esther Palacios-Barrios, Dr. John, Ingeholm, Dr. Lauren Atlas

LCH-075. Karl A. Neumann, Daniel McDermott
Autonomic Nervous System Activation in Placebo Analgesia
McGill University (Non-U.S.), University of Arizona (Arizona)
Preceptors: Dr. Elizabeth Necka, Ms. Shara Grant, Dr. Lauren Y. Atlas

LCH-076. Daniela Velasquez
Efferent projections of "Pain-ON" and "Pain-OFF" cells in the Central Amygdala
Towson University (Maryland)
Preceptor: Dr. Yarimar Carrasquillo
National Heart, Lunch, and Blood Institute (NHLBI)

LCH-077. Ashlee Abrantes  
Applying CRISPR/cas9 to assess genetic and transcriptional correlates of sleep in Drosophila  
SUNY at Fredonia (New York)  
Preceptors: Dr. Susan Harbison, Ms. Yazmin Serrano Negron

LCH-078. Tyler Amos  
Characterization of Cytoskeletal Proteins and Motility Rates in Human Metastatic Melanoma Cell Lines  
Chantilly High School (Virginia)  
Preceptors: Dr. Ana Pasapera, Ms. Michelle Baird, Dr. Clare Waterman

LCH-079. Carlos Aponte  
DENND5B is a Novel Genetic Regulator of Lipoprotein Metabolism  
Northern Virginia Community College (Virginia)  
Preceptors: Dr. Scott Gordon, Dr. Alan Remaley

LCH-080. Tolulope Awosika  
Exploring Innate Immune Response to Distinct Pathogens throughout Development from Pluripotent Cells to Differentiated Cells  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Yakey Yaffe, Dr. Ying-Han Chen, Dr. Marianita, Santiana, Dr. Nihal Altan-Bonnet

LCH-081. Avantika Banerjee  
Sex differences in cardiac outcomes in response to fenofibrate therapy in the ACCORD trial  
Texas Tech University Health Sciences Center School of Medicine (Texas)  
Preceptor: Dr. Ahmed Hasan

LCH-082. Rachel Bang  
Characterization of a Fluorescence Lifetime Probe for Oxygen Sensing in Cells  
Johns Hopkins University (Maryland)  
Preceptors: Dr. Jay Knutson, Dr. Alessio Andreoni, Dr. Rozhin, Penjweini, Dr. Molly Molloy

LCH-083. Charles Bond  
Effects of Physiological ADP Concentrations on Myosin VI Mechanics and Kinetics  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. James Sellers, Dr. Yasuharu Takagi, Dr. Neil Billington

LCH-084. Marielle Borom, Emilia Alina Barbu  
Quantifying early NETosis in healthy human neutrophils with image stream flow cytometry  
Ohio University Heritage College of Osteopathic Medicine (Ohio)  
Preceptors: Dr. Emilia Alina Barbu, Dr. Swee Lay Thein, Ms. Laurel Mendelsohn
LCH-085. Tiffany Cao
Knockout Mice Phenotyping Program (KOMP2): Identifying Novel Genes Associated with Cardiovascular Phenotypes
University of Maryland, College Park (Maryland)
Preceptor: Dr. Young Suk Oh

LCH-086. Carlos Carhuas
Characterizing Locus Specific Expression of Alpha Globin in Murine Vasculature
University of Maryland, College Park (Maryland)
Preceptors: Dr. Hans Ackerman, Dr. Steven Brooks, Dr. Dongying Ma

LCH-087. Juan Cespedes
Retinal ganglia cell axonal Regeneration with ARSB treatment after optic nerve crush
Morehouse School Of Medicine (Georgia)
Preceptors: Dr. Herbert Geller, Mr. Craig Pearson, Dr. Caitlin Mencio

LCH-088. Alisha Desai
Single cell: Ultra-sensitive cytokine detection in primary cells using Single Molecule Array
Winston Churchill High School (Maryland)
Preceptors: Dr. J. Philip McCoy, Dr. Ankit Saxena

LCH-089. Lilly Ding
Erythropoiesis of mouse progenitor cells in vitro
Walt Whitman High School (Maryland)
Preceptors: Dr. Jianqiong Zhu, Dr. Wenli Liu, Dr. Griffin Rodgers

LCH-090. Andrew Dodge
Prediction of Cardiovascular Events in Long-Term Observational Studies by Machine Learning
Georgetown University (District of Columbia)
Preceptor: Dr. Colin Wu

LCH-091. Matthew Donnelly
Characterization of a novel Li-Fraumeni syndrome mouse model
Cornell University (New York)
Preceptors: Dr. Ju-Gyeong Kang, Dr. Paul Hwang

LCH-092. Zerick Dunbar
Functional Characterization of Bone Marrow-derived Mesenchymal Stromal Cell-derived Exosomes to Develop Cellular-Free Acute Graft-Versus-Host Disease Therapies
Tulane University (Louisiana)
Preceptors: Ms. Reema Panjwani, Dr. A. John Barrett, Dr. Sawa Ito
LCH-093. Jacob Enders
Direct imaging of supercoiled DNA for studying the effects of mismatch size on topology
Ohio State University (Ohio)
Preceptors: Dr. Keir Neuman, Dr. Yeonee Seol, Dr. Andrew, Dittmore, Ms. Lynda Bradley

LCH-094. Laura Espinoza
Meta-analysis of the diagnostic accuracy of SPECT myocardial perfusion imaging: A critical comparison of guideline summaries versus the published literature
Montgomery Blair High School (Maryland)
Preceptors: Dr. Andrew Arai, Dr. Minjie Lu

LCH-095. Helene Prisca Fanba
Microtubule-stabilizing drugs alter the distribution of microtubules in affected cells
Dr. Henry A Wise, Junior, High School (Maryland)
Preceptors: Dr. Christian Combs, Dr. Dan Sackett

LCH-096. Nashwan Farooque
Differences in Cardiovascular Outcomes and Mortality with Intensive vs. Standard Glycemic and Blood Pressure Control in the ACCORD Trial
Virginia Commonwealth University (Virginia)
Preceptor: Dr. Ahmed Hasan

LCH-097. Enoc Granados Centeno
Dynamic Imaging of Proteins in Clathrin-Coated Pits during Receptor-Mediated Endocytosis
High Point High School (Maryland)
Preceptors: Ms. Regina Ahn, Dr. Justin Taraska

LCH-098. Frances Hamilton
How I’m Learning About a Rare Lung Disease
Yorktown High School (Virginia)
Preceptors: Dr. Joel Moss, Mrs. Patricia Julien-Williams, Mrs. Amanda Jones

LCH-099. Su-Yun Han
Portfolio Analysis Using RCDC Classifiers: A Data-Driven Approach
Walt Whitman High School (Maryland)
Preceptors: Dr. Dong-Yun Kim, Dr. Catherine M. Stoney

LCH-100. Natalie Hawken
Fabrication and Atomic Force Microscopy of PDMS Softgels for Neurite Outgrowth
Vanderbilt University (Tennessee)
Preceptors: Dr. Herbert Geller, Dr. Sharada Tilve, Dr. Eleni, Degaga, Dr. Emilios Dimitriadis
LCH-101. Sheida Hayati
_Development of a Targeted RNA-seq Assay for the Detection of Minimal Residual Disease in Acute Myeloid Leukemia_
Rutgers University (New Jersey)
Preceptors: Dr. Christopher Hourigan, Dr. Laura Dillon

LCH-102. Brian Ho
_Virus hunting: Screening for novel and existing human enteric viruses hiding in Phosphatidylserine (PS) Vesicles_
Florida International University (Florida)
Preceptors: Dr. Marianita Santiana, Dr. Sourish Ghosh, Dr. Nihal Altan-Bonnet

LCH-103. Travis Hyams
_Portfolio analysis of the National Heart, Lung, and Blood Institute’s funded nutrition projects (2008-2016)_
University of Maryland, College Park (Maryland)
Preceptor: Dr. Charlotte Pratt

LCH-104. Promotto Islam
_Role of fluid phase endocytosis in IL-10 induced LDL and HDL uptake in macrophages as a possible mechanism for “Disappearing HDL Syndrome”_
Eastside High School (Florida)
Preceptors: Dr. Diego Lucero, Dr. Lita Freeman, Dr. Alan Remaley

LCH-105. Dahye Kang
_Recombinant Protein Expression Using Mammalian Cell Culture System_
Poolesville High School (Maryland)
Preceptor: Ms. Yi He

LCH-106. Ibrahim Kargbo
_Differentiation of Rhesus Blood Progenitors into Red Blood Cells in an Optimized Feeder-Free Environment_
George Mason University (Virginia)
Preceptors: Dr. John Tisdale, Dr. Selami Demirci

LCH-107. Yisrael Katz
_The Relationship Between Thyroid Function and Cardiovascular Disease_
Yeshiva of Greater Washington (Maryland)
Preceptor: Dr. Lawton Cooper
LCH-108. Christopher Kyriacou
*Advancing Nutrition Training and Research for Medical Students, Residents, Fellows, Attending Physicians and other Clinicians*
George Mason University (Virginia)
Preceptors: Dr. Charlotte Pratt, Dr. Nicole Redmond

LCH-109. Oscar Levine
*Predictive value of hs-CRP as a Biomarker for Coronary Atherosclerosis in Asymptomatic Patients Referred for Coronary CT Angiography*
Washington University in St. Louis (Missouri)
Preceptors: Dr. Sujata Shanbhag, Dr. Marcus Chen

LCH-110. Ashley Lin
*Transcriptional Adaptation of Vascular Endothelial and Smooth Muscle Cells in Mono-culture vs. Co-culture*
Thomas Jefferson High School for Science and Technology (Virginia)
Preceptors: Dr. Manfred Boehm, Dr. Elisa Ferrante

LCH-111. Hanley Ma
*A potential role for cyclophilin D phosphorylation in mediating mitochondrial permeability transition pore opening*
Brown University (Rhode Island)
Preceptors: Dr. Randi Parks, Dr. Elizabeth Murphy

LCH-112. Zahra Mansur, Philip Kloner
*Cardiac CT and MRI Insights into the Area at Risk in Acute Myocardial Infarction*
Howard University (District of Columbia), University of Maryland, College Park (Maryland)
Preceptor: Dr. Andrew Arai

LCH-113. Mikaela Mohardt
*Localizing essential mitochondrial protein TMEM65 in skeletal muscle using peroxidase APEX2*
Virginia Polytechnic Institute and State University (Virginia)
Preceptors: Dr. Brian Glancy, Dr. Yingfan Zhang

LCH-114. Michael Murphy
*Software for the analysis of multiple components in Fluorescence Lifetime Microscopy Images*
Johns Hopkins University (Maryland)
Preceptors: Dr. Jay Knutson, Dr. Aleksandr Smirnov, Dr. Alessio, Andreoni, Dr. Rozhin Penjweini

LCH-115. Brooke Perlstein
*The Regulation of Alternative Splicing of Non-Muscle Myosin Heavy Chain II-B pre-mRNA by RNA Binding Proteins: Rbfox, CELF, and PSF*
University of Maryland, College Park (Maryland)
LCH-116. Vignesh Rajasekaran  
*Investigating the Pathogenesis of Rotavirus in Vesicles vs. Free Virus*  
University of Virginia (Virginia)  
Preceptors: Dr. Sourish Ghosh, Dr. Marianita Santiana, Dr. Nihal Altan-Bonnet

LCH-117. Irena Roy  
*Analysis of a Functional Element for Regulating Fetal Hemoglobin Gene Expression by CRISPR Gene Editing*  
University of California, Los Angeles (California)  
Preceptors: Dr. Xunde Wang, Dr. Swee Lay Thein

LCH-118. Hadassah Schwartz  
*Screening for Atrial Fibrillation to Prevent Stroke*  
Darchei Binah Women's Institute (Non-U.S.)  
Preceptor: Dr. Lawton Cooper

LCH-119. Ronit Schwartz  
*Regulatory Proteins in Clathrin-Independent Endocytosis*  
Johns Hopkins University (Maryland)  
Preceptors: Dr. Julie Donaldson, Dr. Dipannita Dutta, Dr. Jessica Wayt

LCH-120. Ethan Shi  
*A Novel Lucifer's-complementation-assay Based Method for Investigating Protein-DNA Interaction*  
Thomas S. Wootton High School (Maryland)  
Preceptors: Dr. Keji Zhao, Dr. Qingsong Tang, Dr. Shuai liu

LCH-121. Elizabeth Staskal  
*Making Blood Stem Cells: In-Vitro Mesoderm Patterning*  
Seneca Valley High School (Maryland)  
Preceptors: Mr. Juan Pablo, Dr. Andre Larochelle

LCH-122. Michelle Tai  
*Olfactomedin 4 Protein Suppresses Proliferation of Metastatic Prostate Cancer Cells*  
Winston Churchill High School (Maryland)  
Preceptors: Dr. Hongzhen Li, Dr. Griffin Rodgers, Ms. Christine Kim

LCH-123. Michal Tyrlik  
*The Effect of Object Location and Other Factors on Novel Object Discrimination in the Novel Object Test*  
University of Maryland, College Park (Maryland)
LCH-124. Lauren Vostal  
*Structure-Based Drug Design of a HIV-1 Budding Inhibitor Using NMR Spectroscopy*  
Williams College (Massachusetts)  
Preceptors: Dr. Madeleine Strickland, Dr. Nico Tjandra

LCH-125. Eric Wang  
*Replica exchange simulations of the hemaglutinin fusion peptide and the effect of cholesterol*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Richard Pastor, Mr. Richard Venable

LCH-126. Hwi Yeo  
*Expressing Recombinant Proteins via Baculovirus-Infected Cells*  
Walt Whitman High School (Maryland)  
Preceptors: Dr. Jay Chung, Dr. Hyeog Kang, Dr. Antoine Smith

LCH-127. Chenyu Zhang  
*High Poliovirus Multiplicity of Infection Results in the Innate Immune Response Suppression of RIG-I and MDA-5 Pathways in Cells*  
Lafayette College (Pennsylvania)  
Preceptors: Dr. Ying-Han Chen, Dr. Nihal Altan-Bonnet

LCH-128. Alice Zhu  
*Knocking out genes in mammalian cells using the CRISPR/Cas 9 technology*  
Winston Churchill High School (Maryland)  
Preceptors: Dr. Chengyu Liu, Dr. Fan Zhang

National Institute on Aging (NIA)

LCH-129. David Agyen Darko  
*MRI and NMR: “Evaluation of Body Composition in SLAM mice by MRI and NMR”*  
Bowie State University (Maryland)  
Preceptor: Dr. Rafael de Cabo

LCH-130. Joycemary Amponsem  
*The Effect of Rab29 Phosphorylation in Cells*  
Howard University (District of Columbia)  
Preceptors: Dr. Aleksandra Beylina, Dr. Mark Cookson

LCH-131. Ifeoma Azinge  
*STIM1, but not STIM2, is the calcium sensor critical for sweat secretion*
University of Maryland, Baltimore County (Maryland)
Preceptor: Mr. Chang-Yi Cui

LCH-132. Morgan Biggs
*Effect of Cannabinoid Receptor Modulators and Food Preference Task on the Autonomic Nervous System using Heart Rate Variability Analysis*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Roger Mullins, Dr. Dimitrios Kapogiannis

LCH-133. Skyler Bordeaux
*C9orf72 repeat expansion screening in cerebellar ataxia patients*
Fort Lewis College (Colorado)
Preceptors: Dr. Monia Hammer, Dr. Andrew Singleton

LCH-134. Nicole Butera
*Estimation of Age-Sex-Adjusted Distributions of Physical Activity Measures Among U.S. Adults*
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Eric Shiroma, Dr. Tamara Harris

LCH-135. Shane Chambers
*The Effects of Overexpressing Adenylate Cyclase 8 on In-Vivo Cardiac Parameters and Transcription of Coupled-Clock Proteins*
James Madison University (Virginia)
Preceptors: Dr. Edward Lakatta, Dr. Ismayil Ahmet, Ms. Jessie Axsom

LCH-136. James Chen
*Development of Olfactory Tests and Application to mice deficient in DNA binding protein TDRD3*
Michigan State University (Michigan)
Preceptors: Dr. Kathy Perdue, Dr. Ross McDevitt, Dr. Weidong, Wang, Dr. Yuyoung Joo

LCH-137. Vivian Chen
*LMO3, characterizing a novel molecular marker in a subset of dopaminergic neurons*
Duke University (North Carolina)
Preceptors: Dr. Sara Saez-Atienzar, Dr. Huaibin Cai

LCH-138. Zachary Cook
*Assessment of CDK2-mediated Phosphorylation on WRN Recruitment to Double Strand DNA Breaks*
University of Rochester (New York)
Preceptors: Dr. Tomasz Kulikowicz, Dr. Raghavendra Shamanna, Dr. Vilhelm Bohr

LCH-139. Himanshu Dashora
*NF-kappaB Signaling Dynamics in Innate Immune Systems*
LCH-140. Lauren DeLong
Hyperactive Brain Type Adenylyl Cyclase Blocks The Autonomous Surveillance of Heart Cells
Salisbury University (Maryland)
Preceptors: Dr. Yelena Tarasova, Mr. Max Beyman, Dr. Khalid, Chakir, Dr. Edward Lakatta

LCH-141. Kayla Gilley
Effect of 0.5% Metformin and Exercise in One Year Old Male Mice
Liberty University (Virginia)
Preceptors: Dr. Rafael de Cabo, Dr. Irene Alfaras

LCH-142. Selena Gonzalez
Establishing the Role of Rab7L1 in Regulating the Retrograde Transport Pathway
University of California, Los Angeles (California)
Preceptors: Dr. Mark Cookson, Dr. Luis Bonet-Ponce

LCH-143. Kaysi Gray
Different modes of growth hormone administration influence human physiology
Howard University (District of Columbia)
Preceptors: Dr. Chee Chia, Dr. Kenneth Fishbein

LCH-144. Janet Guo
Effects of intermittent energy restriction on amyloid pathology, neuroinflammation, and cognition
in a novel Alzheimer’s disease mouse model
Emory University (Georgia)
Preceptors: Dr. Yuki Kishimoto, Dr. Mark Mattson, Dr. Yong Liu

LCH-145. Quanshay Henderson
Racial Differences in Muscle Quality in the Baltimore Longitudinal Study of Aging
University of Michigan (Michigan)
Preceptors: Dr. Nancy Chiles, Dr. Stephanie Studenski

LCH-146. Amirah Hewitt
Understanding the Relationship of microRNA-1253 and WAVE2 in Hypertensive Women
Hammond High School (Maryland)
Preceptors: Dr. Douglas Dluzen, Dr. Nicole Noren Hooten, Dr. Michele Evans

LCH-147. Sharmin Hossain
Vitamin D Receptor and Megalin Gene Polymorphisms and Their Association with Obesity, Central Obesity, and the Metabolic Syndrome among African-American Urban Adults
University of Massachusetts, Amherst (Massachusetts)
LCH-148. Cyril Ikeh  
_Evaluation of Senescence in Human Aging_  
Community College of Baltimore County (Maryland)  
Preceptors: Dr. Kotb Abdelmohsen, Mrs. Rachel Munk

LCH-149. Lauren Johnson  
_The Heart’s Pacemaker Cells Beat to Their Own Drum_  
Xavier University of Louisiana (Louisiana)  
Preceptors: Dr. Edward Lakatta, Dr. Kenta Tsutsui, Ms. Mary Kim

LCH-150. Jonathan Legier  
_Gait: Age effect in gait: a cross-sectional study in mice_  
Howard University (District of Columbia)  
Preceptors: Dr. Rafael deCabo, Dr. Irene Alfaras Cardenal, Ms. Kelsey Bullock

LCH-151. Alexander Maltsev  
_Computer Algorithms for Automatic Detection of Mitochondria in FIB-SEM Muscle Images_  
University of California, Los Angeles (California)  
Preceptors: Dr. Luigi Ferrucci, Dr. Brian Caffrey

LCH-152. Minna McFarland  
_The Effect of Demographic Variables on Extracellular Vesicle Characteristics_  
College of William and Mary (Virginia)  
Preceptors: Dr. Nicole Noren Hooten, Dr. Michele Evans

LCH-153. Amy Monasterio  
_Effect of histone deacetylase inhibitor treatment on hippocampal Arc expression in young and aged rats_  
Johns Hopkins University (Maryland)  
Preceptors: Dr. Craig Myrum, Dr. Peter Rapp

LCH-154. Nkatha Mwenda  
_Screening Tobacco Smoke Condensates for New Nicotinic Receptor Ligands_  
Kalamazoo College (Michigan)  
Preceptors: Dr. Lukasz Ciesla, Dr. Ruin Moaddel

LCH-155. Ornella Ngameni  
_Biochemical Analysis of DNA Replication & Repair Helices for their Ability to Resolve G4-Quadruplex DNA Structures that Threaten Genomic Stability_  
McDaniel College (Maryland)  
Preceptors: Dr. Robert Brosh, Dr. Sanket Awate, Mr. Joshua Somers
LCH-156. Chevonne Parker  
*Germinal Center B Cells, Antibodies, and Atherosclerosis*  
Yale University (Connecticut)  
Preceptors: Dr. Mark Hutchinson, Dr. Robert Maul, Dr. Patricia Gearhart

LCH-157. Olivia Petrusky  
*Isolation of Neuronal Dopamine Transporter Positive Extracellular Vesicles from Peripheral Blood*  
Virginia Polytechnic Institute and State University (Virginia)  
Preceptors: Dr. Dimitrios Kapogiannis, Dr. Seema Gulyani

LCH-158. Joshua Preston  
*The Role of NQO1 in mTORC2/Akt Signaling*  
University of Kentucky (Kentucky)  
Preceptors: Dr. Andrea Di Francesco, Dr. Rafael de Cabo

LCH-159. Raúl Ramos Sánchez  
*SIRT3 regulates mitochondrial DNA repair by LIG3 deacetylation*  
University of Puerto Rico, Rio Piedras Campus (Puerto Rico)  
Preceptors: Dr. Vilhelm Bohr, Dr. Hyundong Song

LCH-160. Atrine Samadnejad  
*Repurposing a Test of Anxiety for in vivo Calcium Imaging in Mice*  
Anne Arundel Community College (Maryland)  
Preceptor: Dr. Sarah Hawes

LCH-161. Stephanie Sanchez  
*Rab8, a substrate of the Parkinson's disease kinase LRRK2, is mobilized under cellular metabolic stress*  
Agnes Scott College/Georgia Institute of Technology (Georgia)  
Preceptors: Dr. Adamantios Mamais, Dr. Mark Cookson

LCH-162. Getahun Seyoum  
*The Epigenetic Clock, Inflammation Markers and Accelerated Biological Aging in the Healthy Aging in Neighborhoods of Diversity across the Life Span study*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Michele Evans, Dr. Salman Tajuddin

LCH-163. Kavisha Shroff  
*TMS-Induced Gene Expression Changes in the Rat Brain*  
Towson University (Maryland)  
Preceptor: Dr. Kevin Becker
LCH-164. Faith Simon  
*Targeting of Activation-Induced Deaminase (AID) to Variable Regions by Transcription*  
University of Texas at Austin (Texas)  
Preceptors: Dr. Justin Heltzel, Dr. Robert Maul, Dr. Patricia Gearhart

LCH-165. Tara Srinivas  
*Detection of Autophagy in Human CD4+ T Cells*  
Brown University (Rhode Island)  
Preceptors: Dr. Luigi Ferrucci, Dr. Arsun Bektas

LCH-166. Jill Taylor  
*Predictors and correlates of cerebral tau measured by AV-1451 PET imaging in non-demented adults*  
Towson University (Maryland)  
Preceptors: Dr. Murat Bilgel, Dr. Susan Resnick

LCH-167. Gia Thinh Truong  
*LC-MS/MS based method development for the NAD metabolome*  
University of Maryland, College Park (Maryland)  
Preceptor: Dr. Ruin Moaddel

LCH-168. Sabrina Wang  
*Alzheimer’s Disease 2xTg Mouse Model: Early Stage Structural Brain Differences Detected by MRI*  
University of Wisconsin - Madison (Wisconsin)  
Preceptors: Dr. Olga Fedorova, Dr. Rebecca McPherson

LCH-169. Kali Weiss  
*Is hippocampal interneuron activation disrupted in aged rats with memory impairment?*  
St. Olaf College (Minnesota)  
Preceptors: Dr. Cristina Banuelos, Dr. Craig Myrum, Dr. Peter Rapp

LCH-170. William Wen  
*An Investigation of Olfactory Function in Topoisomerase III Beta Knockout Models*  
Johns Hopkins University (Maryland)  
Preceptors: Dr. Weidong Wang, Dr. Yuyoung Joo, Dr. Ross McDevitt

LCH-171. Richard Wu  
*The Mutagenic and Clinically Relevant Monoribonucleotide Lesion Inhibits DNA Unwinding by Human Repair Helicases*  
University of Texas at Dallas (Texas)  
Preceptors: Dr. Robert Brosh, Dr. Sanket Awate, Mr. Joshua Sommers
LCH-172. Demarrius Young
*Longitudinal Behavioral Characterization of Haploid GLUT9 Deficient Mice*
Hampton University (Virginia)

LCH-173. Henry Zhang
*Mapping the Projection of ALDH1A1-Positive Nigrostriatal Dopaminergic Neurons in Mouse Dorsal Striatum*
Thomas Jefferson High School for Science and Technology (Virginia)
Preceptors: Dr. Junbing Wu, Mr. Justin Kung, Dr. Huaibin Cai

LCH-174. Megan Zhang
*RNA Topoisomerase Complex is Required for Embryogenesis and Genome Stability*
Dulaney High School (Maryland)
Preceptors: Dr. Seung Kyu Lee, Dr. Weidong Wang

**National Institute on Alcohol Abuse and Alcoholism (NIAAA)**

LCH-175. Carolyn Bowering
*Striatal mu opioid receptors contribute to cocaine sensitization and reward.*
Montgomery College (Maryland)
Preceptors: Dr. Lauren Dobbs, Dr. Veronica Alvarez

LCH-176. Sofia Carozza
*Stress in Action: Mapping and Manipulating a Central Amygdala Projection to the Substantia Nigra*
University of Notre Dame (Indiana)
Preceptors: Dr. David Kupferschmidt, Dr. David Lovinger

LCH-177. Meredith Crenca
*Caffeine’s effect on body weight, appetite, and locomotion in mice*
University of Rochester (New York)
Preceptors: Dr. Miriam Bocarsly, Dr. Veronica Alvarez

LCH-178. Elaine Han
*Tissue-specific alcohol metabolism in mice*
Richard Montgomery High School (Maryland)
Preceptors: Dr. Adrien Guillot, Dr. Bin Gao

LCH-179. David Holovac
*Does the Macrophage-Expressed Cannabinoid-1 Receptor (CB1R) Play a Role in the Control of Alcohol Preference in Mice?*
University of Pittsburgh (Pennsylvania)
Preceptors: Dr. Tony Jourdan, Dr. Grzegorz Godlewski, Dr. George Kunos

LCH-180. Shaila Isham
Behavioral Effects of Ethanol on Lhx6 BK-Channel Knockout Mice
Montgomery College (Maryland)
Preceptor: Dr. Karina Abrahao

LCH-181. Adam Mehal
Alcohol Binge Exacerbated Oxidative Stress and Inflammation in Aging Rats
Boston College (Massachusetts)
Preceptors: Dr. Partha Mukhopadhyay, Dr. Pal Pacher

LCH-182. Ryan Nordheimer
New Technique for Cell Type Isolation from Human Postmortem Brain Tissue for Whole Transcriptome Analysis
Washington University in St. Louis (Missouri)
Preceptor: Dr. Lucia Guerri

LCH-183. Khem Plata
HRV in Non-Dependent Drinkers in Response to IV Alcohol Self-Administration
Fisk University (Tennessee)
Preceptor: Dr. Bethany Stangl

LCH-184. Mariana Rocha
The Role of Mu Opioid Receptors in Alcohol Drinking
Yale University (California)
Preceptor: Dr. Aya Matsui

LCH-185. Ellie Sapiro
New Technique for Cell Type Isolation from Mouse Brain for Whole Transcriptome Analysis
Georgetown Day School (District of Columbia)
Preceptor: Dr. Lucia Guerri

LCH-186. Sannidhi Shashikiran
Role of Striatal Dopamine D2 Receptors in Regulating Mouse Body Weight
Walter Johnson High School (Maryland)
Preceptors: Dr. Miriam Bocarsly, Dr. Veronica Alvarez

LCH-187. Pearl Sun
An Experimental Steatotic Cell Model to Study the Role of Endocannabinoids in Metabolic Disorders
Walt Whitman High School (Maryland)
Preceptors: Dr. Jie Liu, Dr. George Kunos

LCH-188. Hawa Toumbou  
*Evaluation of non-canonical dopamine signaling in striatum-dependent behaviors*  
Benjamin Banneker (District of Columbia)  
Preceptor: Dr. Kari Johnson

LCH-189. Andrew Yi  
*Effects of baclofen on stress- and feeding-related hormones in alcohol-dependent individuals: Results from a human laboratory study*  
Richard Montgomery High School (Maryland)  
Preceptors: Dr. Lorenzo Leggio, Dr. Mehdi Farokhnia, Dr. Sofia Bouhlal

National Institute of Allergy and Infectious Diseases (NIAID)

LCH-190. Rachel Alexander, Ashlyn Thomas  
*The Effect of Diet on Sand Fly Gut Microbiota*  
Thomas Jefferson High School for Science and Technology (Virginia), Chantilly High School (Virginia)  
Preceptors: Dr. Kashinath Ghosh, Dr. David Sacks

LCH-191. Rebecca Arteaga  
*Host Factors for Human Respiratory Syncytial Virus Infection*  
Columbia University (New York)  
Preceptors: Dr. Ursula Buchholz, Dr. Peter Collins, Dr. Masfique Mehedi

LCH-192. Stephanie Asdell  
*Influenza Group 2 HA stem-only nanoparticles induce heterotypic immune response*  
Duke University (North Carolina)  
Preceptors: Dr. Syed Moin, Dr. Barney Graham

LCH-193. Samantha Becotte  
*Cloning of a candidate placental malaria vaccine antigen into the Ad5 adenoviral vector*  
University of Rhode Island (Rhode Island)  
Preceptors: Mrs. Holly Torano, Dr. Patrick Duffy

LCH-194. Adhya Beesam  
*Optimizing germline antibody elicitation through the WITO HIV-1 gp120 trimer using molecular dynamics*  
Plano East Senior High School (Texas)  
Preceptors: Dr. Michael Dolan, Dr. Paolo Lusso, Dr. Peng Zhang
LCH-195. Jacob Berrigan
Studies to Investigate the Possible Direct Inhibition of APOBEC3G Deaminase Activity by Virus-Associated HIV-1 Vif In Vivo
University of Washington (Washington)
Preceptors: Dr. Eri Miyagi, Dr. Klaus Strebel

LCH-196. Sarah Bien
Generation and selection of high expressing CHO cells by methotrexate amplification of dihydrofolate reductase selection marker
Pennsylvania State University (Pennsylvania)
Preceptors: Dr. Nadia Amharref, Dr. Elizabeth Scheideman, Dr. Frank Arnold

LCH-197. Jonathan Cao
Assessment of Precision and Accuracy of Proteomic Analysis Quantification
Rutgers University (New Jersey)
Preceptor: Dr. L. Renee Olano

LCH-198. Carlos Castrodad-Rodríguez
Norovirus Pathogenesis: Elucidation of Cell Death-associated Molecular Pathways
University of Puerto Rico School of Medicine (Puerto Rico)
Preceptors: Dr. Eric Levenson, Dr. Kim Green

LCH-199. Nicole Cavett
Optimization of B cell culture for isolating antibodies
University of Maryland, College Park (Maryland)
Preceptors: Dr. Mario Roederer, Dr. Rosemarie Mason, Mr. Leonard Nettey

LCH-200. Lauren Chang
Structure-guided design of epitope-specific T cell receptor/co-engagement heteromultimers
University of California, San Diego (California)
Preceptors: Ms. Rebecca Gillespie, Ms. Emily Phung, Dr. Masaru, Kanekiyo, Dr. Barney Graham

LCH-201. Justin Choi
Contribution of PMT, a toxin exporter, to Staphylococcal pathogenesis
Cornell University (New York)
Preceptors: Dr. Gordon Cheung, Ms. Emilie Fisher, Dr. Michael Otto

LCH-202. Elien Comhaire
Creating a database of annotated computational models of key signaling pathways. Integration of multiple models into a single pathway.
Hood College (Maryland)
Preceptors: Dr. Martin Meier-Schellersheim, Dr. Fengkai Zhang
LCH-203. Daniela Coronado  
Towards an understanding of the roles of the NF-kappaB transcription factor RelB in innate immune responses  
Princeton University (New Jersey)  
Preceptors: Dr. Ulrich Siebenlist, Dr. Estefania Claudio

LCH-204. Christian Cullen  
Glucocorticoid effects in whole-blood models of human inflammation  
University of Georgia (Georgia)  
Preceptor: Dr. Luis Franco

LCH-205. Isabel Dame  
Generation of episomal plasmids for recombinant protein production in Pichia pastoris  
Wheaton High School (Maryland)  
Preceptor: Dr. Nicholas MacDonald

LCH-206. Neel Daugherty-Shrivastava  
Human Microbiome and Alzheimer's Disease  
University of Pennsylvania (Pennsylvania)  
Preceptors: Dr. Mariam Quinones, Dr. Nick Weber

LCH-207. Colin Fields  
Recombinant Human Parainfluenza Virus Type 3 (HPIV3) Expressing Green Fluorescent Protein: An Initial Evaluation of HPIV3 as a Vector for Expressing a Heterologous Protein for Vaccine Development  
University of Maryland, College Park (Maryland)  
Preceptors: Ms. Sonja Gallo, Dr. Xueqiao Liu, Dr. Peter, Collins, Dr. Shirin Munir

LCH-208. Heven Haile  
Evaluating a Novel SARS Coronavirus Vaccine Platform  
Columbia University (New York)  
Preceptors: Dr. Barney Graham, Ms. Kizzmekia Corbett

LCH-209. Brooke Horowitch, Anna Chen  
Key Features of the Interaction between the HIV Envelope Protein gp120 and the Integrin alpha4beta7  
Williams College (Massachusetts), Richard Montgomery High School (Maryland)  
Preceptor: Dr. James Arthos

LCH-210. Cindy Huang, Robert Yang  
LymDB: Collection and Integration of Lymphoma Somatic Mutations from 57 NGS Studies  
Thomas S. Wootton High School (Maryland), Montgomery Blair High School (Maryland)
LCH-211. Jesse Huang  
Fluorescence Anisotropy Analysis of anti-HIV Vaccine Candidates 
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Attila Nagy, Dr. Adam Charlton

LCH-212. Baqar Husain  
Structural Study of Interactions Between CD4 Binding Site Antibodies and the Secondary Binding Site of HIV-1 Envelope Protein 
University of Georgia (Georgia)  
Preceptor: Dr. Yen-Ting Lai

LCH-213. Kevin Johnson  
ADP-ribosylation in the innate immune response. 
Washington University In Saint Louis (Missouri)  
Preceptors: Dr. Casey Daniels, Dr. Aleksandra Nita-Lazar

LCH-214. Barbora Kabatova  
Evaluating the Genetic Stability of Pre-fusion Stabilized Respiratory Syncytial Virus Fusion Protein Expressed by a Parainfluenza Virus Type 3 Vector 
University of Maryland School of Pharmacy (Maryland)  
Preceptors: Dr. Bo Liang, Dr. Shirin Munir, Dr. Peter Collins

LCH-215. Rahul Kamdar  
Tetracysteine Tagged OVA (323-339) Peptide as a Novel Tool for Tracking Peptide-MHCII Complexes in Primary Mouse Cells 
Paint Branch High School (Maryland)  
Preceptor: Dr. Billur Akkaya

LCH-216. Alexander Kim  
Structural Studies of Small Molecule HIV-1 Inhibitors and Env Trimer Complex 
University of Virginia (Virginia)  
Preceptors: Dr. Peter Kwong, Dr. Young Kwon

LCH-217. Joseph Kim  
Developing a microfluidic device for diffusion driven chemotaxis experiments 
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Javier Manzella-Laperia, Dr. Joseph Brzostowski, Dr. Nicole Morgan

LCH-218. Nathan Ko  
Moderna mRNA-Based HIV-1 Vaccines in Guinea Pigs 
Wesleyan University (Connecticut)
LCH-219. Minna Kuriakose  
*Decoding immune signaling cascades through systems proteomics*  
Thomas Jefferson High School for Science and Technology (Virginia)  
Preceptors: Dr. Aleksandra Nita-Lazar, Mr. Mohsin Khan

LCH-220. Megan Le  
*Comparison of Unfolded Protein Response in Various CHO-DG44-mAb Expressing Clones to Identify Molecular Determinants of Higher Producers*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Hussain Dahodwala, Dr. Elizabeth Scheideman, Dr. Frank Arnold

LCH-221. John Lee  
*The Role of Cationic Amino Acid Transporter-2 on Inflammasome NLRP3 Activity*  
Yale University (Connecticut)  
Preceptors: Dr. Rafael Prado, Dr. Thomas Wynn

LCH-222. Shanna Leventhal  
*The Effect of the Endosomal Sorting Complex Required for Transport on Human Cytomegalovirus Entry and Egress*  
Johns Hopkins University (Maryland)  
Preceptors: Dr. Qingxue Li, Dr. Jeffrey Cohen

LCH-223. Samara Levin  
*Impact of Food Allergy on the Growth of Children with Moderate-Severe Atopic Dermatitis*  
George Washington University School of Medicine and Health Sciences (District of Columbia)  
Preceptors: Dr. Pamela Guerrerio, Ms. Marjohn Rasooly

LCH-224. Andrew Li  
*Human IgG internalization on HMVEC*  
RiverHill High School (Maryland)  
Preceptor: Mrs. ZhiHui Xie

LCH-225. Riancy Li  
*Designing Simmune as a More User-Friendly Modeling Tool*  
Columbia University (New York)  
Preceptors: Dr. Fengkai Zhang, Dr. Martin Meier-Schellersheim

LCH-226. Crystal Lipsey  
*Small molecule modulators as tools to study TLR pathway activation in differentiated human macrophage cells*  
Morehouse School of Medicine (Georgia)
LCH-227. Matthew Marino
Analysis of Phosphorylation of MARCKS in Macrophages
Jonathan Law High School (Connecticut)
Preceptors: Dr. Aleksandra Nita-Lazar, Mr. Arthur Nuccio

LCH-228. George Mwinnyaa
HIV Incidence Estimation of East London, South Africa on Samples From Emergency Room Visits
Johns Hopkins University (Maryland)
Preceptors: Ms. Anna Eisenberg, Mr. Reinaldo Fernandez, Dr. Oliver, Laeyendecker, Dr. Thomas Quinn

LCH-229. Sofia Nakuchima
Limited characterization of human antibodies generated against an investigational malaria transmission blocking vaccine
Gaithersburg High School (Maryland)
Preceptors: Dr. David Narum, Mr. Raul Herrera

LCH-230. Regina O'Brien
Early Transcriptional Changes in Eosinophils Post-glucocorticoid Challenge in Hypereosinophilic Syndrome
Northern Virginia Community College (Virginia)
Preceptors: Dr. Amy Klion, Dr. Kindra Stokes

LCH-231. Nicole Oppenheim
Single-cell gene expression analysis of human CCR6+ memory CD4 T cells
Washington University in St. Louis (Missouri)
Preceptors: Dr. Satya Singh, Dr. Joshua Farber

LCH-232. Carson Peters
The Expression of PfEMP1 Proteins as a platform for Malaria Vaccine Target
Grinnell College (Iowa)
Preceptors: Dr. Brittany Pease, Dr. Michal Fried

LCH-233. Daven Pillai
Use of 3D Printing and Visualization in Tuberculosis Imaging
George Mason University (Virginia)
Preceptors: Dr. Meghan McCarthy, Mr. James Tyrwhitt-Drake, Dr. Phil Cruz

LCH-234. Pranav Rekapalli
Analysis of the MCK-2-dependent macrophage infection by mouse cytomegalovirus
LCH-235. Andy Renteria
_Evaluating IL-22-dependent immune factors during mucosal Candida infections_
Emporia State University (Kansas)
Preceptors: Dr. Timothy Break, Dr. Michail Lionakis

LCH-236. Arhum Saleem
_Autosomal-dominant Hyper IgE Impairs Keratinocyte Migration_
Columbia University (New York)
Preceptors: Mr. Erik Anderson, Dr. Ian Myles

LCH-237. Aidan Sandman-Long
_Allergic Sensitization Coincident with Helminth Infection Drives a Hyperreactive Immune Response that Limits Parasite Burden_
Walter Johnson High School (Maryland)
Preceptors: Dr. Pedro Gazzinelli Guimaraes, Dr. Thomas Nutman

LCH-238. Kayla Szymanik
_The Effect of Media Additives on Cell Growth and HIV Monoclonal Antibody Production in CHO Cell Culture_
University of Maryland, Baltimore County (Maryland)
Preceptors: Mrs. Stephanie Barclay, Dr. Bobby Boonyaratananakornkit, Dr. Joe, Horwitz, Dr. Frank Arnold

LCH-239. Yeabsera Tadesse
_Analysis of the interplay between Toll-like receptor (TLR) signaling pathways in B lymphocytes._
Montgomery College (Maryland)
Preceptors: Dr. Susan Pierce, Dr. Munir Akkaya, Mr. Brandon Theall

LCH-240. William Terrell
_The response of human monocytes to microfilaria of Brugia malayi_
State University of New York - Binghamton University (New York)
Preceptors: Dr. Roshanak Semnani, Ms. Sameha Tariq

LCH-241. Miles Tyner
_Characterizing the Prevalence of Wolbachia pipientis and Plasmodium falciparum in a Natural Population of Anopheline Mosquitoes from Mali_
Middlebury College (Vermont)
Preceptors: Dr. Fabio Mendonca-Gomes, Dr. Carolina Barillas-Mury
LCH-242. Pavan Vemulakonda
*Development of antigen-specific B cell tetramers to assess immune response to malaria vaccines.*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Camila Coelho, Dr. Patrick Duffy

LCH-243. Alicia Wang
*Silencing Mutated Cxcr4 in Mouse Hematopoietic Stem Cells as a Genetic Cure Strategy Obviating Bone Marrow Conditioning in WHIM Syndrome*
Princeton University (New Jersey)
Preceptors: Mr. Ari Azani, Dr. Jiliang Gao, Dr. Philip Murphy

LCH-244. Leah Wolfish
*Cellular imaging of the MHC-I chaperone TAPBPR*
Bnos Yisroel (Maryland)
Preceptors: Dr. Nathan May, Dr. David Margulies

LCH-245. Jahyun Yang
*Useful Human T-cell Line Model for CD40L Mutation using CRISPR-Cas9 Gene Editing Method*
Quince Orchard High School (Maryland)
Preceptor: Dr. Uimook Choi

LCH-246. Aolin Zhang
*Characterization of Virulence Factors and Epigenetic Regulation of Meningoencephalitis vs. Pulmonary Origin Cryptococcus neoformans Strains*
Brown University (Rhode Island)
Preceptors: Dr. Sarah Davis, Dr. Peter Williamson

LCH-247. Isabelle Zhou
*Genetic stability of a Respiratory Syncytial Virus encoding codon-pair deoptimized F and G genes*
Richard Montgomery High School (Maryland)
Preceptors: Dr. Peter Collins, Dr. Cyril Le Nouen, Dr. Lijuan Yang

**National Institute of Biomedical Imaging and Bioengineering (NIBIB)**

LCH-248. Zejun Bao
*Comparison of DTI Tractography and Neuronal Tracers in the Mouse Brain*
University of California, San Diego (California)
Preceptors: Dr. Elizabeth Hutchinson, Dr. Carlo Pierpaoli

LCH-249. Tyler Burden
*Effects of Ultraviolet Irradiation on HeLa Cells*
Towson University (Maryland)
Preceptors: Dr. Heather Kalish, Mr. Matthew Davisson

LCH-250. Alexander Chan  
*X-ray Activatable Drug Release of Hybrid Gold Polymersomes for Cancer Chemoradiotherapy*  
Pennsylvania State University (Pennsylvania)  
Preceptors: Dr. Zijian Zhou, Dr. Xiaoyuan Chen

LCH-251. Venkatesh Deshpande  
*Tyrosine Phosphoproteomics of Rat Inner Medullary Collecting Duct Cells in Response to Vasopressin*  
Rutgers University (New Jersey)  
Preceptors: Dr. Chung-Lin Chou, Dr. Mark Knepper

LCH-252. Zeyad Emam, Adam Anderson  
*Developing Deep Neural Networks for Automated 3D Electron Micrograph Segmentation*  
University of Maryland, College Park (Maryland), University of Maryland, College Park (Maryland)  
Preceptors: Dr. Richard Leapman, Dr. Matthew Guay

LCH-253. Elyssa Feuer  
*Defining Molecular Targets in Bladder Cancer*  
Hamilton College (New York)  
Preceptors: Dr. Alexander Gorbach, Dr. Svetlana Pack, Dr. Zied, Abdullaev, Dr. Piyush Agarwal

LCH-254. Michael Gerber  
*Automated Image Quality Assessment in Prostate MRI*  
CUNY The City College of New York (New York)  
Preceptors: Dr. Nathan Lay, Dr. Ronald Summers, Dr. Ismail Baris Turkbey

LCH-255. Saurin Kantesaria  
*Recapitulating in vivo Spatial Oxygen Distribution in 3D Cancer Spheroid Culture*  
University of North Carolina at Chapel Hill (North Carolina)  
Preceptors: Dr. Nicole Morgan, Dr. Michael Gottesman

LCH-256. Brian Liang  
*Polymeric Neoantigen Nanovaccines for Cancer Immunotherapy*  
Montgomery Blair High School (Maryland)  
Preceptors: Dr. Guizhi Zhu, Dr. Shawn Chen

LCH-257. Arthur Liao  
*Design and Development of Nanoscopic Delivery of Camptothesin and Paclitaxel for Combination Therapy*  
Oakton High School (Virginia)
LCH-258. Andrew Liu  
*Combining QCM-D and AFM for Interactions between Lipid Bilayers and Amyloid Beta Plaques*  
Oakton High School (Virginia)  
Preceptor: Dr. Albert Jin

LCH-259. Matthew Short  
*Optimizing Parameters of a Center of Pressure Modification Task during Unstable Sitting*  
Temple University (Pennsylvania)  
Preceptor: Dr. Bradford Hendershot

LCH-260. Justin Song  
*SERS-Active Gold Nanoparticle Dimer for Cu2+ Detection*  
Richard Montgomery High School (Maryland)  
Preceptors: Dr. Jibin Song, Dr. Shawn Chen

LCH-261. Taylor Sullivan  
*Characterizing 3D cell growth in a bioreactor with controlled oxygen delivery*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Nicole Morgan, Mr. William Wulfange

LCH-262. Louis Wang, James Xu  
*Using mobile phones to monitor nailfold capillary density in humans*  
Cornell University (New York), Trinity School (New York)  
Preceptors: Dr. Alexander Gorbach, Dr. Aleksandr Smirnov

LCH-263. Timothy Wood  
*A comprehensive processing and analysis framework for Diffusion MRI: Application to Moebius Syndrome*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Neda Sadeghi, Dr. Carlo Pierpaoli

LCH-264. Amy Xiao  
*A Streamlined Metabolomics Workflow to Identify Putative Biomarkers of P. falciparum Infected Plasma*  
Johns Hopkins University (Maryland)  
Preceptors: Dr. Michal Fried, Dr. Patricia Gonzales Hurtado (NIAID)

LCH-265. Ariel Zhang  
*ES-MIONs with Precisely Controlled Size for High Resolution T1-Weighted MR Imaging and Precise Delivery of Doxorubicin*  
Montgomery Blair High School (Maryland)
Preceptor: Mr. Zheyu Shen

National Institute on Drug Abuse (NIDA)

LCH-266. Joseph Acqui  
*The Effects of METH Self-Administration on the mRNA Expression of Neurotrophic Factors in the Hippocampus*  
Stevenson University (Maryland)  
Preceptors: Dr. Martin Job, Dr. Subramaniam Jayanthi, Mr. Mike, McCoy, Dr. Jean Lud Cadet

LCH-267. Oluwatobi Ariyo  
*Assessing Fos expression in nucleus accumbens-projecting medial prefrontal cortical neurons.*  
Ridge View High School (South Carolina)  
Preceptors: Dr. Brandon Warren, Dr. Bruce Hope

LCH-268. Rachael Avidor  
*XIE2-64, a selective cannabinoid CB2 receptor inverse agonist, inhibits cocaine-administration and cocaine-seeking behavior in rats and mice.*  
Western High School (Maryland)  
Preceptors: Dr. Zheng-Xiong Xi, Dr. Yi He, Dr. Guo-hua Bi

LCH-269. Liam Bourque  
*Dopamine D1-D3 receptor heteromer-mediated G protein-independent signalling in the nucleus accumbens*  
University Of Maryland, College Park (Maryland)  
Preceptor: Dr. Sergi Ferre

LCH-270. Ian Chambers  
*Diversity of VTA neurons; Electrophysiological analysis of Glutamatergic and GABAergic neurons*  
Rhodes College (Tennessee)  
Preceptors: Dr. Jorge Miranda Barrientos, Dr. Marisela Morales

LCH-271. Dana Dandeneau  
*The role of Nucleus Accumbens medium spiny neuron sub-types in modulating aggression reward and relapse.*  
West Virginia University (West Virginia)  
Preceptors: Dr. Sam Golden, Dr. Yavin Shaham

LCH-272. Marisa DeLuca  
*The Novel Modafinil Analog, JJC8-091, Is Promising for Treatment of Cocaine Addiction*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Guo-Hua Bi, Dr. Zheng-Xiong Xi, Dr. Amy Newman
LCH-273. Apoorva Dhanala  
Quantifying behavioral search strategies in rats performing a foraging task  
Northview High School (Georgia)  
Preceptors: Dr. Andrew Wikenheiser, Dr. Geoffrey Schoenbaum

LCH-274. Katrina Gazo  
Preclinical Evaluation of Probenecid on Motor, Anxiety, and Consummatory Behaviors  
University of Pittsburgh (Pennsylvania)  
Preceptors: Dr. Brendan Tunstall, Dr. Leandro Vendruscolo, Dr. George Koob

LCH-275. Amanda Haas  
Dissecting the functional network connecting the lateral preoptic area and the ventral tegmental area  
Anne Arundel Community College (Maryland)  
Preceptor: Dr. David Barker

LCH-276. Nicole Haggerty  
Impact of societal trends on drug use in Baltimore City over the past 10 years  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Karran Phillips, Ms. Kelli Russell

LCH-277. Timothy Huynh  
The Role of the Orbitofrontal Cortex on Economic Choice Behavior  
Catonsville High school (Maryland)  
Preceptors: Dr. Matthew Gardner, Dr. Geoffrey Schoenbaum

LCH-278. Ryan James  
Analysis of KDEL Receptor Function Using CRISPR-Cas9 Mutagenesis  
Stevenson University (Maryland)  
Preceptors: Dr. Christopher Richie, Dr. Brandon Harvey

LCH-279. Andrew Jiang  
Monosynaptic Inputs to Ventral Tegmental Area Glutamate Neurons: Discovering the Potency of the Optimized Rabies Glycoprotein  
Drexel University (Pennsylvania)  
Preceptors: Dr. Carlos Mejias-Aponte, Dr. Marisela Morales

LCH-280. Eliza Judge  
Influence of psilocybin on attentional, emotional and executive control in treatment-seeking smokers  
Michigan State University (Michigan)  
Preceptors: Dr. John Fedota, Dr. Elliot Stein
LCH-281. Sierra Kane  
*Excitatory inputs from the lateral hypothalamus to the VTA*  
University of Pennsylvania (Pennsylvania)  
Preceptors: Dr. Hui-Ling Wang, Dr. Marisela Morales

LCH-282. Jacqueline Magaha  
*Finding New Designer Drugs for Designer Receptors*  
Worcester Polytechnic Institute (Massachusetts)  
Preceptors: Dr. Mike Michaelides, Dr. Jordi Bonaventura

LCH-283. Yaroslav Markov  
*A Closer Look Into Retention of ER Resident Proteins: KDELR Isoforms and Their Functions*  
City University of NewYork - Hunter College (New York)  
Preceptors: Dr. Susanne Back, Dr. Brandon Harvey

LCH-284. Jessica Marquez-Membreno  
*The highly selective and metabolically stable dopamine D3R antagonist VK4-116 inhibits oxycodone addiction-like behaviors without compromising oxycodone’s antinociceptive effects in rats*  
Baltimore City College High School (Maryland)  
Preceptors: Dr. Zhi-Bing You, Dr. Guo-Hua Bi, Dr. Zheng-Xiong Xi

LCH-285. Kaylan Mayo  
*Social-Based Voluntary Abstinence Prevents the Emergence of Incubation of Drug Craving*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Yavin Shaham, Dr. Marco Venniro, Ms. Michelle Zhang

LCH-286. Alan Min  
*Subtypes within Human Resting-State fMRI Data*  
Purdue University (Indiana)  
Preceptors: Dr. Betty Jo Salmeron, Dr. Yuzheng Hu

LCH-287. Ankit Mishra  
*Methamphetamine Self-Administration regulates Inward Rectifying K+ channel mRNA levels in the Rat hippocampus*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Jean Cadet, Dr. Subramaniam Jayanthi

LCH-288. Gardy Nicolas  
*The effects of oxycodone self-administration on intermediate early genes of the dorsal striatum.*  
George Washington University (District of Columbia)  
Preceptor: Dr. Christopher Blackwood
LCH-289. Alexander Ogilvy
*Deconstructing the synaptic connections of lateral preoptic area glutamate and GABA neurons onto neurotransmitter defined cell-types in the ventral tegmental area*
New York Medical College (New York)
Preceptors: Dr. Shiliang Zhang, Dr. David Barker

LCH-290. Chelsea Osuji
*Characterizing Interferon Response in SH-SY5Y Cells using a HISG54 Nano-Luciferase Reporter*
Rutgers University (New Jersey)
Preceptors: Dr. Brandon Harvey, Mr. Doug Howard, Ms. Lowella Fortuno

LCH-291. Aaron Park
*Gesicles Mediate Transient Delivery of CRISPR/Cas9 to Deactivate the HIV-1 LTR*
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Lee Campbell, Dr. Brandon Harvey, Dr. Christopher Richie

LCH-292. Seo Jung Park
*Glutamate corelease from dopamine neurons antagonizes MPTP-induced neurotoxicity and locomotor impairment in mice*
Cornell University (New York)
Preceptor: Dr. Hui Shen

LCH-293. Syrus Razavi
*Incubation of discriminative stimulus-induced cocaine craving*
Winston Churchill High School (Maryland)
Preceptors: Dr. Rajtarun Madangopal, Ms. Lauren Komer, Dr. Bruce Hope

LCH-294. Angelica Romero
*Impact of lifetime drug use on white matter in humans*
Immaculate Conception Academy (Puerto Rico)
Preceptors: Dr. Betty Jo Salmeron, Dr. Yuzheng Hu, Dr. Elliot Stein

LCH-295. Sydney Schmitt
*Elucidating Behavioral Subtypes from a Broad Range of Characterization Data*
Southern Methodist University (Texas)
Preceptors: Dr. Betty Jo Salmeron, Dr. Thomas Ross, Dr. Yuzheng, Hu, Dr. Elliot Stein

LCH-296. Rachel Shaffer
*Beyond Modafinil: Evaluation of R-modafinil and the next generation of analogues using fast-scan cyclic voltammetry*
Shippensburg University (Pennsylvania)
Preceptors: Dr. Gianluigi Tanda, Dr. Jacqueline Keighron

LCH-297. Arfa Sheikh
*Cell-Type Specific Expression of μ Opioid Receptor in VTA Neurons*
Community College of Baltimore County (Maryland)
Preceptors: Dr. Marisela Morales, Dr. David Root

LCH-298. Sabra Sisler
*Probing the Identity of TH+ Neurons in the Dorsal Raphe Nucleus*
Bethesda Chevy Chase High School (Maryland)
Preceptors: Dr. Stephanie Gantz, Dr. Antonello Bonci

LCH-299. Allison Smith
*Septal Stimulation and Reward: An Optogenetic Investigation*
Community College of Baltimore County (Maryland)
Preceptors: Mr. Andrew Kesner, Dr. Satoshi Ikemoto

LCH-300. Jerry Song
*The Role of Substantia Nigra and Ventral Tegmental Dopamine Neurons in Conditioned Taste Aversion*
Johns Hopkins University (Maryland)
Preceptors: Dr. Satoshi Ikemoto, Dr. Andrew Kesner

LCH-301. Shivani Talwar
*The dorsal raphe nucleus provides a major glutamatergic input to the lateral hypothalamus*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Marisela Morales, Dr. Huiling Wang

LCH-302. Ian Taukulis
*Rapid Discovery and Visualization of Clinical Research Data Using R*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Massoud Vahabzadeh, Dr. Jia-Ling Lin, Mr. Mustapha Mezghanni

LCH-303. Alexandra Wynn
*Effect of sigma-1 receptor on epigenetic modulation in the dorsal root ganglion as they relate to neuropathic pain*
Saint Bonaventure University (New York)
Preceptor: Dr. Hsiang-En Wu

LCH-304. Alina Yasinova
*Two Paths to the Door of Our Addiction Clinic: Opioid Initiation with Heroin or Prescription Pills*
University of Maryland, Baltimore (Maryland)
Preceptors: Dr. Kenzie Preston, Dr. David Epstein, Dr. Karran Phillips
LCH-305. Kevin Zheng
*Dissection of CB1 Receptor Function in Different Phenotypes of Neurons in Cannabis Reward and Aversion*
Duke University (North Carolina)
Preceptors: Dr. Guo-Hua Bi, Dr. Eliot Gardner, Dr. Zheng-Xiong Xi, Dr. Zheng-Xiong Xi

National Institute on Deafness and Other Communication Disorders (NIDCD)

LCH-306. Omar Allam
*Establishing an In-Vitro Inner-Ear Environment Model for Prolonged Stria Vascularis Vitality*
University of Connecticut School of Medicine (Connecticut)
Preceptors: Dr. Michael Hoa, Dr. Rafal Olszewski, Dr. Soumya Korrpati

LCH-307. Alejandro Anaya
*Using single-molecule fluorescence in situ hybridization (smFISH) to study mammalian cochlear development*
University of California, Santa Cruz (California)
Preceptors: Dr. Matthew Kelley, Dr. Michael Kelly, Dr. Weise, Chang, Dr. Elizabeth Driver

LCH-308. Hailey Bednar
*Effects of Polymorphisms of the Melanocortin 3 Receptor on Circadian Rhythm Related Activity and Gene Expression*
Clemson University (South Carolina)
Preceptors: Dr. Jack Yanovski, Mr. Andrew Uhlman

LCH-309. Brittney Carter
*Auditory Phenotype of Oculocutaneous Albinism*
Ohio State University (Ohio)
Preceptor: Dr. Carmen Brewer

LCH-310. Jeffrey Cooper
*Normative Oculomotor Data: Unfiltered, Filtered, and Clinician's Eye*
Gallaudet University (District of Columbia)
Preceptor: Dr. Christopher Zalewski

LCH-311. Daniel Fong
*Effect of Epigenetic Changes on Inner Ear Gene Therapy*
Poolesville High School (Maryland)
Preceptors: Dr. Wade Chien, Mr. Kevin Isgrig, Dr. Hong Jun Wang
LCH-312. Mahmoud Khalil
*Mapping cell lineage relationships in the developing inner ear using genetic tools and mitotic labeling*
Colgate University (New York)
Preceptors: Dr. Matt Kelley, Dr. Michael Kelly, Mr. Joseph Mays, Dr. Kathryn Ellis

LCH-313. Krista Roberts
*Evaluating Candidate Genes for Stuttering*
Georgetown University School of Medicine (District of Columbia)
Preceptors: Dr. Dennis Drayna, Mr. Eduardo Sainz, Dr. Carlos Domingues

LCH-314. Lillian Sun
*Enhanced Antigen-Positive and TNF-Dependent Bystander Killing of Oral Cancer Cells by Cytotoxic T-Lymphocytes following WEE1 Inhibition*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Clint Allen

LCH-315. Christina Takla
*Novel recessive genetic variants that lead to hearing loss in Pakistani families*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Thomas Friedman, Ms. Rabia Faridi

LCH-316. Charis Williams
*Effects of Lovastatin on Cisplatin Induced Hearing Loss*
University of Pittsburgh (Pennsylvania)
Preceptors: Dr. Lisa Cunningham, Dr. Lisa Cunningham, - Katie, Speibauer, Dr. Kate Fernandez

National Institute of Minority Health and Health Disparities (NIMHD)

LCH-317. Myriam Alcantar Rama
*Allostatic load and health behavior among Latino/Hispanic communities*
University of New Mexico (New Mexico)
Preceptors: Dr. Erik Rodriguez, Dr. Eliseo Perez-Stable

LCH-318. Abel Amare
*Systemic Inflammation Score (SIS) as a Predictor for Sagittal Abdominal Diameter (SAD) in Non-Diabetics*
George Washington University (District of Columbia)
Preceptor: Dr. Sharon Jackson

LCH-319. Ky-Mani Coutain
*Characterization of Repetitive Behaviors in Toddlers with Language Delay*
Eleanor Roosevelt High School (Maryland)
LCH-320. Michael Ramsey
_Intersectionality of social determinants of health and smoking behaviors among US Black adults_
Jackson State University (Mississippi)
Preceptor: Dr. Kelvin Choi

LCH-321. Catherine Trad
_Exploring the distribution of Tobacco-Free policies in a national sample of post-secondary educational institutions_
New York University (New York)
Preceptor: Dr. Kelvin Choi

National Institute of Nursing Research (NINR)
LCH-322. Stephanie Becenti
_Health disparities in individuals with or without chronic abdominal pain_
Heritage University (Washington)
Preceptors: Dr. Wendy Henderson, Ms. Onyinyechi Ozoji, Ms. Hannah, Davidson, Ms. Ana Diallo

LCH-323. Mary Blake
_Method development for optimizing primary skeletal muscle cell cultures for downstream application_
Loma Linda University School of Medicine (California)
Preceptors: Dr. Joshua Todd, Dr. Katy Meilleur

LCH-324. Emma Butturini
_Analysis of exosomal content and protein expression in overweight individuals using Nanosight_
Wake Forest University (North Carolina)
Preceptors: Dr. Wendy Henderson, Dr. Paule Joseph, Dr. Ana, Diallo, Mr. Natnael Kenea

LCH-325. Hannah Davidson
_Trauma on our genes: The role of traumatic life events on miRNA expression in differential pain profiles_
Hampshire College (Massachusetts)
Preceptors: Dr. Paule Joseph, Ms. Christina Boulineaux, Dr. Jeffrey, Robinson, Dr. Wendy Henderson

LCH-326. Ron Jako Domingo
_Morphology and Distribution of Neuromuscular Junction in C57 Mice_
Seneca Valley High School (Maryland)
Preceptors: Dr. Rebekah Feng, Dr. Leorey Saligan
LCH-327. Ronna Kayla Domingo  
*The Effects of Androgen Deprivation Therapy on Urinary Function in Men with Prostate Cancer*  
Seneca Valley High School (Maryland)  
Preceptors: Dr. Rebekah Feng, Dr. Leorey Saligan

LCH-328. Joseph Johnson  
*Investigating the Domains of Fatigue Related to Radiation Therapy*  
Northwest High School (Maryland)  
Preceptors: Dr. Leorey Saligan, Dr. Rebekah Feng

LCH-329. Sara Mithani  
*Gene Expression in Military Veterans with Sleep Disturbances*  
University of Illinois at Chicago (Illinois)  
Preceptors: Dr. Jessica Gill, Dr. Young-Eun Cho

LCH-330. Farideh Sistani-khanaman  
*Metabotropic Glutamate Receptor 5 Mediates Post-radiotherapy Chronic Fatigue Development in Cancer Patients*  
Montgomery College (Maryland)  
Preceptors: Dr. Rebekah Feng, Dr. Leorey Saligan

LCH-331. Emma Walter  
*Individual Differences in Intestinal Permeability: Utility of High Resolution Liquid Chromatography-Mass Spectrometry (LC-MS)*  
Walter Johnson High School (Maryland)  
Preceptors: Dr. Wendy Henderson, Dr. Ana Diallo

LCH-332. Berwin Yuan  
*Proteomic Profile of a Radiation-Induced Fatigue Mouse Model*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Rebekah Feng, Dr. Leorey Saligan

**Center for Information Technology (CIT)**

PM-001. Esther Chen  
*Assistive Technology: Automated Calibration of Kinect-Based Keyboard Engineered for a Wounded Warrior*  
Cornell University (New York)  
Preceptors: Mr. Manish Kondapolu, Mr. Mark Lindholm, Dr. Thomas, Pohida, Mr. Randall Pursley
PM-002. Amisha Dave
*mHealth Smartphone Application to Measure Risky Driving Behavior and Predict Crashes*
University of Connecticut (Connecticut)
Preceptors: Dr. Raisa Freidlin, Dr. Thomas Pohida, Dr. Johnathon, Ehsani, Dr. Bruce Simons-Morton

PM-003. Manish Kondapolu
*Developing a Kinect Assisted Keyboard for an Wounded Warrior*
University of California, Berkeley (California)
Preceptors: Mr. Mark Lindholm, Mr. Tom Pohida, Mr. Randall Pursley

PM-004. Aditya Nilacantan, Connor Schultz
*Compact video monitoring systems for large-scale rodent ethology*
University of Maryland, College Park (Maryland), Catholic University (Maryland)
Preceptors: Mr. Tom Pohida, Dr. Lex Kravitz, Dr. John, Dennis, Mr. Ghadi Salem

PM-005. Christopher Roque
*Sensor-Based “Smart Cage” System to Advance Rodent Monitoring Capabilities*
University of Maryland, College Park (Maryland)
Preceptors: Mr. Marcial Garmendia-Cedillos, Dr. John Dennis, Dr. Alexxai, Kravitz, Mr. Tom Pohida

PM-006. Connor Schultz
*Automated Generation of Patient-Specific Prostate Molds for Validating Lesion Localization and Procuring Fresh Tissue Specimens*
Catholic University of America (District of Columbia)
Preceptors: Mr. Marcial Garmendia, Dr. Peter Pinto, Mr. Tom, Pohida, Dr. Ismail Turkbey

PM-007. Tony Shu
*Next-gen sequencing analysis made easy: A case of running ATAC-seq pipelines on a local Galaxy server*
University of Maryland, College Park (Maryland)
Preceptors: Mr. William Lau, Dr. Calvin Johnson

**National Human Genome Research Institute (NHGRI)**

PM-008. Brandon Wang
*Electric Field Effects on Cells - Evaluation as Cancer Therapy*
Thomas Jefferson High School for Science and Technology (Virginia)
Preceptors: Mr. Tom Pohida, Dr. Peter Basser, Mr. Randall, Pursley, Dr. Rea Ravin

PM-009. Anila Afzal
*Crispr/Cas9-mediated Mutagenesis for Studying Hair Cell Regeneration in Zebrafish*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Shawn Burgess, Dr. Alberto Rissone, Dr. Jason, Sinclair, Dr. Lisha Xu

**PM-010. Faris Aziz**  
*Information Transformation: Annotating Whole Genome VarSifter Files with the Genome Aggregation Database*  
River Hill High School (Maryland)  
Preceptor: Dr. Thomas Markello

**PM-011. Ian Brown**  
*Prenatal Whole Exome Sequencing Identifies the Causes of Congenital Heart Disease*  
Walt Whitman High School (Maryland)  
Preceptors: Dr. William Gahl, Dr. May Christine Malicdan, Dr. Joshi, Stephen, Dr. Huda Al-Kouatly

**PM-012. Nia Byrd**  
*A Case Study Approach of Coping Styles and Mental Health in Caregivers of Children with Severe Genetic Illnesses*  
University of Michigan (Michigan)  
Preceptor: Dr. Laura Koehly

**PM-013. Michael Cardone**  
*Lysosomal storage disease Niemann-Pick Type C1 cells display disease phenotype with various intracellular disease markers.*  
Florida Atlantic University (Florida)  
Preceptors: Dr. Bill Pavan, Ms. Denise Larson

**PM-014. Uriah Contreras**  
*Zebrafish as a model to identify genetic factors of tissue regeneration*  
Fort Lewis College (Colorado)  
Preceptors: Dr. Wuhong Pei, Dr. Shawn Burgess

**PM-015. Reinatou Coulibaly**  
*Searching for Evidence of Large Deletions in Sequencing Data from Fanconi Anemia Patients*  
Wheaton High School (Maryland)  
Preceptors: Dr. Nancy Hansen, Dr. Zhi Liu, Dr. Hyejin, Cho, Dr. Jim Mullikin

**PM-016. Andrea D'Souza, Reem Mohamed**  
*An Individual Patient's Pathway to Diagnosis of an Elusive Disease via the Undiagnosed Diseases Program*  
University of Maryland, College Park (Maryland), George Washington University (District of Columbia)  
Preceptors: Dr. Audrey Thurm, Ms. Jennifer Murphy, Dr. Cynthia Tift
PM-017. Brandon Davis  
*Cornelia de Lange Syndrome in Diverse Populations*  
Washington University in St. Louis (Missouri)  
Preceptors: Dr. Maximilian Muenke, Dr. Paul Kruszka

PM-018. Nadine Dogbe  
*Participants’ Perceptions of the Receipt of a Negative Secondary Findings Report from Genome Sequencing*  
St. Olaf College (Minnesota)  
Preceptors: Mr. Kendall Umstead, Dr. Barbara Biesecker

PM-019. Clayton Forman  
*A Study on Novel Causes of Pigmentation and Vesicular Biology Disorders in an Oculocutaneous Albinism Cohort*  
St. Albans School (District of Columbia)  
Preceptor: Dr. David Adams

PM-020. Tesiya Franklin  
*Telomere length analysis of Type 2 alveolar cells in Hermansky-Pudlak Syndrome (HPS) Patients*  
Virginia Commonwealth University (Virginia)  
Preceptors: Dr. Bernadette Gochuico, Dr. Heidi Dorward, Dr. William Gahl

PM-021. Eric Joshua Garcia  
*Exploration of epigenetic modifiers in Gaucher Disease-associated Alpha-Synucleinopathies*  
University of Maryland, Baltimore County (Maryland)  
Preceptors: Mr. Shahzeb Hassan, Dr. Ellen Sidransky, Dr. Nahid Tayebi

PM-022. Duber Gomez-Fonseca  
*Machine Learning for Variable Selection in GWAS Data*  
Jackson State University (Mississippi)  
Preceptors: Dr. Joan Bailey-Wilson, Dr. Emily Holzinger

PM-023. Sunny Greene  
*Chediak-Higashi Disease: Phenotype of the Mouse Model*  
Hollins University (Virginia)  
Preceptors: Dr. May Malicdan, Dr. Raluca Nicoli

PM-024. Emily Gripp  
*Analysis of Variants in Platelet Derived Growth Factor Receptor Alpha and Associated Human Phenotypes*  
Pennsylvania State University (Pennsylvania)  
Preceptors: Dr. Maximilian Muenke, Dr. Paul Kruszka
PM-025. Christian Hernandez  
*Carrier Results and Genetic Counseling in ClinSeq: Describing Elements of Therapeutic Alliance*  
George Mason University (Virginia)  
Preceptor: Dr. Lori Erby

PM-026. Andrew Hong  
*Alagille Syndrome in Diverse Populations*  
United States Naval Academy (Maryland)  
Preceptors: Dr. Maximilian Muenke, Dr. Paul Kruszka

PM-027. Frederick Horne  
*Confirmation of Small Deletions in DBA Patient DNA Identified by Whole-Genome Sequencing*  
St. Albans School (District of Columbia)  
Preceptors: Mr. Jens Lichtenberg, Mrs. G. Jaya Jagadeesh, Dr. David Bodine

PM-028. Randall Hughes  
*N2A Neuroblastoma Differentiation for a Cell Model of Leigh’s Disease*  
Fort Lewis College (Colorado)  
Preceptors: Dr. Peter McGuire, Mr. Russell D’souza

PM-029. Brenda Iriele  
*Turner Syndrome in Diverse Populations*  
Howard University College of Medicine (District of Columbia)  
Preceptors: Dr. Paul Kruszka, Dr. Maximilian Muenke

PM-030. Jae Hee Jang  
*Genetic Screening of Human Holoprosencephaly Enhancers in Zebrafish*  
University of Maryland, College Park (Maryland)  
Preceptor: Dr. Sungkook Hong

PM-031. Anique Jones  
*Molecular Cytogenetic Studies in cell lines*  
George Washington University (District of Columbia)  
Preceptor: Dr. Amalia Dutra

PM-032. Oliver Kruszka  
*Noonan Syndrome in Diverse Populations*  
West Potomac High School (Virginia)  
Preceptor: Dr. Suzanne Hart
PM-033. Sofia Kruszka  
*Genetic Predisposition in Turner Syndrome*  
Thomas Jefferson High School of Science and Technology (Virginia)  
Preceptor: Dr. Suzanne Hart

PM-034. Taylor Lindstrom, Somto Ukwuani  
*Neuropsychological Profile in Patients with Type 3 Gaucher Disease: a longitudinal analysis*  
University of Miami (Florida), Emory University (Georgia)  
Preceptors: Dr. Ellen Sidransky, Dr. Grisel Lopez, Ms. Alta, Steward, Dr. Edythe Wiggs

PM-035. Amari McDuffie  
*FGF-21 and GDF-15 as Potential Clinical Markers for Mitochondrial Hepatopathy*  
Benjamin Banneker Academic High School (District of Columbia)  
Preceptors: Mr. Maxim Jestin, Dr. Peter McGuire

PM-036. Melissa McGowan  
*Multi-system Organ Involvement in Hermansky-Pudlak Syndrome*  
West Virginia University School of Medicine (West Virginia)  
Preceptors: Dr. Bernadette Gochuico, Mr. Kevin O'Brien

PM-037. Corey Miller  
*Investigating Child Feeding in a Virtual Reality Buffet*  
Kansas State University (Kansas)  
Preceptor: Dr. Susan Persky

PM-038. Bernard Ndedi  
*Fragile X syndrome in diverse populations*  
Howard University College of Medicine (District of Columbia)  
Preceptors: Dr. Paul Kruszka, Dr. Maximilian Muenke

PM-039. Jonathan Odim  
*Efficient Data Sharing within and between Groups: A Solution with Opal*  
Wootton Highschool (Maryland)  
Preceptor: Dr. Amadou Gaye

PM-040. Katherine Pardo  
*Uncovering Uniqueness: Using the Genome Aggregation Database to Filter for Rare Variants in Whole Genome VarSifter Files*  
University of Virginia (Virginia)  
Preceptor: Dr. Thomas Markello

PM-041. Anantha Sriya Reddy  
*Comparing miRNA Target Prediction Tools: miRanda vs. TargetScan*
PM-042. **Sofia Rosenzweig**  
*Association between migraines with aura and variations in the CECR1 gene*  
University of Maryland, Baltimore County (Maryland)  
Preceptors: Dr. Ivona Aksentijevich, Dr. Daniel Kastner, Ms. Natalia, Deuitch, Ms. Natalia Sampaio Moura

PM-043. **Benjamin Ruben**  
*Quantitative Assessment of Inflammasome Formation: ASC Speck Detection by Flow Cytometry*  
Rice University (Texas)  
Preceptors: Dr. Daniel Kastner, Dr. Ivona Aksentijevich, Dr. Massimo, Gadina, Ms. Natalia Sampaio Moura

PM-044. **Alaina Shreves**  
*Clinical Trajectories of Patients with and without Screened Genetic Disorders in the UK*  
College of William and Mary (Virginia)  
Preceptors: Mr. Jeff Lienert, Dr. Christopher Marcum

PM-045. **Suprit Singh**  
*Longitudinal Studies of the Clinical and Laboratory Parameters of the NIH Cohort of the mut Type Methylmalonic Acidemia*  
University of Central Florida College of Medicine (Florida)  
Preceptors: Dr. Oleg Shchelochkov, Dr. Charles Venditti

PM-046. **Abigail Stanton**  
*Old Proteins, New Tricks: What Fish Can Teach Us About Vitamin B12 Metabolism*  
Colgate University (New York)  
Preceptor: Dr. Lawrence Brody

PM-047. **Kisha Thakur**  
*Identifying agents of change within multigenerational and culturally different Australian households*  
University of Maryland, College Park (Maryland)  
Preceptor: Dr. Laura Koehly

PM-048. **Tada Vargas**  
*To B12, or not to B12: Understanding the Impact of Vitamin B12 Deficiency on Gene Expression in the Brains of Genetically Engineered Mice*  
Oglala Lakota College (South Dakota)  
Preceptors: Dr. Larry Brody, Mr. David Bernard
PM-049. Kaylyn Williams  
*The Association between Physician Uncertainty and Drug Treatment Decision Making: A Quantitative and Qualitative Analysis*  
Yale University (Connecticut)  
Preceptors: Mr. Vence Bonham, Ms. Khadijah Abdallah

PM-050. Reem Al Shabeeb  
*Optimizing a Protocol to Identify Gustatory Neurons in Drosophila*  
The George Washington University (District of Columbia)  
Preceptors: Dr. Mark Stopfer, Dr. Yu-Shan Hung

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

PM-051. Atieh Bakhtiar  
*Assessing the Relationship Between Borderline Traits and Executive Function Processes During an Emotional Task: A FNIRS Study*  
University of Maryland, Baltimore County (Maryland)  
Preceptors: Ms. Emma Condy, Dr. Amir Gandjbakhche

PM-052. Lauren Blau  
*Eating for Two: Women’s experience and understanding of food cravings during pregnancy*  
University at Albany, SUNY (New York)  
Preceptors: Dr. Miriam Eisenberg, Dr. Leah Lipsky, Dr. Tonja Nansel

PM-053. Matthew Boden  
*A Novel LHX4 Mutation Associated with Combined Pituitary Hormone Deficiency*  
Washington University in St. Louis (Missouri)  
Preceptors: Dr. Youn Hee Jee, Dr. Jeffrey Baron

PM-054. Jade Brunicardi  
*Study of the impact of PKA Catalytic Subunit amplification in Transgenic Mice*  
University of South Florida (Florida)  
Preceptors: Dr. Ludivine Drougat, Dr. Constantine Stratakis

PM-055. Julia Buldo-Licciardi  
*Secretomic Analysis of Spent Embryo Culture Media*  
George Washington School of Medicine and Health Sciences (District of Columbia)  
Preceptors: Dr. Katherine Green, Dr. Alan DeCherney

PM-056. Sonia Bustos Barocio  
*Role of FlgO: Novel Small RNA Regulated by Flagella Sigma Factor*  
Los Medanos College (California)  
Preceptors: Dr. Gisela Storz, Mr. Joshua M. Mills, Ms. Hira Shabbir
PM-057. Tzipora Caplan
Multivitamin Use and Semen Quality
Hebrew Theological College (Illinois)
Preceptors: Dr. Matthew Connell, Dr. Sunni Mumford, Dr. Enrique, Schisterman, Dr. Alan H. DeCherney

PM-058. Arihant Chadda
Analysis of ErbB4 isoforms in the developing mouse brain
Landon School (Maryland)
Preceptors: Ms. Larissa Erben, Dr. Andres Buonanno

PM-059. Giehae Choi
Polybrominated diphenyl ethers and incident pregnancy loss: The LIFE Study
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Melissa Smarr, Dr. Yu-Bo Wang, Dr. Germaine, Louis, Dr. Rajeshwari Sundaram

PM-060. Sarah Clifford
The Role of the Necroptic Pathway in Niemann - Pick Disease, Type C1
Washington and Lee University (Virginia)
Preceptor: Dr. Antony Cougnoux

PM-061. Patrick Coyle
Modeling Adolescent Drinking Risk: Joint Maximum Likelihood Estimation with Peer Network Influence and Informative Cluster Size
Temple University (Pennsylvania)
Preceptor: Dr. Danping Liu

PM-062. Elizabeth Dent, Mira Stone
Food Insecurity, Socioeconomic Status, Race, and Energy Consumed at In-Laboratory Buffet Meals.
James Madison University (Virginia), Walter Johnson High School (Maryland)
Preceptor: Dr. Jack Yanovski

PM-063. Sarah Donnelly
Identifying Novel and Early Risk Factors of Liver Dysfunction: A Prospective Study of Diabetes in Pregnancy and Liver Function 9 to 15 years Postpartum
Virginia Polytechnic Institute and State University (Virginia)
Preceptors: Dr. Cuilin Zhang, Dr. Stefanie Hinkle

PM-064. Samantha Edgar
Exploring the Role of GPR101 Loss of Function in Individuals with Short Stature
AIM High school (Washington)
Preceptor: Dr. Andrea Gutierrez-Maria

PM-065. Olufisola Famuyiwa
De Novo Lipogenesis in Adipose Tissue of Mice with Obesity due to Hypoactivity of MC3R
Our Lady of Good Counsel High School (Maryland)
Preceptors: Dr. Jack Yanovski, Dr. Joo Yun Jun, Dr. Tusharkumar, Patel, Ms. Robin Roberson

PM-066. Moronkeji Fapohunda
The Influence of Racial Bias on Inhibitory Control: A Go/No-Go Study using Functional Near-Infrared Spectroscopy
(Maryland)
Preceptors: Dr. Amir Gandjbakhche, Ms. Rachel Zaragoza, Ms. Fatima Chowdhry

PM-067. Mia Faulkner
Role of a Germline Defect in Disrupting Cell Cycle Control in the Pathogenesis of Pediatric Cushing’s Disease
Walt Whitman High School (Maryland)
Preceptors: Dr. Laura Hernandez-Ramirez, Dr. Giampaolo Trivellin

PM-068. Ellen Francis
Longitudinal Associations of Vitamin D Status During Pregnancy and Neonate Anthropometric Measures
Clemson University (South Carolina)
Preceptors: Dr. Cuilin Zhang, Dr. Stefanie Hinkle

PM-069. Megan Gaines
Association of Decision Making with Adiposity and Energy Intake during a Laboratory Test Meal in Children and Adolescents
University of Maryland, College Park (Maryland)
Preceptor: Dr. Jack Yanovski

PM-070. Carmen-María García
Deletion of a putative synaptogenic protein using the CRISPR-Cas9 methodology
Florida Atlantic University (Florida)
Preceptor: Dr. Mihaela Serpe

PM-071. Monil Ghodasra
Quantifying Sarcomeric Discontinuities in Mouse Muscle
University of Maryland, College Park (Maryland)
Preceptors: Dr. Brad Busse, Dr. Paul Blank, Dr. John, Heuser, Dr. Joshua Zimmerberg
PM-072. Roy Ghosh  
*Unusual Tubulin Isotype Expression in Cultured Cells and Tissues*  
Parkland High School (Pennsylvania)  
Preceptor: Dr. Dan Sackett

PM-073. Ashley Greenlee, Rebecca Clem  
*An RNAi screen to identify new regulators of the GATOR complex*  
Virginia Commonwealth University (Virginia), Winston Churchill High School (Maryland)  
Preceptors: Dr. Mary Lilly, Mr. Kuikwon Kim

PM-074. Rahul Gupta  
*Elucidating the Link between Signaling Factors and Morphogenesis in the Zebrafish Lateral Line Primordium*  
Sidwell Friends School (District of Columbia)  
Preceptors: Dr. Uma Neelathi, Dr. Ajay Chitnis

PM-075. Kevin Hackbarth  
*A Mouse Model for Investigating the Interplay of Irf8 and Trex1*  
Tufts University (Massachusetts)  
Preceptors: Dr. Tiyun Wu, Dr. Keiko Ozato

PM-076. Chloe Ham  
*Effects of environmental stress on retrotransposition in fission yeast*  
Northern Virginia Community College (Virginia)  
Preceptors: Dr. Henry Levin, Mr. Michael Lee, Dr. Caroline Esnault

PM-077. Kimberly Hochstedler  
*Gestational age at birth and early childhood development: The Upstate KIDS Study*  
Carnegie Mellon University (Pennsylvania)  
Preceptor: Dr. Edwina Yeung

PM-078. Ashley Jackson  
*Understanding the role of Prkar2a in liver with the Alb-cre/LoxP Prkar2a mouse*  
Morgan State University (Maryland)  
Preceptors: Dr. Edra London, Dr. Constantine A. Stratakis

PM-079. Ashwin Kalidas  
*Consequence of Armc5 haplo-insufficiency on Sirt1 function in adrenal tissue*  
Vandegrift High School (Texas)  
Preceptors: Dr. Annabel Berthon, Dr. Constantine Stratakis

PM-080. Anish Karpurapu, Jacob Wagner  
*QRICH1: A Syndrome of Short Stature, Developmental Delay, and Dysmorphic Facies*
PM-081. Alex Kim
*Feature Extraction by an Olfactory System*
University of Chicago (Illinois)
Preceptors: Dr. Zane Aldworth, Dr. Mark Stopfer

PM-082. Adrian Lin
*The Melanocortin 3 Receptor C17A + G241A Haplotype in Adults: Characterizing the Inflammatory Phenotype*
Yale University (Connecticut)
Preceptors: Dr. Jack Yanovski, Dr. Andrew Demidowich, Mr. Viraj Parikh

PM-083. Vincent Ma
*Thyroid Hormone Regulation on SKI during frog intestinal metamorphosis.*
Thomas S. Wootton High School (Maryland)
Preceptors: Dr. Liezhen Fu, Dr. Yun-Bo Shi

PM-084. Stacey Maldonado Ortez
*C-terminal deletion of ma14 and msi2 in fission yeast*
Academy of Health Sciences at Prince George’s Community College (Maryland)
Preceptors: Ms. Oluwadamilola Bankole, Dr. Henry Levin

PM-085. Kate McDaniel
*Analysis of neuronal cell biology of the neuregulin sheddases ADAM10 and ADAM17*
University of Virginia (Virginia)
Preceptors: Dr. Detlef Vullhorst, Dr. Andres Buonanno

PM-086. Jacob Miller
*Sexual Orientation Disparities in Weight-Related Behaviors in a Nationally Representative Sample of US Adolescents*
Colorado College (Colorado)
Preceptors: Dr. Jeremy Luk, Dr. Stephen Gilman

PM-087. Oliver Nguyen
*Recruitment of Smooth Muscle Cells to Arteries*
Virginia Polytechnic Institute and State University (Virginia)
Preceptors: Dr. Brant Weinstein, Dr. Amber Stratman

PM-088. Tuyet Nguyen
*Optimization of CUBIC Clearing Protocol for Whole Mount Adult Transgenic Zebrafish*
PM-089. Christina Nichols  
*Plasma phospholipid fatty acids in association with premenstrual syndrome and symptoms*

University of North Carolina at Chapel Hill (North Carolina)  
Preceptors: Dr. Sunni Mumford, Dr. Keewan Kim, Mr. Dan Kuhr

PM-090. Charles Omoregbee  
*Prefrontal cortex activation patterns during facial recognition task: A study of functional Near Infrared Spectroscopy*

Charles Herbert Flowers High School (Maryland)  
Preceptors: Dr. Amir Gandjbakhche, Dr. Fatima Chowdhry, Mr. Riley, Kermanian, Ms. Emma Condy

PM-091. Nancy Ortega  
*Effects of Gulf War Neurotoxicants on Oligodendrocytes*

University of San Francisco (California)  
Preceptors: Dr. R. Douglas Fields, Dr. Dipankar Dutta

PM-092. Anna Osofsky  
*Segmenting Muscle MRI Data*

Charles E Smith Jewish Day School (Maryland)  
Preceptors: Dr. Jack Yao, Dr. Brad Busse, Dr. Paul, Blank, Dr. Joshua Zimmerberg

PM-093. Linh Pham  
*Creation of a nanoLuciferase Reporter System for tRNA Biogenesis in S. pombe*

Humboldt State University (California)  
Preceptors: Ms. Shaina Hasan, Dr. Abdul Khalique, Dr. Richard Maraia

PM-094. Shyneice Porter  
*Gross, Fine, or Both? Understanding Motor Skills Required for Children’s Play*

University of Maryland, College Park (Maryland)  
Preceptors: Dr. Melissa Richards, Dr. Marc Bornstein, Dr. Diane Putnick

PM-095. Leana Ramos  
*Investigating the interaction between the AcrZ small protein and the AcrAB-TolC multidrug efflux pump*

St. Thomas University (Florida)  
Preceptors: Dr. Gisela Storz, Dr. Mona Wu Orr

PM-096. Kushi Ranganath  
*Pilot Study of Mobile Attention Training in Overweight Female Adolescents*
PM-097. Akhil Rekulapelli  
*The Discovery and Analysis of Unexpected Sensitivities to Anti-Mitotic Drugs in Fibrous Yeast*
Thomas Jefferson High School for Science and Technology (Virginia)  
Preceptor: Dr. Dan Sackett

PM-098. Connor Richards  
*Synthesis of Fluorescent Epothilone*
Red Cloud High School (South Dakota)  
Preceptor: Dr. Dan Sackett

PM-099. Kathia Rodarte  
*Structural Effects that Different Microtubule-Targeting Agents Have on Mitotic Spindle Formation*
University of Texas at El Paso (Texas)  
Preceptor: Dr. Dan Sackett

PM-100. Angelo San Pablo  
*Ulipristal Acetate & Its Effects on Fibroid Development*
Stony Brook University (New York)  
Preceptors: Dr. Terrence Lewis, Dr. William Catherino, Dr. Alan DeCherney

PM-101. Arjun Sethi-Olowin  
*The Effects of Szechuan Pepper Extract on the Motility of Three Day Old Zebrafish*
Sidwell Friends School (District of Columbia)  
Preceptors: Dr. Ajay Chitnis, Dr. Greg Palardy, Dr. Eric Horstick

PM-102. Malcolm Smith Fraser  
*Investigating the Role of N-Linked Glycosylation in Niemann-Pick disease Type C1 Fibroblasts*
California Polytechnic State University - San Luis Obispo (California)  
Preceptors: Ms. Caitlin Sojka, Dr. Niamh Cawley, Dr. Forbes Porter

PM-103. Nicholas Sun  
*Two-Sample Comparison of Semicontinuous Outcomes with Application to a Dietary Intervention Study*
Columbia University Mailman School of Public Health (New York)  
Preceptors: Dr. Aiyi Liu, Dr. Wei Zhang

PM-104. Roxana Taginya  
*Array Tomography of Human Subcutaneous Adipose Tissue*
University of Michigan - Ann Arbor (Michigan)
PM-105. Andrew Tong
Transcriptional activation of Xenopus tropicalis SPAG7 expression by thyroid hormone is mediated by a DNA element in the first intron.
Thomas S. Wootton High School (Maryland)
Preceptors: Dr. Liezhen Fu, Dr. Yunbo Shi

PM-106. Ninaz Valisharifabad
H19 Encoded miR675 Contributes to H19 Functioning
Irvine Valley College (California)
Preceptors: Dr. Karl Pfeifer, Dr. Beenish Dhar

National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)

PM-107. Sooraj Achar
Investigating the role of individual KH domains in interactions between PCBP1 and BolA2
University of Virginia (Virginia)
Preceptors: Dr. Sarju Patel, Dr. Caroline Philpott

PM-108. Mark Ellie Alonzo
The effect of a FMR1 premutation allele on the transcriptome of mouse embryonic stem cells (mESCs)
California State Polytechnic University, Pomona (California)
Preceptors: Dr. Inbal Gazy, Dr. Karen Usdin

PM-109. Christina Ashby
Structural study of the SLERT long non-coding RNA
Pace University (New York)
Preceptors: Dr. Shuang Li, Dr. Jinwei Zhang

PM-110. Razan Bakarman
Study the Function of O-GlcNAcylation on OTX2
Catholic University of America (District of Columbia)
Preceptors: Dr. Stephanie Olivier-Van Stichelen, Dr. John Hanover

PM-111. Joon Bang
Analysis of Short-Read Alignment Behaviors
Poolesville High School (Maryland)
Preceptor: Dr. Weiping Chen
PM-112. Rosie Bauer  
*Modeling cardiac arrhythmias in C. elegans*  
Lawrence University (Wisconsin)  
Preceptor: Dr. Andy Golden

PM-113. Caroline Broadwell  
*Evaluation of non-invasive biomarkers in identifying liver disease in patients with lipodystrophy*  
University of North Carolina at Chapel Hill (North Carolina)  
Preceptor: Dr. Christopher Koh

PM-114. Jonathan Chang  
*Characterization of Translation Activity during the Mouse Maternal-to-Zygotic Transition*  
University of Illinois at Urbana-Champaign (Illinois)  
Preceptors: Dr. Di Wu, Dr. Jurrien Dean

PM-115. Rohit Chari  
*Comparison of Candidate Biomarkers from Urine Exosomes to Diagnose and Predict the Severity of Acute Kidney Injury in Mice*  
Poolesville High School (Maryland)  
Preceptors: Dr. Peter Yuen, Dr. Robert Star, Dr. Jonathan, Street, Mr. Erik Koritzinsky

PM-116. Phil Chen  
*A New Model for Evaluating Oral Glucose Tolerance Tests*  
University High School (California)  
Preceptors: Dr. Arthur Sherman, Dr. Joon Ha

PM-117. Rebecca Chernick  
*Thyrocytes from Graves’ Disease Patients Exhibit TSHR-Specific Deficits in cAMP-based signaling*  
Brown University (Rhode Island)  
Preceptors: Dr. Sarah Morgan, Dr. Marvin Gershengorn

PM-118. Steffen Cornwell  
*Generative model for single-cell RNA-seq data*  
University of Pennsylvania (Pennsylvania)  
Preceptor: Dr. Vipul Periwal

PM-119. Silvano Daniels  
*Expressing a dominant-negative retinoic acid receptor selectively in glomerular podocytes in transgenic mice to test the role of retinoic acid in protecting against kidney disease*  
Pennsylvania State University (Pennsylvania)  
Preceptors: Dr. Jeffrey Kopp, Dr. Jurgen Heymann
PM-120. Anita Danthi  
*Detection of athersclerotic plaques using alphavbeta3 integrin targeting probe in hyperlipidemic Wantanabe rabbits*  
University of Maryland, Baltimore County (Maryland)  
Preceptor: Dr. Ahmed Gharib

PM-121. Thomas Davis  
*Calcium Mediated Enhancement of Chemotaxis and Chemotactic Biochemical Response*  
University of Connecticut (Connecticut)  
Preceptors: Dr. Netra Meena, Dr. Alan Kimmel

PM-122. Meena Deshpande  
*Application of Split-GFP Technology for Screening of Drugs Against R7bp, the Master Regulator of the Sensation of Itch*  
Hinsdale South High School (Illinois)  
Preceptors: Dr. Jianhua Zhang, Dr. William Simonds

PM-123. Molly Ding  
*Erythropoietin regulation of high fat diet induced inflammation in mouse hypothalamus*  
Walt Whitman High School (Maryland)  
Preceptors: Dr. Soumyadeep Dey, Dr. Constance T. Noguchi

PM-124. Yize Dong  
*A Pathway Analysis on the Effects of Erythropoietin and Erythropoietin Receptor Signaling on Mice Hypothalamus*  
Massachusetts Institute of Technology (Massachusetts)  
Preceptors: Dr. Constance Noguchi, Dr. Shoumo Dey, Dr. Sukanya Suresh

PM-125. Jazmin Escamilla  
*Modulation of autophagy by HCV entry inhibitor aryl oxazole*  
Berea College (Kentucky)  
Preceptors: Dr. Zongyi Hu, Dr. Jake Liang

PM-126. Paola Escobales Cabrera  
*Influences of PCBP1, an Iron Chaperone, in Cholesterol Biosynthesis Genes in the Liver*  
Universidad de Puerto Rico - Recinto de Bayamón (Puerto Rico)  
Preceptors: Dr. Caroline Philpott, Dr. Shyamalagauri Jadhav

PM-127. Steven Fang  
*SNPrimer: A primer design software for SNP genotyping in agriculture, medicine and forensics*  
Poolesville Highschool (Maryland)  
Preceptor: Dr. Weiping Chen
PM-128. Yaeli Fink
*Physiological Responses and Adaptation of Brown Adipose Tissue to Chronic Treatment with the β3-Adrenergic Receptor Agonist Mirabegron*
Bnos Yisroel of Baltimore (Maryland)
Preceptors: Dr. Aaron Gypess, Dr. Kong Chen

PM-129. Rebecca Freeman, David Wu
*Investigating the Role of PPARγ in Adipocyte Function Using an Inducible Knockout System*
Middlebury College (Vermont), Walter Johnson High School (Maryland)
Preceptors: Dr. Younghoon Jang, Mr. Eugene Froimchuk, Dr. Kai Ge

PM-130. Swata Gade
*Comparison of Monomer Conformations of Amyloid Beta Mutants using Single Molecule FRET Spectroscopy*
Mission San Jose High School (California)
Preceptors: Dr. Hoi Sung Chung, Dr. Fanjie Meng

PM-131. Alison Gaynor
*Role of hypothalamic TGFβ signaling pathway in metabolic function*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Ioannis Papazoglou, Dr. Sushil Rane

PM-132. Allondra Gonzalez
*Role of protein quality control factors in disruption of [URE3] prion propagation by mutations outside of Ure2 amyloid-forming region*
San Diego Mesa College (California)
Preceptor: Dr. Dan Madison

PM-133. Matthew Guo
*Characterizing Galectin-3 Secretion through the Misfolding-Associated Protein Secretion Pathway*
Cornell University (New York)
Preceptors: Dr. Yihong Ye, Dr. Yue Xu

PM-134. Emily Hernandez-Avila
*Mechanisms of APOL1-induced nephropathy in in vitro and CAG-APOL1-B3 mouse model of FSGS*
Cornell University (New York)
Preceptors: Dr. Hila Roshanravan, Dr. Jeffrey Kopp

PM-135. Jada Hislop
*Changes in Artificial Sweetener Intake in Participants of Natural History Study of Obesity*
University of Southern California (California)
Preceptor: Dr. Kristina Rother
PM-136. Vienna Huso
*The Maternal-effect Gene Mater regulates exocytosis through Myosin IIA in mouse eggs.*
Pennsylvania State University (Pennsylvania)
Preceptors: Dr. Jurrien Dean, Dr. Edgar Vogt

PM-137. Alexander Jordan
*Functional characteristic of the CTRB1/2 locus to identify variants that are protective for type 2 diabetes*
Bethune-Cookman University (Florida)
Preceptors: Dr. Leslie Baier, Mr. Jeff Sutherland, Dr. Anup Nair

PM-138. Samuel Juarez-Solis
Precision of Caloric Estimates Given to Research Volunteers
University of Washington, Seattle (Washington)
Preceptors: Dr. Susanne Votruba, Dr. Marci Gluck

PM-139. Jeewoo Kim
*Classifying Cognitive Performance with Deep Learning*
University of Virginia (Virginia)
Preceptors: Dr. Carson Chow, Dr. Shashaank Vattikuti

PM-140. Katherine Kim
*Regional Differences in Brown Adipose Tissue Activation Between Cohorts of Lean Men, Lean Women, and Obese Men*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Kong Chen, Dr. Robert Brychta, Dr. Aaron Cypess

PM-141. Shwetha Kunnam
*Reproducibility of Oral Glucose Tolerance Test parameters in adolescent girls at risk for type 2 diabetes*
Montgomery Blair High School (Maryland)
Preceptors: Dr. Stephanie Chung, Mr. Anthony Onuzuruike

PM-142. Allan Lee, Kosuke Suzuki
*Effect of APOL1 Renal Risk Variants on Potocyte Mitochondrial Function In Vitro*
Winston Churchill High School (Maryland), Tohoku University (Non-U.S.)
Preceptors: Dr. Jeffrey Kopp, Dr. Shashi Shrivastav, Dr. Koji Okamoto

PM-143. Jaehyun Lee
*Analysis of Protein Residues Important for Response Regulator Function in Vibrio cholera and Bordetella pertussis*
Carnegie Mellon University (Pennsylvania)
PM-144. Allison Lemmer  
**Studying Lipid Metabolic Pathways in Polycystic Kidney Disease Models**  
Johns Hopkins University (Maryland)  
Preceptors: Dr. Gregory Germino, Dr. Takeshi Terabayashi, Dr. Luis Menezes

PM-145. David Lieberman  
**Molecular Modeling Investigation of Agonist Binding at the Human Adenosine A3 Receptor**  
Bethesda-Chevy Chase High School (Maryland)  
Preceptors: Dr. Antonella Ciancetta, Dr. Kenneth Jacobson, Dr. Nicholas Restifo

PM-146. Andrew Liu  
**Development of A Novel Hepatitis B Virus Infection Reporter System**  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Yuchen Xia, Dr. Xiaoming Cheng, Dr. Jake Liang

PM-147. Jackie Liu  
**Structural Analysis of the Dumbbell Region of Flavivirus Genomic RNA**  
Urbana High School (Maryland)  
Preceptors: Dr. Jinwei Zhang, Dr. Shuang Li

PM-148. Sangavi Manickavel  
**Where Synapsis Begins on Meiotic Mice Chromosomes**  
Poolesville High School (Maryland)  
Preceptors: Dr. Florencia Pratto, Dr. Daniel Camerini-Otero

PM-149. Matthew Martin  
**The N-Terminus of Human S-OPA1 Allows for Homotypic Dimerization**  
Northwood High School (Maryland)  
Preceptors: Dr. Andrew Kehr, Dr. Jenny Hinshaw

PM-150. Esther Meisler  
**Characterizing the Aberrant Expression of Maelstrom**  
Bais Yaakov High School (Maryland)  
Preceptors: Dr. Pavol Genzor, Mr. Sushil Sobti, Dr. Astrid Haase

PM-151. Hermela Mengesha  
**OpenSource Physical Activity Monitoring Device**  
Montgomery Blair High School (Maryland)  
Preceptors: Dr. Alexxai Kravitz, Mr. Mohamed Ali
PM-152. Nadia Miranda
The role of TGFβ in brown/beige adipocytes
California State University San Marcos (California)
Preceptors: Dr. Yanling Wang, Dr. Sushil Rane

PM-153. Reed Mszar
Impaired Beta Cell Responsivity in Insulin Resistant, Non-Diabetic South Asians
Bates College (Maine)
Preceptor: Dr. Ranganath Muniyappa

PM-154. Nicholas Munyan
Comets, Cancer and C:
Evaluating the Role of DNA Damage Induced by Pharmacologic Ascorbic Acid
University of Maryland, College Park (Maryland)
Preceptors: Dr. Pierre-Christian Violet, Dr. Mark Levine

PM-155. Ericka Nevarez Munoz
Erythropoiesis is regulated by nitric oxide pathway
Fort Hays State University (Kansas)
Preceptors: Dr. Shoumo Dey, Dr. Constance Tom Noguchi

PM-156. Tasha Nez
Identification of Genetic Variants that Influence Human Body Weight with Altered Population Based Frequency Due to Adaptation to Environment
Northern Arizona University College of Engineering, Forestry and Natural Sciences (Arizona)
Preceptors: Dr. Leslie Baier, Dr. Pankaj Kumar, Mr. Darin Mahkee

PM-157. Chi Nguyen
TGF-beta signalling effect on key thermogenic gene expression in preadipocyte cell lines
Colgate University (New York)
Preceptors: Dr. Young Jae Bahn, Dr. Sushil Rane

PM-158. Claythia Nicholas
The Expression and Function of the MCT8 Thyroid Hormone Transporter in the Eye
Medgar Evers College (New York)
Preceptors: Dr. Ye Liu, Dr. Lily Ng, Dr. Douglas Forrest

PM-159. Ujuonu Nwizu
Postprandial Insulin and Incretin Responses in Premenopausal and Postmenopausal Women:
The Federal Women Study
Cornell University (New York)
Preceptors: Dr. Stephanie Chung, Dr. Anne Sumner
PM-160. Kavya Parekh
*Canalization: The Impact of Environmental Fluctuations on Stability and Evolution*
Thomas Jefferson High School for Science & Technology (Virginia)
Preceptor: Dr. Vipul Periwal

PM-161. Benjamin Paskoff
*Mapping methylation of the Fmr1 promoter in a mouse model of Fragile X Syndrome*
Pennsylvania State University (Pennsylvania)
Preceptors: Dr. Xiaonan Zhao, Dr. Karen Usdin

PM-162. Siona Prasad
*Expression of EpoR and Glut4 in White Adipose Tissue of delta EpoR Mice*
Thomas Jefferson High School for Science and Technology (Virginia)
Preceptors: Ms. Heather Rogers, Dr. Constance Noguchi

PM-163. Ethan Pritikin
*Gsα in MC4R Expressing Neurons is Essential for the Regulation of Energy Homeostasis*
University of Chicago (Illinois)
Preceptors: Mr. Eric Wilson, Dr. Lee S. Weinstein, Dr. Min Chen

PM-164. Priscila Rubio
*Molecular Dynamics Investigation of Human Adenosine A3 Receptor Activation Mechanisms*
Montgomery College (Maryland)
Preceptors: Dr. Antonella Ciancetta, Dr. Kenneth Jacobson

PM-165. John Ryan
*Assessing Microcirculation with Laser Doppler Flowmetry*
University of Virginia (Washington)
Preceptors: Mr. Brooks Leitner, Dr. Kong Chen, Dr. Robert, Brychta, Dr. Ranganath Muniyappa

PM-166. Alexander Sabol
*Dynamic Control of Food Intake During Intruder Challenge*
Emory University (Georgia)
Preceptors: Dr. Michael Krashes, Dr. Chia Li, Mr. CJ Burnett

PM-167. Lisa Scheuing
*Differences in Immune Activation Markers in the Splenic Vein, Portal Vein and Periphery of Treated Chronic Hepatitis C Patients*
Georgetown University School of Medicine (District of Columbia)
Preceptor: Dr. Theo Heller
PM-168. Corbin Schuster  
*Impact of Varying Fat Source and Fat Concentration on Reduced Chow Consumption Following Short Access to High Fat Diet*  
Heritage University (Washington)  
Preceptors: Dr. Wambura Fobbs, Dr. Alexxai Kravitz

PM-169. Hina Shah  
*A pharmacologic screen for epigenetic regulators of adult hemoglobin activation in differentiating mouse erythroleukemia cells*  
Cornell University (New York)  
Preceptors: Dr. Ann Dean, Dr. Benjamin Leadem

PM-170. Sooah Sohn  
*Characterization of Mouse Osteoblasts with Targeted Deletion of the Erythropoietin Receptor*  
Richard Montgomery High School (Maryland)  
Preceptors: Dr. Sukanya Suresh, Dr. Constance Noguchi

PM-171. Cody Stein  
*Natural Product Analogs of Blasticidin S as Broad Spectrum Antibiotics*  
University of Colorado, Colorado Springs (Colorado)  
Preceptors: Dr. Sivakoteswara rao Mandadapu, Dr. Gengxiang Zhao, Dr. Carole Bewley

PM-172. Jaena Taitague  
*The Role of Brd4 in Adipogenesis*  
University of Guam (Guam)  
Preceptors: Dr. Ji-Eun Lee, Dr. Kai Ge

PM-173. Lionelle Tchanga Betnji  
*Understanding the physiological function of FES1 in Saccharomyces cerevisiae beyond the nucleotide exchange factor for Hsp70.*  
Springbrook High School (Maryland)  
Preceptors: Dr. Shailesh Kumar, Dr. Daniel Masison

PM-174. Rujia Teng  
*Induction of nNOS expression with C2C12 myoblast differentiation*  
Vanderbilt University (Tennessee)  
Preceptors: Dr. Alan Schechter, Dr. Connie Noguchi, Dr. Barbora Piknova

PM-175. Parisa Thepmankorn  
*Determining the Time Window of Histone Exchange in the C.elegans Germline*  
Brown University (Rhode Island)  
Preceptors: Dr. Simona Rosu, Dr. Orna Cohen-Fix
PM-176. Parisorn Thepmankorn
*Editing Centriole Duplication Genes in Caenorhabditis elegans using CRISPR/Cas9*
College of New Jersey (New Jersey)
Preceptors: Dr. Jyoti Iyer, Dr. Kevin O'Connell

PM-177. Manaswitha Thota
*Isolation and Characterization of suppressors of sei1pex30 double mutant*
College of William and Mary (Virginia)
Preceptors: Dr. Amit Joshi, Dr. William Prinz

PM-178. Wesley Tung
*Role of beta arrestins in regulation of beta adrenergic receptor signaling in adipocytes*
University of Illinois at Urbana-Champaign (Illinois)
Preceptors: Dr. Sai Pydi, Dr. Jurgen Wess

PM-179. Rachel Vanjoske
*Examining the effect of O-GlcNAc in Mixed Lineage Leukemia 1 (MLL1) in leukemia cell lines*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Ilhan Akan, Dr. John Hanover

PM-180. Jacob Vieira
*Improved Visualization and Scalability of R ChIP-seq Quality Control Analysis*
University of Massachusetts Amherst (Massachusetts)
Preceptors: Dr. Ryan Dale, Dr. Elissa Lei

PM-181. Edward Will
*Synthesis of Allosteric Enhancers of the A1 Adenosine Receptor*
Imperial College London (Non-U.S.)
Preceptors: Dr. Kenneth Jacobson, Dr. Rama Ravi

PM-182. Christopher Yin
*PNA-based Microfluidic Chip for Isothermal Detection of HIV*
University of California, San Diego (California)
Preceptors: Dr. Kaylyn Oshaben, Dr. Daniel Appella, Dr. Nicole, Morgan, Mr. Tom Pohida

PM-183. Derek Zhang
*Exploring Long Noncoding RNA Function in GATA2 Gene Expression*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Guoyou Liu, Dr. Ann Dean
National Institute of Environmental Health Sciences (NIEHS)

PM-184. Ryan Booth
Profileing the Expression of Progesterone Receptor and Serum Response Factor Pathway Members in Female Reproductive Tract
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Steve Wu, Dr. Xiaqui Wang, Dr. Francesco DeMayo

PM-185. Meghan Chung
Temporal and spatial expression pattern of the EZH2 gene in murine uteri during early pregnancy
Wake Technical Community College (North Carolina)
Preceptors: Dr. Xiaoqiu Wang, Dr. Francesco DeMayo

PM-186. Danielle Duarte
The Effects of Environmental Exposure on the Clinical Phenotype of Idiopathic Inflammatory Myopathies
University of New Mexico (New Mexico)
Preceptors: Dr. Frederick Miller, Dr. Adam Schiffenbauer

PM-187. Lily Ivanov
Sulfite Induced Protein Radical Formation in LPS Challenged Mice: Implication of Protein Radicals in Asthma
Athens Drive High School (North Carolina)
Preceptors: Dr. Ashutosh Kumar, Dr. Ronald Mason

PM-188. Harini Salgado
Whole exome sequencing analysis in 35 patients with juvenile dermatomyositis
Pomona College (California)
Preceptors: Dr. Adriana Almeida de Jesus, Dr. Lisa Rider, Dr. Raphaela Goldbach-Mansky

PM-189. Arnav Subramanya
Biologically-based Bayesian Networks and Application to Chemical Carcinogenesis
University of North Carolina in Chapel Hill (North Carolina)
Preceptor: Dr. Nicole Kleinstreuer

National Institute of Mental Health (NIMH)

PM-190. Thomas Brettschneider
Visualizing Neural Activity in CA2 using GCaMP and Cre Recombinase
Michigan State University (Michigan)
Preceptors: Dr. Scott Young, Dr. Adi Cymerblit-Sabba
PM-191. James Brown
Stimulus Properties Effect Population Receptive Responses Measured using fMRI
Virginia Polytechnic Institute and State University (Virginia)
Preceptors: Dr. Chris Baker, Dr. Elisha Merriam

PM-192. Justin Buck
Optimization of Histological Methods to Examine Neuromodulatory Projections of the Mouse Brain
University of Maryland, College Park (Maryland)
Preceptor: Dr. Kuan Wang

PM-193. Aviva Caplan
Correlation Between Behavioral Tests of Face/Object Memory and Resting State FMRI Results in Healthy Individuals May Reveal New Thoughts on Prosopagnosia
Community College of Baltimore County (Maryland)
Preceptors: Dr. Michal Ramot, Ms. Catherine Walsh, Dr. Alex Martin

PM-194. Yeshwant Chillakuru
Evaluation of a novel PET radioligand for imaging O-linked-N-acetyl-glucosamine hydrolase (O-GlcNAcase), an enzyme involved in clearance of tau protein from brain
George Washington University (District of Columbia)
Preceptors: Dr. Robert Innis, Dr. Jeih-San Liow, Dr. Soumen Paul

PM-195. Elizabeth Choi
Validation of RNA-Sequencing using Quantitative Real-Time Polymerase Chain Reaction
Dartmouth College (New Hampshire)
Preceptors: Dr. Barbara Lipska, Dr. Ningping Feng, Mr. Robin, Kramer, Ms. Qing Xu

PM-196. Eunice Chung
An analysis of magnetoencephalography and electroconvulsive therapy data
University of Maryland, College Park (Maryland)
Preceptors: Dr. Sarah Lisanby, Dr. Zhi-De Deng

PM-197. Anna Cook
Does Rapamycin Rescue Audiogenic Seizures in Fragile X Mice?
University of South Carolina (South Carolina)
Preceptors: Dr. R. Michelle Saré, Dr. Carolyn Beebe Smith

PM-198. Karis Courey
Optogenetic Stimulation of Vasopressin Neurons
University of Akron (Ohio)
Preceptors: Dr. Su Hyun Lee, Dr. Sarah Williams Avram, Dr. Adi, Cymerblit-Sabba, Dr. W. Scott Young
PM-199. Riley Davies
*Developing PET Imaging Agents to Measure NR2B within NMDA Complexes*
Oberlin College (Ohio)
Preceptors: Dr. Lisheng Cai, Dr. Victor Pike

PM-200. Jackie De Melo
*Characterization of the efferent projections of phosphodiesterase 1B (PDE1B)-expressing neurons of the paraventricular nucleus of the thalamus using genetically encoded anterograde tracing*
Rockville High School (Maryland)
Preceptors: Dr. Mario Penzo, Mr. Omar Koita

PM-201. Rachel Dick, Pradith Santapur
*Chemogenetic Manipulation of the Dorsal and Ventral Hippocampus in Spatial Memory*
University of Virginia (Virginia), Chantilly High School (Virginia)
Preceptors: Mr. Mike Leventhal, Dr. Gloria Laryea, Dr. Yogita Chudasama

PM-202. Victoria Flagg
*Patterns of Motor Activity in Humans and Monkeys*
Brown University (Rhode Island)
Preceptors: Dr. Kathleen Merikangas, Dr. Judy Cameron, Dr. Haochang Shou

PM-203. Winni Gao
*Potentiation of the Medial Amygdala Circuit Induces Sustained Aggression*
Cornell University (New York)
Preceptors: Dr. Zheng Li, Dr. Jacob Nordman

PM-204. Alshaday Gudina
*Pathway analysis: comparing different approaches using PGC-ADHD (psychiatric genetic consortium - attention-deficit/hyperactivity disorder)*
University of Virginia (Virginia)
Preceptors: Dr. Yin Yao, Dr. Sun Kang, Dr. Wei Guo

PM-205. Sarina Hanfling
*Marmoset training: object identification and fixation*
Tufts University (Massachusetts)
Preceptors: Dr. Jim Pickel, Ms. Sindhura Kolachana

PM-206. Hannah Hatchell
*Complement 4 Haplotyping and Structural Variant Detection within the MHC Region in 445 Brain Whole Genome Sequencing Samples*
Georgia Institute of Technology (Georgia)
Preceptors: Mr. Robin Kramer, Dr. Barbara Lipska

**PM-207. Chris Higham**  
*Environmental Enrichment as a Prophylactic Against Stress-Induced Neuroinflammation*  
Colgate University (New York)  
Preceptors: Dr. Michael Lehmann, Dr. Miles Herkenham

**PM-208. Oliver Hightower**  
*Targeting a FRET Sensor to Monitor CaMKII Activation*  
Montgomery College (Maryland)  
Preceptors: Dr. Susan Amara, Dr. Suzanne Underhill, Ms. Carla Glasser

**PM-209. Erika Hinkle**  
*Body Composition in Sex Chromosome Aneuploidies*  
University of Maryland, College Park (Maryland)  
Preceptors: Mrs. Erin Torres, Dr. Armin Raznahan, Dr. Liv, Clasen, Mr. Jonathan Blumenthal

**PM-210. Cherella Hughes**  
*Investigating the Potential Link between Inflammation in the Brain and Suicidal Ideation*  
Fort Lewis College (Colorado)  
Preceptors: Dr. Elizabeth Ballard, Dr. Erica Richards, Dr. Carlos Zarate

**PM-211. Arman Yashar Khojandi**  
*Assessing the test-retest reliability of resting state fMRI data using metrics from CONN Functional Connectivity Toolbox*  
George Mason University (Virginia)  
Preceptor: Dr. Karen Berman

**PM-212. Margaret Lin**  
*Sex Differences in Motor Activity*  
Montgomery Blair High School (Maryland)  
Preceptors: Dr. Kathleen Merikangas, Mrs. Lihong Cui

**PM-213. Saivardhan Mada**  
*Genome Wide Association Study of Antidepressant Efficacy on Major Depressive Disorder using Random Forest Classification Algorithm*  
Georgia Institute of Technology (Georgia)  
Preceptors: Dr. Yin Yao, Dr. Wei Guo

**PM-214. Nino Migineishvili**  
*Parsimony and Machine Learning in Neuroimaging*  
University of California, Los Angeles (California)  
Preceptors: Dr. John Rogers-Lee, Dr. Dylan Nielson, Dr. Peter, Bandettini, Dr. Adam Thomas
PM-215. Reem Mohamed
*Cognitive Functioning and Adaptive Behavior Based on Seizure History in Pediatric Undiagnosed Disease Program Patients*
George Washington University (District of Columbia)
Preceptors: Dr. Audrey Thurm, Dr. Cristan Farmer

PM-216. Darrah Morrison
*Using High Throughput Sequencing to Understand the Effects of Steroid Hormones on Human Neuronal (Luhmes) Cell Line*
Catholic University of America (District of Columbia)
Preceptors: Mr. Peter Schmidt, Ms. Allison Goff, Ms. Sarah Rudzinskas

PM-217. Michelle Noh
*The effect of transcranial magnetic stimulation coil orientation on noise in resting state electroencephalogram recordings*
Massachusetts Institute of Technology (Massachusetts)
Preceptors: Dr. Sarah Lisanby, Dr. Thomas Radman

PM-218. Christine Oh
*Expression of noradrenergic receptors in cortical GABAergic neurons*
University of Virginia (Virginia)
Preceptor: Dr. Soohyun Lee

PM-219. Duy Phan
*Understanding the architecture of the central pacemaker in the mammalian hypothalamus*
Johns Hopkins University (Maryland)
Preceptor: Dr. Samer Hattar

PM-220. Rhea Rakheja
*Exploring the Relation between Time-of-Day and Performance in Cognitive Tasks*
Poolesville High School (Maryland)
Preceptors: Dr. Chris Baker, Dr. Cibu Thomas, Dr. Wilma Bainbridge

PM-221. Victoria Rooke
*Characterizing the Role of the Paraventricular Nucleus of the Thalamus in Mediation of Homeostatic Feeding*
Walter Johnson High School (Maryland)
Preceptors: Dr. Mario Penzo, Dr. Sofia Beas

PM-222. Nikhil Sahni
*Unlocking the Brain*
Wheaton High School (Maryland)
PM-223. Pradith Santapur, Rachel Dick
Chemogenetic Manipulation of Dorsal and Ventral Hippocampus in Spatial Memory
Chantilly High School (Virginia), University of Virginia (Virginia)
Preceptors: Ms. Madeleine Perkins, Dr. Johann du Hoffmann, Dr. Kevin, Cravedi, Dr. Yogita Chudasama

PM-224. Mina Senthil
The Newsletter: The Importance of Maintaining Communication with Study Participants and Relaying Complex Scientific Concepts in Simple, Understandable Language
Thomas Sprigg Wootton High School (Maryland)
Preceptors: Dr. Francis McMahon, Ms. Emily Besancon, Ms. Lexie Wille

PM-225. Lindsey Shain
Comparing caregiver and child/adolescent self-report measures of the state trait anxiety inventory (STAI) in medically ill patients
Western Kentucky University (Kentucky)
Preceptors: Dr. Lori Wiener, Dr. Lisa Horowitz, Dr. Maryland Pao

PM-226. Susie Shin
Postnatal Development and Distribution of Cells in Psychiatric Disorders
Vanderbilt University (Tennessee)
Preceptors: Dr. Kuan Hong Wang, Dr. Wenyu Zhang

PM-227. Bezawit Sisay
Development of Marmoset Transfer Box
Towson University (Maryland)
Preceptor: Dr. Jim Pickel

PM-228. Madison Stevens
The role of the ventral striatum in appetitive and aversive reinforcement learning
Lake Shore Senior High (New York)
Preceptors: Mr. Craig Taswell, Dr. Bruno Averbeck

PM-229. Ginny Sun
Bioinformatics Analyses of the Adaptive Immune System in Depression
Massachusetts Institute of Technology (Massachusetts)
Preceptors: Dr. Stacey Kigar, Dr. Miles Herkenham

PM-230. Zoe Tompkins
Angiotensin II Induces the Axonal Trafficking and Translation of Tyrosine Hydroxylase mRNA
Walt Whitman High School (Maryland)
PM-231. Caitlin Van Wicklin  
*Population Receptive Fields in the Visual Word Form Area are Tuned Ideally for Word Reading*  
Virginia Tech (Virginia)  
Preceptors: Dr. Christopher Baker, Dr. Edward Silson

PM-232. Sameera Vedantam  
*Axonal Trafficking of Nuclear-Encoded Mitochondrial ATP Synthase mRNA*  
American Heritage School - Plantation (Florida)  
Preceptors: Dr. Barry Kaplan, Dr. Armaz Aschrafi, Mr. Mark Colt

PM-233. Grace Wang  
*The influence of gonadal steroid hormones on maturation of forebrain dopaminergic anatomy*  
Meade Senior High School (Maryland)  
Preceptors: Dr. Kuan Hong Wang, Mr. Matthew Coon, Mr. Justin Buck

PM-234. Alexander Wong  
*Machine Learning Applied to Brain Image Segmentation*  
University of California, San Diego (California)  
Preceptor: Dr. Robert Cox

PM-235. Maxwell Wong  
*Acceleration of voxel searchlight regression models*  
University of California, Irvine (California)  
Preceptor: Dr. Peter Bandettini

PM-236. Kevin Zhu  
*Gene Expression in Human Induced Pluripotent Stem Cells and their Neural Derivatives: Effects of Donor, Cell type, and Psychotropic Medications*  
Johns Hopkins University (Maryland)  
Preceptors: Dr. Francis McMahon, Dr. Xueying Jiang

**National Institute of Neurological Disorders and Stroke (NINDS)**

PM-237. Nicholas Adamstein  
*Defining the Expression of Programmed Death Ligand 1 (PD-L1) in the High-Grade Glioma Microenvironment and its Clinical Implications*  
Columbia University College of Physicians and Surgeons (New York)  
Preceptor: Dr. Edjah Nduom

PM-238. Adam Adelstein  
*How Tubulin Isoform Composition Influences Microtubule Dynamics*
PM-239. Lydia Albjerg  
*Fludarabine-induced neurotoxicity*  
Pacific Northwest University of Health Sciences (Washington)  
Preceptors: Dr. Omar Khan, Ms. Julie Albert

PM-240. Mary Alice Allnutt  
*Chromosomal Integration of Human Herpesvirus 6 (ciHHV6): Detection in Peripheral Blood Lymphocytes by Droplet Digital PCR*  
Elon University (North Carolina)  
Preceptors: Mr. Major Lin, Dr. Steven Jacobson

PM-241. Claire Altany  
*Examining Connectivity using TMS-EEG*  
Yale University (Connecticut)  
Preceptors: Dr. Eric Wassermann, Dr. Michael Freedberg, Mr. Jack Reeves

PM-242. Simon Arango Baquero  
*Testing Immunomodulatory Properties of TRAP-MS Clinical Trial Drugs on the Conversion of Astrocytes to a Neurotoxic Phenotype by Inflammatory Stimuli*  
Poolesville High School (Maryland)  
Preceptors: Dr. Ruturaj Masvekar, Mr. Joshua Milstein, Dr. Bibiana Bielekova

PM-243. Jefferson Ascencio  
*Visualization and Digital Recreation of Dopamine Neurons*  
Gonzaga College High School (District of Columbia)  
Preceptors: Dr. Paul Kramer, Dr. Zayd Khaliq

PM-244. Jamal Bailey  
*Investigating the Viability of Electromagnetic Fields In Vitro for the Treatment of Glioblastoma*  
Prince George's Community College (Maryland)  
Preceptor: Dr. John Heiss

PM-245. Valerie Bakly  
*Sonication Breaks the Postsynaptic Density into Subcomplexes*  
Mount Saint Mary's University (Maryland)  
Preceptor: Dr. Ayse Dosemeci

PM-246. Marie Baranoski, Aleksandr Fuksenko  
*Crowd-Sourced System for Labeling of 3D Electron Microscopy Connectome Data: Code Optimization and System Enhancement*
Georgia Institute of Technology (Georgia), University of Maryland, College Park (Maryland)
Preceptors: Mr. Srujan Ganta, Mr. Amarendra Yavatkar, Dr. Yang, Fann, Dr. Kevin Briggman

PM-247. Marjo Beltoja
Investigating the role of protrusion mediated cell-cell contact in Notch signaling
Brown University (Rhode Island)
Preceptors: Dr. Ginger Hunter, Dr. Edward Giniger

PM-248. Tzipporah Bergman
Characterization of the Expression of Novel Spinal Neuron Markers Discovered by Single Cell Sequencing
Bnos Yisroel of Baltimore (Maryland)
Preceptors: Dr. Ariel Levine, Ms. Li Li

PM-249. Akrita Bhatnagar, Prashant Chittiboina
Enhanced 5-ALA Induced Fluorescence in Pituitary Adenomas
George Washington School of Medicine and Health Sciences (District of Columbia), NINDS (Maryland)
Preceptors: Dr. Prashant Chittiboina, Dr. Jie Lu

PM-250. Nechama Biberfeld
Immunofluorescence Microscopy to Assess Vesicular Storage in Catecholaminergic Neurons
Montgomery College (Maryland)
Preceptors: Dr. Risa Isonaka, Dr. Yunden Jinsmaa, Ms. Patricia, Sullivan, Dr. David Goldstein

PM-251. Stacey Bloom, Chidinma Opaigbeogu, Jasmine Akiko Garcia
Feeding into the Problem: Are Certain Formulated Diets Correlated to Overweight Rats?
University of Maryland, College Park (Maryland), From the Heart Christian School (Maryland),
University of California, San Diego (California)
Preceptors: Dr. LaTesa Hughes, Dr. James O'Malley

PM-252. Kayla Bohlke, Carlton Wicker, Jr.
Optimizing the immunohistochemistry protocol and analysis for correlative serial block-face electron microscopy
University of Maryland, College Park (Maryland), College of Southern Maryland (Maryland)
Preceptors: Ms. Kara Fulton, Dr. Kevin Briggman

PM-253. Kiki Bonetta-Misteli
Core Autophagy Genes are Differentially Required for Pexophagy
Walter Johnson High School (Maryland)
Preceptors: Dr. Chunxin Wang, Dr. Richard Youle
PM-254. Grace Cheung  
*Structural Study of AKAP and STEP Membrane Targeting to the Post-synaptic Membrane*  
Yale University (Connecticut)  
Preceptors: Dr. Xiaobing Chen, Dr. Thomas Reese

PM-255. James Chief  
*Mapping Projections of GABAergic Neurons in the Botzinger and Pre-Botzinger Complex*  
Montana State University (Montana)  
Preceptors: Dr. Jeffrey Smith, Dr. Shahriar Sheikhbahaei

PM-256. Supraja Chittari  
*Cloning and characterization of the squid sodium channel*  
University of Virginia (Virginia)  
Preceptors: Dr. Miguel Holmgren, Dr. Chhavi Mathur, Dr. Pablo Miranda

PM-257. Emilio Chufan-Bordon  
*Fluorescence Analysis of Glycosylated Proteins in Isolated Axons from Loligo palei*  
Howard High School (Maryland)  
Preceptors: Dr. Miguel Holmgren, Dr. Pablo Miranda Fernandez

PM-258. JoAnne Compo  
*A quality of life comparison of spinal and bulbar muscular atrophy to other neuromuscular disorders*  
University of Washington (Washington)  
Preceptors: Dr. Christopher Grunseich, Dr. Kenneth Fischbeck, Mrs. Angela Kokkinis

PM-259. Aleksandra Dagunts  
*Identification and Characterization of Novel D4 Dopamine Receptor Antagonists with High Affinity and Selectivity*  
George Washington University (District of Columbia)  
Preceptors: Dr. David Sibley, Dr. Benjamin Free

PM-260. Melanie Delgado  
*Antibody Detection of Autoantigens (MOG and AQP4) Using an Electrochemiluminescence Assay for Neuromyelitis Optica Spectrum Disorder (NMOSD)*  
American University (District of Columbia)  
Preceptors: Dr. Steve Jacobson, Dr. Shila Azodi, Dr. Chiara Monaco

PM-261. Brianna DiSanza  
*Activation of a Human Endogenous Retrovirus (HERV) in a Neurodevelopmental Tumor and Modulation by Ouabain*  
University of Virginia (Virginia)  
Preceptors: Dr. Tara Doucet-O'Hare, Dr. Lisa Henderson, Dr. Avi Nath
PM-262. Cole Dittentholer
Generation of a Homozygous GluN2B Knockin mouse
White Swan High School (Washington)
Preceptors: Dr. Katherine Roche, Dr. John Badger

PM-263. Tsemacha Dubuche
Validating an MRI Measure of Spinal Cord Atrophy using Clinical and Research Scans
Montgomery College (Maryland)
Preceptors: Dr. Steven Jacobson, Dr. Shila Azodi, Dr. Govind Bhagavatheeshwaran

PM-264. David Espinoza
Conversion of Human iPS Cells to Sensory Neurons
Johns Hopkins University (Maryland)
Preceptors: Mr. Alec Nickolls, Dr. Carsten Bonnemann

PM-265. Francia Fang
Development of an inducible IDH1 R132H mutation cell model for the study of glioma pathogenesis
Duke University (North Carolina)
Preceptors: Dr. John Heiss, Dr. Zhengping Zhuang, Dr. Herui Wang

PM-266. Graeme Fenton
Missense mutations at spastin residue 499 impair endosomal trafficking and result in clinically different neurologic syndromes
University of California, Berkeley (California)
Preceptors: Dr. Lymarie Maldonado-Baez, Dr. Nelson Cole, Dr. Crystal, Lee, Dr. Craig Blackstone

PM-267. Jason Fu, Rachel Rolinski
Does PET Partial Volume Correction Improve Seizure Focus Localization?
Swarthmore College (Pennsylvania), Michigan State University (Michigan)
Preceptor: Dr. William Theodore

PM-268. Noah Fu
Recruiting ER-derived vesicles to late endosomes for transport in axons
Saint Louis University (Missouri)
Preceptors: Dr. Rajat Puri, Dr. Zu-Hang Sheng

PM-269. Jasmine Akiko Garcia, Stacey Bloom, Chidinma Opaigbeogu
Optimizing health through bedding efficiency for laboratory rats
University of California, San Diego (California), University of Maryland, College Park (Maryland),
From the Heart Christian School (Maryland)
PM-270. Michael Gold
*Neural Correlates of EEGRT: A Resting-State fMRI Study*
Brown University (Rhode Island)
Preceptors: Dr. Eric Wassermann, Dr. Jeffrey Lewis

PM-271. Andrew Gray
*Carney Complex: Neurological sequelae in a Multiple Neoplasm Syndrome*
Pacific Northwest University of Health Sciences - College of Osteopathic Medicine (Washington)
Preceptor: Dr. Omar Khan

PM-272. Amelia Hall
*P3 Cone Responses of Zebrafish Thyroxin beta-2 Nuclear-Receptor Knockout to Various Light Wavelengths*
Haldane High School (New York)
Preceptor: Dr. Ralph Nelson

PM-273. Elyssa Hawk
*Generation of clustered regularly interspaced short palindromic repeats (CRISPR) tools to study Parkinson’s Disease.*
Salish Kootenai College (Montana)
Preceptors: Mr. Gil Kanfer, Mrs. Sarah Pickles, Dr. Richard Youle

PM-274. Hayden Hawk
*Comparing the efficiencies of commercially available transfection reagents for optimizing an AAV virus packaging protocol using HEK293 cells.*
Hellgate High School (Montana)
Preceptor: Mr. Raymond Fields

PM-275. Natalie Ivanina
*Dissecting complex disease: The age of genome sequencing in precision medicine*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Sonja Scholz, Ms. Marya Sabir

PM-276. Catherine Jean
*Assessing The Neuroprotective Activity of Statins*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Joe Steiner, Ms. Muzna Bachani, Dr. Nasir Malik

PM-277. Carly Kaplan
*A context-based neural explanation of temporal effects in associative memory performance*
Brown University (Rhode Island)
PM-278. Gregory Keating, Grace Armstrong, Jamal Bailey
*Combination of Protein phosphatase 2A Inhibition and PD-1 Blockade Synergistically Induces Regression of Murine Intracranial Glioblastoma*
Georgetown University School of Medicine (District of Columbia), Barnard College (New York), Prince George's Community College (Maryland)
Preceptors: Dr. Dominic Maggio, Dr. Zhengping Zhuang, Dr. John Heiss

PM-279. Mary Kelley
*Mastocytosis and Headaches*
Pacific Northwest University of Health Sciences College of Osteopathic Medicine (Washington)
Preceptor: Dr. Omar Khan

PM-280. Alexandra Kilkenny Hansen
*The Elusive Physician-Scientist: The Effect of Publication Rates on the Physician-Scientist Workforce*
University of California, San Diego (California)
Preceptors: Dr. Omar Khan, Mr. Wyatt Bensken

PM-281. Hyong Kim
*Identification of the components of muscarinic receptor signaling in mediating neuronal hyperpolarization in Drosophila larval visual system*
University of Pennsylvania (Pennsylvania)
Preceptors: Dr. Quan Yuan, Dr. Jun Yin

PM-282. Pavan Krishnan
*A Histological Evaluation of a Novel ZASP Mutant Myofibrillar Myopathy Mouse Model*
Case Western Reserve University (Ohio)
Preceptors: Dr. Ami Mankodi, Dr. Yotam Blech-Hermoni, Mrs. Kalpana Subedi

PM-283. Lex Lehr
*Phosphorylation of Neuroligin 1 and its Implications*
Ursinus College (Pennsylvania)
Preceptors: Mr. Thien Nguyen, Dr. Katherine Roche

PM-284. William Levesque
*Flow Cytometric Identification of Epstein Barr Virus Specific Memory B Cells in Multiple Sclerosis Patients*
Colby College (Maine)
Preceptors: Dr. Steve Jacobson, Ms. Yoshimi Akahata, Dr. Sarah Andrews
PM-285. Tianming Li  
*Subcellular distribution of GABAα receptor beta subunits in hippocampal neurons*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Wei Lu, Dr. Jingjing Duan

PM-286. Xiaoyang Li  
*Cell Segmentation and Computational Analysis on Rat Brain Tissue*  
University of Houston (Texas)  
Preceptors: Dr. Dragan Maric, Dr. Badri Roysam, Mr. Jahandar, Jahanipour, Mr. Kedar Grama

PM-287. Delores Luttrell  
*Effect of HERV-K Exposure on Astrocyte Activation/Function: Implications for Neurodegenerative Disease*  
Osbourn High School (Virginia)  
Preceptors: Dr. Lisa Henderson, Dr. Avindra Nath

PM-288. Alexandra Mandel  
*The Effect of Cognitive and Motor Effort in Healthy Volunteers*  
George Washington University (District of Columbia)  
Preceptors: Dr. Traian Popa, Dr. Silvina Horovitz, Dr. Mark Hallett

PM-289. Melika Marani  
*Assessing CHCHD2/10 Localization Using Split GFP Assay*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Derek Narendra, Dr. Xiaoping Huang

PM-290. Jason Mazique  
*TP5 modulates the dendritic morphology of the cultured rat cortical neurons*  
Williams College (Massachusetts)  
Preceptors: Dr. Sharda Yadav, Dr. Harish Pant

PM-291. ReLiza McGinnis  
*Viral Dissemination in the Meninges Impedes Reparative Angiogenesis Following Traumatic Brain Injury*  
University of North Carolina at Chapel Hill (North Carolina)  
Preceptors: Mr. Matthew Russo, Dr. Dorian McGavern

PM-292. Mazda Moayeri  
*Automated lesion segmentation in Spinal Cord MRIs of Marmoset EAE*  
Harvey Mudd College (California)  
Preceptors: Ms. Jennifer Lefeuvre, Dr. Pascal Sati
PM-293. Summer Montileaux  
Quantification of RNA in dopamine neuron cell types  
Red Cloud Indian School (South Dakota)  
Preceptors: Dr. Rebekah Evans, Dr. Zayd Khaliq, Dr. Sherry Zhang

PM-294. Meghana Nadella  
Adjusting Protein Levels for Genotype to Improve the Accuracy of Multiple Sclerosis (MS) Classifiers that Differentiate Progressive from Relapsing-Remitting MS  
Allen High School (Texas)  
Preceptors: Mrs. Ann Marie Weideman, Dr. Bibi Bielekova

PM-295. Matthew Nalls  
Screening of Morpholino Antisense Oligos (PMOs) for skipping of pseudoexon inclusion in Collagen 6 Alpha 1 gene  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Veronique Bolduc, Dr. Apurva Sarathy, Dr. Carsten Bonnemann

PM-296. Diana Nguyen  
Effect of CHCHD2 and CHCHD10 Loss on the Mitochondrial Proteome  
Clemson University (South Carolina)  
Preceptors: Dr. Derek Narendra, Dr. Xiaoping Huang

PM-297. Arnold Obungu  
Investigating the Immunosuppressive Role of Fibroblast Activation Protein-Alpha (FAP-alpha) in the Microenvironment of High Grade Gliomas.  
Indiana University School Of Medicine (Indiana)  
Preceptor: Dr. Edjah Nduom

PM-298. Tracy Ogata  
Dysregulation of TGFbeta signaling pathway in an in vitro model of collagen VI-related muscular dystrophy  
University of California, Irvine (California)  
Preceptor: Dr. Payam Mohassel

PM-299. Chidinma Opaigbeogu, Jasmine Akiko Garcia, Stacey Bloom  
Increasing Cage Change Intervals of Mice Through Different Beddings  
From the Heart Christian School (Maryland), University of California, San Diego (California), University of Maryland, College Park (Maryland)  
Preceptors: Dr. LaTesa Hughes, Dr. James O’Malley

PM-300. Maria Ortiz  
Exploring the tools of biotechnology: The purification of a fluorescent protein mCherry  
White Swan High School (Washington)  
Preceptors: Dr. Joseph Mindell, Ms. Alissa Becerril, Ms. Irina Shlosman
PM-301. Parvathy Panakal
*Effects of WNT Pathway Activators on Neural Stem Cell (NSC) Proliferation*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Joe Steiner, Dr. Nasir Malik, Ms. Muzna Bachani

PM-302. Jacob Parker
*Correlation of Clinical Characteristics and Structural/Functional MRI Abnormalities in Spinocerebellar Ataxia Type 7*
New York University (New York)
Preceptors: Dr. Shabbir Merchant, Dr. Silvina Horovitz, Dr. Mark Hallett

PM-303. Claire Marie Perez
*Mapping of spatial distribution of the olfactory bulb new neurons at single cell level using iron oxide assisted-MRI*
University of Guam (Guam)
Preceptors: Dr. Nikorn Pothayee, Dr. Stephen Dodd

PM-304. Kara Quaid
*Using Clinical Data at Discharge to Model Prognosis post Stroke*
Case Western Reserve University (Ohio)
Preceptors: Dr. Kory Johnson, Mr. Amarendra Yavatkar, Dr. Yang Fann

PM-305. Cyrus Rastegar
*Human endogenous retrovirus K is more active in the blood of amyotrophic lateral sclerosis patients and can be targeted by antiretroviral therapy*
Johns Hopkins University (Maryland)
Preceptors: Dr. Marta Garcia Montojo, Dr. Avindra Nath

PM-306. Noah Riley
*Homology model of a putative bacterial serotonin transporter*
North Carolina State University (North Carolina)
Preceptors: Dr. Lucy Forrest, Dr. Antoniya Aleksandrova

PM-307. Jacob Rosales
*Generation of ALS4 patient-derived motor neurons using a transcription factor overexpression system*
Red Cloud Indian School (South Dakota)
Preceptors: Dr. Christopher Grunseich, Dr. Kenneth Fischbeck

PM-308. Alexander Ryder
*Myoclonus and other neurological manifestation observed in Sialidosis type 1*
Pacific Northwest University of Health Sciences - College of Osteopathic Medicine (Washington)
PM-309. Devin Scott  
*The Neuroprotective Activity of Flavonoids*  
Spelman College (Georgia)  
Preceptors: Dr. Joseph Steiner, Ms. Muzna Bachani, Mr. Ferdinand Vilson

PM-310. Misha Sharma  
*Effect of TFP5 (truncated form of p35) on cancer cell lines*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Niru Amin, Dr. Manju Bhaskar

PM-311. Christine Shen  
*The Effect of Constitutively Active CaMKII on Spine Synapse Structure*  
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Xiaobing Chen, Mrs. Christine Winters, Ms. Virginia, Crocker, Dr. Thomas Reese

PM-312. Emily Shorb  
*VEGF and its Receptor in CNS Hemangioblastomas*  
Poolesville High School (Maryland)  
Preceptor: Dr. Marsha Merrill

PM-313. Alexander Silva  
*Discovery of Two Meningeal Macrophage Populations with Different Roles upon Homeostasis and Inflammation*  
University of Pennsylvania (Pennsylvania)  
Preceptors: Dr. Rejane Rua, Dr. Dorian McGavern

PM-314. Kathryn Slacin  
*Investigating Longitudinal Patterns of Spinal Cord Atrophy in Multiple Sclerosis Using MRI*  
College of William and Mary (Virginia)  
Preceptors: Dr. Shila Azodi, Dr. Govind Nair, Dr. Steven Jacobson

PM-315. Opal Stayer-Wilburn  
*Mapping Circuit Connections of Pre-Bötzinger Complex GABAergic Neurons in Adult Transgenic Rats*  
Mills College (California)  
Preceptors: Dr. Shahriar Sheikhbahaei, Dr. Jeffrey Smith

PM-316. Carol Sun  
*Adjusting Protein Levels for Genotype to Improve the Accuracy of Multiple Sclerosis Diagnostic Tests*
Oak Park High School (California)
Preceptors: Mrs. Ann Marie Weideman, Dr. Bibi Bielekova

PM-317. Mitchell Sun
A Novel Treatment of Glioblastoma Using CAR-T
University of Illinois at Chicago (Illinois)
Preceptors: Dr. John Heiss, Dr. Zhengping Zhuang, Dr. Qi Zhang

PM-318. Alan Tang
Osteogenesis and Epithelial Remodeling Following Neuroinvasive Infection
Vanderbilt University (Tennessee)
Preceptors: Dr. Dorian McGavern, Dr. Ashley Moseman

PM-319. Deionna Vigil
Methodology of Botulinum Toxin to Treat Pelvic Pain
Fort Lewis College (Colorado)
Preceptor: Dr. Barbara Karp

PM-320. Tarun Vippa
Quantifying ankle-dorsiflexion myotonia with a portable device in ambulatory individuals with myotonic dystrophy type 1: A 1-year follow up study
University of Virginia (Virginia)
Preceptors: Dr. Ami Mankodi, Ms. Hirity Shimellis

PM-321. Hannah Wang
Using In Vivo MRI to Explore Iron Accumulation in Subcortical Brain Regions of HIV Subjects
Columbia University in the City of New York (New York)
Preceptors: Ms. Paba De Alwis, Dr. Daniel Reich, Dr. Avindra, Nath, Dr. Govind Bhagavatheeshwaran

PM-322. Ronald Wang
Assessing predicted off-target effects of CRISPR-Cas9 system during polyglutamine length-specific isogenic engineering of a SBMA hiPSC model
Johns Hopkins University (Maryland)
Preceptors: Dr. Kenneth Fischbeck, Dr. Xia Feng

PM-323. Molly Weiner
Characterization of Cortical Lesions in Marmoset Experimental Autoimmune Encephalomyelitis
University of Chicago (Illinois)
Preceptors: Dr. Erin Beck, Dr. Daniel Reich

PM-324. Conner Whitten
Evolution of Neuroinflammatory Lesions in Human Subjects with CTLA-4 Haploinsufficiency
PM-325. Beverly Wu  
*The Role of CHCHD2 and CHCHD10 in Mitochondrial DNA Maintenance*  
University of Maryland, Baltimore County (Maryland)  
Preceptor: Dr. Derek Narendra

PM-326. Tina Xia, Naomi Jim  
*The Developmental Profile of GABA-A Receptor Beta Subunits in a Mouse Hippocampus*  
Walt Whitman High School (Maryland), Yakama Nation Tribal School (Washington)  
Preceptors: Dr. Wei Lu, Mr. Qingjun Tian

PM-327. Yiqiu Yang  
*Looking for Changes in Electrophysiological Biomarkers of Executive Function in the Hemiparkinsonian Rat Model*  
University of Michigan – Ann Arbor (Michigan)  
Preceptors: Mr. Alexander Weiss, Dr. Judith Walters

PM-328. Angela Yim  
*Tonic Pain Processing in the Basal Ganglia-Thalamo-Cortical Circuit of Hemiparkinsonian Rats*  
Washington University in St. Louis (Missouri)  
Preceptors: Mr. Alexander Weiss, Dr. Judith Walters

PM-329. Esther Yoon  
*Two hands are better than one: Exploring the clinical phenomenon of bimanual tremor improvement in essential tremor*  
Indiana University Bloomington (Indiana)  
Preceptors: Dr. Omar Ahmad, Dr. Imran Khan, Dr. Dietrich, Haubenberger, Dr. Mark Hallett

Office of the Director (OD)

PM-330. Alexis Bryant  
*The Impact of Wet Chemistry Photo Processor Treatment Processes on the Concentration of Silver in the Wastewater*  
University of Maryland University College (Maryland)  
Preceptor: Mr. Mark F. Miller

OD High School Scientific Training and Enrichment Program (HiSTEP)

HS-303. Stephen Agyepong  
*My Summer Experience in the HiSTEP Program at NIH*  
Paint Branch High School (Maryland)  
Preceptor:
HS-304. Olamide Alabi
My Summer Experience in the HiSTEP Program at NIH
High Point High School (Maryland)

HS-305. Pamela Aluvale
My Summer Experience in the HiSTEP Program at NIH
Wheaton High School (Maryland)

HS-306. Brooklyn Brown
My Summer Experience in the HiSTEP Program at NIH
McKinley Technology High School (Maryland)

HS-307. Stephany Carrasco
My Summer Experience in the HiSTEP Program at NIH
Montgomery Blair High School (Maryland)

HS-308. Kavisha Chandrawarakkalage
My Summer Experience in the HiSTEP Program at NIH
Wheaton High School (Maryland)

HS-309. Joseph Clark
My Summer Experience in the HiSTEP Program at NIH
Watkins Mill High School (Maryland)

HS-310. Kathleen Dang
My Summer Experience in the HiSTEP Program at NIH
Hayfield Secondary School (Maryland)

HS-311. Biobele Davies
My Summer Experience in the HiSTEP Program at NIH
Academy Of Health Science @ PGCC (Maryland)

HS-312. Inez Dibonge
My Summer Experience in the HiSTEP Program at NIH
Clarksburg High School (Maryland)

HS-313. Noha Elzaree
My Summer Experience in the HiSTEP Program at NIH
Eleanor Roosevelt High School (Maryland)
HS-314. Luis Estrada
My Summer Experience in the HiSTEP Program at NIH
Benjamin Banneker Academic High School (Maryland)

HS-315. Saul Flores
My Summer Experience in the HiSTEP Program at NIH
Watkins Mill High School (Maryland)

HS-316. Iliana Gonzalez
My Summer Experience in the HiSTEP Program at NIH
Academy Of Health Science @ PGCC (Maryland)

HS-317. Tooba Malik
My Summer Experience in the HiSTEP Program at NIH
Eleanor Roosevelt High School (Maryland)

HS-318. Stephanie Montes De Oca
My Summer Experience in the HiSTEP Program at NIH
Montgomery Blair High School (Maryland)

HS-319. Richard Nguyen
My Summer Experience in the HiSTEP Program at NIH
James Hubert Blake High School (Maryland)

HS-320. Chigozirim Nwogu
My Summer Experience in the HiSTEP Program at NIH
Benjamin Banneker Academic High School (Maryland)

HS-321. Maureen Onyebuchukwu
My Summer Experience in the HiSTEP Program at NIH
High Point High School (Maryland)

HS-322. Nathan Phillips
My Summer Experience in the HiSTEP Program at NIH
James Hubert Blake High School (Maryland)

HS-323. Mumtahina Tabassum
My Summer Experience in the HiSTEP Program at NIH
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HS-324. Simon Talusan
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Benjamin Banneker Academic High School (Maryland)

HS-325. Samuel Teshome
My Summer Experience in the HiSTEP Program at NIH
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HS-326. Vanessa Wong
My Summer Experience in the HiSTEP Program at NIH
James Hubert Blake High School (Maryland)

HS-327. Tsion Yemane
My Summer Experience in the HiSTEP Program at NIH
Albert Einstein High School (Maryland)
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