# NIH SUMMER INTERNSHIP PROGRAM PRESENTATION WEEK 2021 • AUGUST 3-5

## AGENDA

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NOTE: the complete program for Summer Research Presentation Week 2021, including poster titles, can be found at [https://www.training.nih.gov/assets/2021_Summer_Presentation_Week_Program.pdf](https://www.training.nih.gov/assets/2021_Summer_Presentation_Week_Program.pdf).
**PRESENTATION SESSION INFORMATION**

Virtual Summer Research Presentation Week 2021 is organized into 79 sessions (60 poster sessions and 19 lightning talk sessions), each with 6 to 9 presenters for poster sessions and 10 to 12 presenters for lightning talk sessions. The sessions will be shared via Zoom. The table below will allow you to determine on what day and in which session the presentations that interest you are scheduled. The sessions will take place over 3 days (August 3rd through August 5th) and are organized into 3 timeslots: 11:00 am – 12:30 pm, 1:00 – 2:30 pm, and 3:00 – 4:30 pm. For security reasons, we will share online session links with presenters and preceptors via email. To attend a particular presentation or session, find the Zoom event name for the session, which will be in the form “Summer Research Presentation - Session #”. Then use the associated link to access the session of interest. All session times will be Eastern Time.

**TUESDAY, AUGUST 3, 2021**

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*NCI-DCEG, NIAMS, and OD share Session 18.
†NCI-DCEG, NIAMS, and NIEHS share Session 26.
OD-HiSTEP participants will present lightning talks in both Session 21 and Session 27.
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* NIBIB and NLM share Session 41.
† CC, NIBIB, and NLM share Session 48.
‡ NIDA and NIMH share Session 52.

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* NCCIH, NIMHD, and NINR share Session 65.
† NIDCD and NIDCR share Session 72.
‡ NCATS, NEI, NHLBI, and NIDCD share Session 74.
§ NHGRI and NIAID share Session 76.
¶ NICHD and NINR share Session 78.
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(superscripts indicate author position, first₁ vs. second₂)
# PRESENTOR INDEX

(superscripts indicate author position, first\(^1\) vs. second\(^2\))

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Tuesday, August 3, 2021
National Cancer Institute (NCI) Posters

# 1 Colette Achee
Characterizing Murine mut-IL7R/TLX3 Leukemia
Emory University (Georgia)
Preceptors: Dr. Gisele Rodrigues, Dr. Scott Durum

# 2 Dariush Aligholizadeh
Salt-resistant Binding of Gag to HIV-1 RNA psi Packaging Signal
University of Maryland, Baltimore County (Maryland)
Preceptor: Dr. Alan Rein

# 3 Simon Anderson
Incorporation of CD160 Intracellular Sequence into CAR Plasmid
James Madison University (Virginia)
Preceptors: Mr. Justin Mirazee, Ms. Kniya Dede, Dr. Naomi Taylor

# 4 Eshan Arora¹, Samisha Suresh², Yunice Pyo³
Role of Modular Domains in Chimeric Antigen Receptors in Cytotoxicity against CD19+ Leukemia
¹California Northstate University (California), ²Virginia Commonwealth University (Virginia), ³University of Pennsylvania (Pennsylvania)
Preceptors: Dr. Naomi Taylor, Mr. Justin Mirazee

# 5 Kurt Auville (POSTER MOVED to the end of session 40)
Integration and Visualization of Mechanism Interrogation PlatE (MIPE) Data across Multiple Cell Lines Using the Oncogenomics Database Platform
University of Maryland School of Medicine (Maryland)
Preceptors: Dr. Javed Khan, Dr. Craig Thomas, Mr. Xinyu Wen

# 6 Hana Bagheri
Assessment of Co-housing Mediated Transfer in Wild Type and Natural Killer T-cell Deficient Mouse Strains
University of Maryland, College Park (Maryland)
Preceptors: Dr. Jay Berzofsky, Dr. Purevdorj Olkhanud, Dr. Matthew Angel

# 7 Vikram Bala
Analysis of the Immune Response to Implanted ECM Biomaterials as a Cancer Immunotherapy through High Parameter Flow Cytometry Dimensionality Reduction Techniques
University of Michigan (Michigan)
Preceptors: Dr. Matthew Wolf, Dr. Elizabeth Brooks
# 8 Cailyn Barthlow
*Identification of Mutations in Non-target Genes in Donors with HIV Failing Raltegravir*
Hood College (Maryland)
Preceptors: Dr. Jennifer Groebner, Dr. Mary Kearney

# 9 Aidell Benyarku¹, Fadilah Farrin²
*Descriptive Framework of the Barriers to Cancer Pain Management*
¹Howard University (District of Columbia), ²Georgetown University (District of Columbia)
Preceptors: Dr. Amanda Acevedo, Dr. Rebecca Ferrar

# 10 Frimpong Boateng
*Probing the Activation and Repression Mechanisms of Bacteriophage Lambda Promoter, PRM, by CI and RNA Polymerase Interactions Using DNA and Protein Mutations*
Joliet Junior College (New Jersey)
Preceptors: Dr. Dale Lewis, Dr. Sankar Adya

# 11 Brianna Boggan
*Cancer Risk Perceptions, Health Behaviors, and BMI among the United States’ Population*
UNC Charlotte (North Carolina)
Preceptors: Dr. Tanya Agurs-Collins, Ms. Adaora Ezeani, Ms. Olga Herren

# 12 Paul Borgman III
*Impact of Obesity, Ethnicity, and Race on Chimeric Antigen Receptor (CAR) T-cell Therapy Outcomes*
Florida State University College of Medicine (Florida)
Preceptors: Dr. Nirali Shah, Ms. Bonnie Yates, Dr. Haneen Shalabi, Dr. John Ligon

# 13 Adam Bruzzese¹, Leah Liebman², Omar Roman³
*Clinical Characteristics and Natural History of NF1-associated GIST*
¹New York University (New York), ²Gratz College (Maryland), ³Case Western Reserve University (Ohio)
Preceptors: Dr. John Glod, Ms. Barbara Thomas, Ms. Shadin Ahmed, Ms. Hannah Smith

# 14 Nikki Cannon
*A Software for Comparing Bacterial Strains Reconstructed from Metagenomes*
West Virginia University (West Virginia)
Preceptors: Dr. John McCulloch, Dr. Giorgio Trinchieri

# 15 Jennie Cao
*Stable Stochastic Switches in Bidirectional Promoters*
Johns Hopkins University (Maryland)
Preceptors: Dr. Stephen Anderson, Dr. Hongchuan Li, Dr. Md Ahasanur Rahman, Mr. Paul Wright
# 16 Usamah Chaudhary

*CT Based Detection and Segmentation of Small Cell Lung Cancer Liver Metastases*

University of Texas Southwestern Medical School (Texas)
Preceptors: Dr. Stephanie Harmon, Dr. Ismail Turkbey

# 17 Bobby Chen

*How COVID-19 Is Revamping How We Work from Home*

University of Maryland, College Park (Maryland)
Preceptors: Mr. Dinesh Reddy, Mr. Rene Pineda

# 18 Ann Chen

*PTEN Dual Lipid and Protein Phosphatase Function in Tumor Metastasis*

Carnegie Mellon University (Pennsylvania)
Preceptors: Dr. Yanlin Yu, Dr. Glenn Merlino

# 19 Varshita Chirumamilla¹, Anjali Mahajan²

*Evaluation of PHENX Toolkit for Tobacco Use and Cessation Measures for Minority and Underserved Populations: A Targeted Literature Analysis*

¹The Ohio State University (Ohio), ²University of Pennsylvania (Pennsylvania)
Preceptors: Dr. Stephanie Land, Dr. Joe Ciccolo

# 20 Natalie Chung

*Mapping Cancer Stem Cell Dynamics in a Breast Cancer Model*

Ramapo College of New Jersey (New Jersey)
Preceptors: Dr. Lalage Wakefield, Dr. Daniel Grun, Dr. Binwu Tang, Ms. Zoya Khan

# 21 Sasha Coates-Park

*The Effects of Smad4 Loss on TGF-β-Induced Alternative mRNA Splicing*

University of Maryland, College Park (Maryland)
Preceptors: Dr. Christina Stuelten, Dr. Ying Zhang

# 22 Madeline Eisenfeld

*Transcriptome Analysis of the PHF1 Gene*

University of Maryland, College Pak (Maryland)
Preceptors: Dr. Zheng-gang Liu, Dr. Swati Choksi, Mrs. Sahar Foroutannejad

# 23 Sophia Elliott

**WITHDRAWN:** *Assessing the Lifecycle and Usage of Data Stored in dbGAP*

Delaware State University (Delaware)
Preceptors: Dr. Joe Flores-Toro, Dr. Subhashini Jagu, Dr. Freddie Pruitt, Dr. Sylvia Gale

# 24 Rivka Farrell

*In silico Analysis of Promoter Methylation of Somatostatin Receptor in Neuroendocrine Cancer*

New Jersey Institute of Technology (New Jersey)
# 25 Fadilah Farrin\textsuperscript{1}, Aidell Benyarku\textsuperscript{2}
\textbf{WITHDRAWN: Barriers to Achieving Equity in Cancer Pain Management}
\textsuperscript{1}Georgetown University (District of Columbia), \textsuperscript{2}Howard University (District of Columbia)
Preceptors: Dr. Amanda Acevedo, Dr. Rebecca Ferrer

# 26 Colin Fischer
\textit{METTL7A Is a Primary Mechanism of Resistance to Thiol Containing Histone Deacetylase Inhibitors}
University of Minnesota, Duluth (Minnesota)
Preceptors: Dr. Robert Robey, Dr. Christina Fitzsimmons, Dr. Michael Gottesman

# 27 Julia Francis
\textit{Investigating the Roles of Acetyltransferase Proteins in Bacteria}
University of Maryland, College Park (Maryland)
Preceptors: Dr. Susan Gottesman, Ms. Emily Tai, Mr. Xing Luo

# 28 Arielle Fried
\textit{Evaluating Quality of Life in Patients with Biochemically Recurrent Prostate Cancer}
Georgetown University School of Medicine (District of Columbia)
Preceptors: Dr. Ravi Madan, Dr. Fatima Karzai, Dr. William Dahut

# 29 Ryan Gensler
\textit{Localization and Characterization of the Zebrafish Homologs of the Human ABCG2 Transporter}
University of Notre Dame (Indiana)
Preceptors: Dr. Michael Gottesman, Dr. Robert Robey, Dr. Jo Thomas

# 30 Laila Ghorab
\textit{Point of No Return: Determining the Commitment Point for Cellular Senescence}
University of Maryland, College Park (Maryland)
Preceptors: Dr. Marwa Afifi, Dr. Steven Cappell

# 31 Thailynn Glover
\textit{Does Dietary Seaweed Consumption Modulate Prostate Cancer Risks in the Multiethnic Cohort Populations}
University of Maryland Eastern Shore (Maryland)
Preceptors: Dr. Nancy Emenaker, Dr. Carol Boushey, Dr. Kevin Dodd

# 32 Gittel (Gitty) Goldstein
\textit{Correlation between Clinical Biomarkers and Response to Combination Immunotherapy in Patients with Advanced Cancer.}
Stern College for Women (New York)
Preceptor: Dr. Julius Strauss
# 33 Isabel Gomez
*Evaluating the Use of Race in Prediction Models to Reduce Racial Disparities in Lung Cancer Screening*
Smith College (Massachusetts)
Preceptors: Dr. Rebecca Landy, Dr. Hormuzd Katki, Dr. Li Cheung

# 34 Rebecca Gordon
*Cancer Beliefs and Physical Activity Levels among Individuals with Personal and Family Cancer History: Findings from the Health Information National Trends Survey (2020)*
Cornell University (New York)
Preceptors: Dr. Kelly Blake, Dr. Yuki Lama

# 35 Enoc Granados Centeno
*Does Microbiota Affect Tumor-induced Myelopoiesis?*
University of Maryland, College Park (Maryland)
Preceptors: Mr. Khiem Lam, Dr. Romina Goldszmid

# 36 Rahul Gupta
*Computational Analysis of Nanopore Sequencing Data to Distinguish Guanosine from Inosine*
University of Chicago (Illinois)
Preceptors: Dr. Shalini Oberdoerffer, Dr. David Sturgill

# 37 Jeisac Guzman Rivera
*Mesothelin: A Potential Target for Combined Immunotherapy for Ovarian Cancer*
University of Puerto Rico, Rio Piedras (Puerto Rico)
Preceptors: Dr. Soumya Korrapati

# 38 Grace Ha
*Flow Cytometry Analysis of Chimeric Antigen Receptor Efficacy against CD19+ Leukemia*
University of Minnesota Twin Cities (Minnesota)
Preceptors: Dr. Naomi Taylor, Dr. Josquin Moraly, Dr. Chris Chien

# 39 Maria Hancu
*Finding New RpoS Regulators in Fitness Data*
Rice University (Texas)
Preceptors: Dr. Sophie Bouillette, Dr. Susan Gottesman

# 40 Tuesday Haynes
*Investigating the Association between Immune-related Genetic Polymorphisms and Cancer Risk in Individuals of African and European Descent*
University of Texas at Austin (Texas)
Preceptors: Dr. Mark Gilbert, Dr. Terri Armstrong, Ms. Diane Cooper
# 41 Madeline Hinkley¹, Kate Ryan²
*Classification of Reported Protein-Metabolite Interactions*
¹University of Michigan (Michigan), ²Syracuse University (New York)
Preceptor: Dr. Jordan Meier

# 42 Hannah Holmes
*Seaweed Consumption and Colorectal Cancer Risk in a Multiethnic Cohort Population*
University of Hawaii at Manoa (Hawaii)
Preceptor: Dr. Nancy Emenaker

# 43 Gabriela Holzer
*Analysis of Multiomics Data for mTOR Signaling in Human Cancer*
Eleanor Roosevelt High School (Maryland)
Preceptors: Dr. Joe Nguyen, Dr. Beverly Mock, Ms. Mikaela Matera-Vatnick

# 44 Navami Jain
*Identifying Differentially Active Gene Networks in Breast Cancer*
Stanford University (California)
Preceptors: Dr. Sridhar Hannenhalli, Dr. Piyush Agrawal

# 45 Paige Jones
*Investigation of the Interactome with FOXC1 in NF1-deficient MPNST*
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Xiyuan Zhang, Dr. Jack Shern

# 46 Sabrina Kaplan
*Smoking Cessation & Lung Cancer Screening: The Psychology of Context Effects and Consumer Choice*
Vanderbilt University (Tennessee)
Preceptor: Dr. Stephanie Land

# 47 Nelli Karapetyan
*Filling the BAP1 Tumor Predisposition Syndrome Resource Gap: Assessing Readability and Accuracy*
Montgomery College (Maryland)
Preceptors: Mrs. Alexandra Lebensohn, Dr. Kathleen Calzone

# 48 Priya Katyal
*Spatial Genomic and Proteomic Study of FFPE Metastatic Tumor Samples from Patients with Solid Tumors*
University of Virginia (Virginia)
Preceptors: Dr. Todd Prickett
# 49 McKenzie Kauss
*Exploring Survivorship in Breast and Genitourinary Cancers: Report from a Scoping Review of Health Care Utilization and Patient Outcomes*
University of Michigan (Michigan)
Preceptors: Dr. Heather Leeper, Dr. Terri Armstrong, Ms. Diane Cooper

# 50 Adam Kenet
*Modeling the Variability of Therapeutic Outcomes for CAR-T Treatment of Pediatric Leukemia*
Johns Hopkins University (Maryland)
Preceptors: Dr. Grégoire Altan-Bonnet, Dr. Dongya Jia, Dr. Naomi Taylor, Ms. Angela Su

# 51 Sarah Kimmel¹, Tsion Mekonnen², Lynn Fu³
*Phase 2 MEK 1/2 inhibitors Selumetinib in Adult NF1 patients*
¹Middlebury College (Vermont), ²Towson University (Maryland), ³Amherst College, (Massachusetts)
Preceptors: Dr. Brigitte Widemann, Dr. Andrea Gross, Dr. Cecilia Tibery, Dr. Eva Dombi, Dr. Brigitte Widemann

# 52 Emma Kosmeder
*Investigating the Tumor Suppressor Mechanism of the Novel Protein FORCP in Colorectal Cancer*
Colgate University (New York)
Preceptors: Dr. Yannis Grammatikakis, Dr. Ashish Lal

# 53 Haoran Li
*Exploring Co-occurring Mutations in KRAS-Driven Cancers*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Chih-Shia Lee, Dr. Ji Luo

# 54 Allie Yuxin Lin
*Exploring Survivorship in Lung and Gastrointestinal Cancers: Report from a Scoping Review of Health Care Utilization and Patient Outcomes*
Columbia University in the City of New York (New York)
Preceptors: Dr. Heather Leeper, Dr. Terri Armstrong, Ms. Diane Cooper

# 55 Lauren Loebach
*Predictors of Pathological Grade in von Hippel-Lindau (VHL)-associated Renal Cell Carcinoma*
Cornell University (New York)
Preceptor: Dr. Mark Ball

# 56 Abbie Macher
*Flow Cytometry Analysis of Chimeric Antigen Receptor T Cells against the CD19 Leukemia Antigen: Differences between Mature T Cells and Recent Thymic Emigrants*
Brown University (Rhode Island)
Preceptors: Dr. Josquin Moraly, Dr. Naomi Taylor
# 57 Anjali Mahajan¹, Varshita Chirumamilla²
*Development of CEAL CS2 for Measurement of Vaccine Hesitancy and Promotion of Inclusive Clinical Trials*

¹University of Pennsylvania (Pennsylvania), ²The Ohio State University (Ohio), Preceptor: Dr. Stephanie Land

# 58 Riya Mahesh
*Somatic Mutations in Cancer Adjacent Normal Tissue in Breast Cancer Patients*
University of Texas at Austin (Texas)
Preceptors: Dr. Rose Yang, Dr. Bin Zhu

# 59 Alexander Majkic (POSTER MOVED to the end of session 17)
*Antibody Responses to Childhood Vaccines in Patients with Inherited Bone Marrow Failure Syndromes*
Oberlin College (Ohio)
Preceptors: Dr. Burak Altintas, Dr. Neelam Giri

# 60 Sarah Martin
*Modeling the Presomitic Mesoderm Fgf8 Gradient in Mouse Embryos via HCR and Imaris Analysis*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Mark Lewandoski, Dr. Matthew Anderson

# 61 Abby Molnar
*Effects of the Loss of Respiration in Petite Yeast Strains on Mitochondrial Protease Degradation*
Juniata College (Pennsylvania)
Preceptors: Dr. Meredith Metzger, Dr. Allan Weissman

# 62 Gabe Needle
*Association between Immunological Subtypes and Response to Immune Checkpoint Blockades in Human and Mouse Melanomas*
University of Maryland, Baltimore County (Maryland)
Preceptor: Dr. Chi-Ping Day

# 63 Anna Newen
*Mechanism of EZH2 Protein Transportation between Nucleus and Cytoplasm and the Role of Cytoplasmic EZH2 in Cancer*
Rutgers University (New Jersey)
Preceptors: Dr. Brajendra Tripathi, Dr. Douglas Lowy

# 64 Tyler Perlstein
*Developing Novel Algorithms for Analyzing Survival Data of Small Cell Lung Cancer Patients*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Nitin Roper, Dr. Lorinc Pongor

# 65 Rivka Bella Rabaev
*Bone Morphogenetic Protein (BMP) Directly Regulates Cancer Stem Cell Dynamics in Metastatic Breast Cancer*
Landers College for Women (New York)
Preceptors: Dr. Lalage Wakefield, Dr. Binwu Tang, Ms. Zoya Kahn

# 66 Rashika Rahman
*Needle in a Haystack: Applying Machine Learning Methods to Identify and Improve Patient Health Outcomes in Healthcare Delivery Research*
University of North Carolina at Chapel Hill (North Carolina)
Preceptor: Dr. Roxanne Jensen

# 67 Sandy Reynolds
*Survey of TGF-β secretion in Cancer Cells*
Prairie View A & M University (Texas)
Preceptor: Dr. James Hodge

# 68 Lydia Ruan
*Development of a NIDAP Workflow for GeoMx Digital Spatial Profiler Data*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Maggie Cam

# 69 Cole Ruoff
*Delineating Cellular Composition in Spatial Transcriptomic Data*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Sridhar Hannenhalli, Dr. Vishaka Gopalan

# 70 Sahil Sahni
*Detection of Synthetic Lethality in Gene-fusion Mediated Prostate Cancers*
McGill University (Canada)
Preceptors: Dr. Kun Wang, Dr. Eytan Ruppin

# 71 Remi Savard
*Transcriptional Markers of Mouse Lung NKT Cell Subsets*
University of Vermont (Vermont)
Preceptors: Dr. Jay Berzofsky, Dr. Purevdorj Olkhanud, Dr. Matthew Angel

# 72 Dana Schaar
*Cardiovascular Risk Factors and Clinical Outcomes after Hematopoietic Stem Cell Transplantation*
Georgetown University (District of Columbia)
Preceptors: Dr. Steven Pavletic, Dr. Noa Holtzman, Mr. Filip Pirsl
# 73 Rahi Shah
*Tobacco, Alcohol and Their Effect on Sleep Rhythm*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Carolyn Reyes-Guzman

# 74 Kaitlynn Slattery
*Distinctive Transcriptomic Signatures Derived from Cancer-associated Mutation in Isocitrate Dehydrogenase 1*
George Washington University (District of Columbia)
Preceptors: Dr. Chunzhang Yang, Dr. Yang Liu

# 75 Krishay Sridalla
*Understanding the Role of TCEA1 (TFIIS) in Breast Cancer Using RNA-Seq Analysis*
Cornell University (New York)
Preceptors: Dr. Smriti Singh, Dr. Mikhail Kashlev

# 76 Hannah Stack
*Identification of N-myc Interactors as Druggable Targets in Neuroblastoma*
Colgate University (New York)
Preceptors: Dr. Carol Thiele, Dr. Zhihui Liu, Mr. Samuel Chen

# 77 Ian Stukes
*Targeted Drug Delivery in Aggressive Thyroid Cancer Microenvironment*
University of Wisconsin-Madison (Wisconsin)
Preceptors: Dr. Dipranjan Laha, Dr. Naris Nilubol

# 78 Amanda Taylor
*The Effects of Overexpression of EPAS1, A Repressed Target of EWS-FLI1, on the Ewing Sarcoma Transcriptome*
Washington University in St. Louis (Missouri)
Preceptors: Dr. Natasha Caplen, Dr. Katelyn Ludwig

# 79 Hao Dong Tian
*Development and Evaluation of Chimeric Antigen Receptor (CAR) T Cells Targeting CD276 in Solid Tumors*
Vassar College (New York)
Preceptor: Dr. Pradip Bajgain

# 80 Sanidhya Tripathi
*Validation of Deep Learning Model for Prostate Cancer Detection on Digital Pathology*
University of Arkansas (Arkansas)
Preceptors: Dr. Stephanie Harmon, Dr. Freddy Escorcia, Dr. Baris Turkbey
# 81 Brianna Wachter  
*Characterizing Murine mut-IL7R/TLX3 Leukemia*
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Scott Durum, Dr. Gisele Rodrigues

# 82 Trent Walker  
*CAR T-Cell Efficacy with CD28 Costimulatory Domain Downstream of TCR zeta: An Experimental Design*
The Ohio State University College of Medicine (Ohio)  
Preceptors: Mr. Justin Mirazee, Dr. Naomi Taylor

# 83 Danyi Wang  
*Identification and Verification of microRNA Gene Targets in Mesothelioma*
Northwestern University (Illinois)  
Preceptor: Dr. Chuong Hoang

# 84 Rohan Wedam  
*Genomic Alterations in the Mitochondrial Genes of Breast Cancer*
Winston Churchill High School (Maryland)  
Preceptors: Dr. Stanley Lipkowitz, Dr. Yoshimi Greer, Ms. Samantha Sevilla

# 85 Lauren Witmer  
*Defining Genetic Adaptations in Clinical Bacterial Isolates from Cystic Fibrosis*
Bridgewater College (Virginia)  
Preceptors: Dr. Tiffany Zarrella, Dr. Anupama Khare

# 86 Melinda Yan  
*Assessing GWAS Fine Mapping Tools for Dimensional Reduction of Credible Sets*
University of Maryland, College Park (Maryland)  
Preceptors: Dr. Ludmila Prokunina-Olsson, Dr. Oscar Florez-Vargas

# 87 William Yang  
*Analysis of Factors Influencing LTR and gag Levels in HIV Infected Patients*
Rice University (Texas)  
Preceptors: Dr. Chuen-Yen Lau, Dr. Brian Luke, Dr. Frank Maldarelli

# 88 LaYow Yu  
*Targeting Glioblastoma with Anti-carbonic Anhydrase IX/CD3 Bispecific Antibody*
Washington University in St. Louis (Missouri)  
Preceptors: Dr. Zhengping Zhuang, Dr. Herui Wang, Mr. Pashayar Lookian

# 89 Danny Zelmanovich  
*Understanding the Transcriptional Landscape of GLI2 Overexpression in TC32 Cell Lines*
Colgate University (New York)
Preceptors: Dr. Katelyn Ludwig, Dr. Natasha Caplen, Dr. Vernon Ebegboni

# 90 Flora Zhang
*Genome Wide Association Study Identifies SNPs influencing Omega-3 Fatty Acid Composition in the NCI-UMD Prostate Cancer Cohort*
Colgate University (New York)
Preceptors: Dr. Stefan Ambs, Dr. Wei Tang

# 91 Sophie Zhuang
*Chromosome-specific DNA Replication Patterns in Cancer Cells*
Kalamazoo College (Michigan)
Preceptors: Dr. Bhushan Thakur, Dr. Haiqing Fu, Dr. Mirit Aladjem

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

# 92 Carolyn Brandt
*Racial and Ethnic Differences in Risk of Second Primary Cancers among Breast Cancer Survivors*
The George Washington University (District of Columbia)
Preceptors: Dr. Cody Ramin, Dr. Amy Berrington

# 93 Gargi Damle
*Characterizing of Somatic Hotspot Mutations Using Cervical Exfoliated Cells among Different HPV Types*
Georgia Institute of Technology (Georgia)
Preceptor: Dr. Maisa Pinheiro

# 94 Lee Ding
*Estimating Changes in Average Annual Percentage Change of Disease Rates: Alternatives to Join-Point Regression*
Brown University (Rhode Island)
Preceptors: Ms. Julia Elrod, Dr. Philip Rosenberg

# 95 Sarah Dixon
*Recent Trends in Oral Tongue Cancer Incidence in the United States by Region*
Virginia Tech Polytechnic Institute and State University (Virginia)
Preceptors: Ms. Julia Elrod, Dr. Philip Rosenberg, Dr. Anil Chaturvedi

# 96 Somayina Ezennia
*Alu Retroelement Copy Number and Lung Cancer Risk in the Prospective Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Trial*
Washington University in St Louis (Missouri)
# 97 Jared Garfinkel
Helicobacter pylori Seropositivity, Pepsinogens and Circulating Inflammation Markers
Columbia University Mailman School of Public Health (New York)
Preceptor: Dr. Minkyo Song

# 98 Jesica Godinez Paredes
Analysis of Clinically Relevant Breast Cancer Germline Variants from Whole-exome Sequencing in a Cohort of Mexican Young Women
University of Nevada Las Vegas (Nevada)
Preceptor: Dr. Michael Dean

# 99 Baqar Husain
The Cancer Disparity in Gender Minority Adults: An Assessment of Risk Factors
Yale School of Public Health (Connecticut)
Preceptor: Dr. Sarah Jackson

# 100 Ali Khan
Body Mass Index and Risk of Progression From Monoclonal Gammopathy of Undetermined Significance to Multiple Myeloma
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Jonathan Hofmann, Dr. Vicky Chang

# 101 Nikita Marcou
Chromosomal Abnormalities in Peripheral Blood of Patients with Myelofibrosis
Northwestern University (Illinois)
Preceptors: Dr. Shahinaz Gadalla, Dr. Maryam Rafati

# 102 Rose Milano
Characterizing HPV18-Positive Cervical Cancer Cell Lines Reveals HPV Integration Effects on Gene Expression
George Washington University (District of Columbia)
Preceptors: Dr. Michael Dean, Ms. Nicole Rossi

# 103 Brian Richardson
Testing the Interaction between Polygenic Risk Score and an Environmental Factor Using Summary Statistics of Genome-wide Association Studies
University of North Carolina at Chapel Hill (North Carolina)
Preceptor: Dr. Jianxin Shi

# 104 Eric Ruan¹, Erika Nemeth²
Exploring NCI Prostate, Lung, Colon, and Ovary (PLCO) Study Data with FAIR Web Computing
¹Stony Brook University (New York), ²Stony Brook University (New York)
Preceptor: Dr. Jonas Almeida

# 105 Thomas Shao
*Using Cluster Models to Identify Groups of Farmers with Similar Pesticide Usage: The Biomarkers of Exposure and Effect in Agriculture (BEEA) Study*
Yale University (Connecticut)
Preceptors: Dr. Melissa Friesen, Dr. Shuai Xie

# 106 Sruthi Srinivasan
*Hematopoietic Chromosomal Alterations and Their Associations with Chronic Lymphocytic Leukemia*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Mitchell Machiela, Dr. Shu-Hong Lin, Dr. Derek Brown

# 107 Amy Tao
*Automated Evaluation of p16 Immunohistochemistry for Diagnosis of Cervical Precancer*
University of North Texas Health Science Center Texas College of Osteopathic Medicine (Texas)
Preceptors: Dr. Nicolas Wentzensen, Dr. Megan Clarke

# 108 Megan Wohlfarth
*A Systematic Review and Meta-analysis on the Risk Factors for Endometrial Cancer by Histologic Subtype*
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Megan Clarke, Dr. Nicolas Wentzensen

# 109 Joshua Woo
*Platelet-motivated Investigation of Single Nucleotide Polymorphisms Associated with Endemic Burkitt lymphoma in the EMBLEM Study*
Johns Hopkins University (Maryland)
Preceptors: Dr. Sam Mbulaiteye, Mr. Lei Song, Dr. Kai Yu

# 110 Joshuah Yon
*Partitioning Heritability Enrichment for Melanoma Using Specific Cell Types*
University of Rochester (New York)
Preceptors: Dr. Kevin Brown, Dr. Rohit Thakur

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

# 111 Ma Ritchelle Bayron
*Discovering Novel Target Genes for Merkel Cell Carcinoma Treatment*
Virginia Polytechnic Institute and State University (Virginia)
Preceptor: Dr. Khalid Garman

**# 112 Ali Khan**  
*Similarities between Merkel Cell Development and Merkel Cell Carcinoma Provide Clues for Therapy*  
The George Washington University (District of Columbia)  
Preceptors: Dr. Isaac Brownell, Dr. Natasha Hill, Dr. Khalid Garman, Dr. Lingling Miao

**# 113 Adelle Perkelvald**  
*Analysis and Census of RNA Binding Proteins*  
Touro College (New York)  
Preceptors: Dr. Markus Hafner, Dr. Robert Walker, Ms. Elizabeth Aliberti, Mr. Martyn Green

**National Institute of Environmental Health Sciences (NIEHS) Posters**

**# 114 Fatima Ahmed**  
*Automatic Visualization of Single-cell Heterogeneity*  
University of Maryland, Baltimore County (Maryland)  
Preceptor: Dr. Benedict Anchang

**# 115 Jaya Alagar**  
*Automated Method to Improve the ex vivo Quantification of ABC Transporter Activity at the Blood-Brain Barrier in Response to Emerging Environmental Toxicants*  
Williams College (Massachusetts)  
Preceptor: Dr. Ronald Cannon

**# 116 Claire Ashley**  
*Use of Wood-Burning Stoves and Fireplaces and Select Cardiovascular Outcomes among Sister Study Participants*  
University of North Carolina Gillings School of Global Public Health (North Carolina)  
Preceptor: Dr. Suril Mehta

**# 117 Lauren Chan**  
*Exposure Ontologies: Harmonizing Survey Data for Interoperability and Reuse*  
Oregon State University (Oregon)  
Preceptor: Dr. Charles Schmitt

**# 118 Frederick Chang**  
*Glis3 Regulates Thyroid Gland Cell Migration, Extracellular Matrix Organization, and Thyroid Hormone Biosynthesis Genes through TSH.*  
University of Pennsylvania (Pennsylvania)  
Preceptors: Dr. Hong Soon Kang, Dr. Anton Jetten
# 119 Matthew Chen
*Identifying High-throughput Screening Assays for Prediction of Genotoxicity and Carcinogenicity Potential*
University of Chicago (Illinois)
Preceptors: Dr. Arun Pandiri, Dr. Warren Casey

# 120 Amy Chen
*Perceived Neighborhood Safety during Childhood*
Johns Hopkins University (Maryland)
Preceptors: Ms. Lauren Gullett, Dr. Symielle Gaston, Dr. Dana Alhasan, Dr. Chandra Jackson

# 121 Tammy Chen
*Vitamin D and Time-to-Pregnancy in the PRESTO Cohort*
Boston University (Massachusetts)
Preceptors: Dr. Anne Marie Jukic, Dr. Anita Subramanian

# 122 Sidney Donzella
*Sedentary Time and Breast Cancer Risk in the Sister Study Cohort*
University of Arizona (Arizona)
Preceptors: Dr. Mary Diaz Santana, Dr. Claire Weinberg

# 123 Anthony Guzzo
*Effect of the Ionic State of Catalytic Cysteine (Cys-145) on SARS-CoV-2 Main Protease Structure*
Rice University (Texas)
Preceptor: Dr. Lalith Perera

# 124 Jocelyn Hernandez
*Defining The Effects of High-fat Diet on Hypothalamic Responses to Food*
Delaware State University (Delaware)
Preceptor: Dr. Christopher Mazzone

# 125 Peter Huffman
*Curation and Data Mining of ToxValDB: Cheminformatic Approaches to Outlier Detection*
Vanderbilt University (Tennessee)
Preceptor: Dr. Kamel Mansouri

# 126 Patrick Jiang
*Utility of Dual-energy X-ray Absorptiometry Imaging in Calcinosi*
Virginia Polytechnic Institute and State University (Virginia)
Preceptor: Dr. Adam Schiffenbauer

# 127 Nivetha Karunakaran
WITHDRAWN:*Expression of RNA Polymerase Pausing Factors Is Altered in Chronic Kidney Disease*
North Carolina State University (North Carolina)
Preceptor: Dr. Jason Watts

# 128 Dongwon Lee
*Analysis of the Relationship between Polyadenylation Site Selection and Poly(A) Tail Length in the Transition from Pachytene Spermatocytes to Round Spermatids*
Duke University (North Carolina)
Preceptors: Dr. Marcos Morgan, Dr. Marine Baptissart, Dr. Brian Papas

# 129 Lauren Lim
*Using cryo-EM to Explore the Structure of the Coronavirus Spike Protein*
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Traci Hall, Dr. Chen Qiu, Dr. Mario Borgnia, Dr. Venkata Dandey

# 130 Anneliese Long
*Serum Levels of C-Reactive Protein, and Anti-Müllerian Hormone, Follicle-Stimulating Hormone, and Inhibin B in Women Attempting Pregnancy in North Carolina*
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Anne Marie Jukic, Dr. Hannah Jahnke

# 131 Shawn Mathew
**WITHDRAWN:** *The Effect of Zwitterionic Catalytic Residues (Cys145, His41) on the SARS-Cov-2 Main Protease Structure*
University of North Carolina at Chapel Hill (North Carolina)
Preceptor: Dr. Lalith Perera

# 132 Kaytlyn Salmons
*Associations between Sun and Early Life Farming Exposures on Epigenetic Aging in the Agricultural Lung Health Study*
UT Health Science Center at Houston (Texas)
Preceptors: Dr. Thanh Hoang, Dr. Stephanie London

# 133 Jonathan Scalabrini
*Environmental Exposures in Patients with Idiopathic Inflammatory Myopathies*
Brown University (Rhode Island)
Preceptor: Dr. Lisa Rider

# 134 Alvin Sheng
*Effects of Flood Risk and Climate Change on Census Tract-level Health Outcomes*
North Carolina State University (North Carolina)
Preceptors: Dr. Kyle Messier

# 135 Kelsey Shimoda
*Possible Direct and Indirect Actions of ASC Specks Contributing to Neurodegeneration*
# 136 Madeline Somers
*Gestational Weight Gain and Maternal Exposure to Three Classes of Consumer Product Chemicals*
University of Michigan School of Public Health (Michigan)
Preceptors: Dr. Barrett Welch, Dr. Kelly Ferguson

# 137 Caitlin Su
*The Role of ACADS and ACOX3 in Hepatocellular Carcinoma*
Duke University (North Carolina)
Preceptors: Dr. Yi Fang, Dr. Xiaoling Li

# 138 Kayen Tang
*Investigating the Role of Drd2 Expressing Hippocampal Neurons in Wheel Running Regulation*
Vassar College (New York)
Preceptor: Dr. Ayland Letsinger

# 139 Judicael Tchoudja
*Perceived Neighborhood Safety and Sleep Health in Childhood*
University of Maryland, College Park (Maryland)
Preceptors: Ms. Lauren Gullett, Dr. Symielle Gaston, Dr. Dana Alhasan, Dr. Chandra Jackson

# 140 Rachel Thompson
*Associations between Serum Iron Biomarkers and Breast Cancer Tumor Size*
Grand Valley State University (Michigan)
Preceptors: Dr. Ann Von Holle, Dr. Clarice Weinberg

# 141 Pranav Viswanathan
*Using CRISPR/Cas9 for Neural Protein Labeling and Gene Knock-down*
Baylor University (Texas)
Preceptors: Dr. Oliver Goral, Dr. Jerry Yakel

Office of the Director (OD) Posters

# 142 Ja'Sean Holmes
*Detecting Disparities in High-cholesterol Treatments for Participants in the All of Us Research Program*
Colby College (Maine)
Preceptors: Dr. Sheri Schully, Dr. Claire Schulkey, Dr. Tamara Litwin, Dr. Ella Ulrike Klenke
# 143 Samantha Tesfaye  
*Disparities in Cervical Cancer Screening Rates Among All of Us Participants*  
Cornell University (New York)  
Preceptor: Dr. Tamara Litwin

**National Cancer Institute (NCI) Lightning Talks**

# 144 Cori Amsellem  
*Development of Cytotoxic Antibodies to Cancer-expressed Surface Targets*  
University of Texas at Austin (Texas)  
Preceptor: Dr. David Fitzgerald

# 145 Ons Yasmeen Bouali  
*Antibiotic Mouse Model in Anti PD-1 Immunotherapy*  
Elon University (North Carolina)  
Preceptors: Dr. Raquel Costa, Dr. Miriam Fernandes

# 146 Lane Cavey  
*Developing Communication Strategies for Pediatric Patients Who Lack Speech*  
University of Alabama (Alabama)  
Preceptors: Dr. Lori Wiener, Dr. Naomi Taylor

# 147 Wonjeong Choi  
*Discovery of Novel APOL1 Variant and Application of PGS (Polygenic Risk Score) in FSGS (Focal Segmental Glomerulosclerosis) Cohort*  
George Washington University (District of Columbia)  
Preceptors: Dr. Sungkweon Cho, Dr. Cheryl Ann Winkler

# 148 Faithyn Chukundah  
*Metabolic Profiling of a Drosophila melanogaster Triglyceride Lipase*  
Eleanor Roosevelt High School (Maryland)  
Preceptors: Dr. Govind Kunduri, Dr. Usha Acharya, Dr. Jairaj Acharya

# 149 Tasmine Clement  
*Data-mining Genetic Interactions in Cancer Cells: Biology and Therapeutic Opportunities*  
University of Michigan (Michigan)  
Preceptor: Dr. Xavier Bofill de Ros

# 150 Charles Coleman  
*SnapATAC Analysis of Open Chromatin Regions from Single Cell ATAC-seq Data Sets*  
College of William and Mary (Virginia)  
Preceptor: Dr. Efsun Arda
# 151 Laura De Ravin
Whole Exome Mutational Analysis of Mouse Glioma Cell Lines for Vaccine Development
University of Maryland, College Park (Maryland)
Preceptors: Dr. Masaki Terabe, Dr. Taijun Hana

# 152 Kylie Enten
Evaluation of Key Genes Mediating Resistance to PEN-866
Towson University (Maryland)
Preceptors: Dr. Christine Heske, Ms. Princess Ekpo

# 153 Wawen Ewimbi
Out of Pocket Costs and Healthcare Access: Associations between Health Insurance Coverage Types and Delayed or Foregone Treatment in Individuals with Cancer
Paint Branch High School (Maryland)
Preceptors: Dr. Courtney Williams, Dr. Janet de Moor

# 154 Gabriel Franco
Cell Expression Patterns in Skin and Gastrointestinal Kaposi Sarcoma Lesions
Georgetown University (District of Columbia)
Preceptor: Dr. Joseph Ziegelbauer

# 155 Vainavi Gambhir
A Caregiver's Guide on Communicating Effectively to their Child about RUNX1-FPD
Walter Johnson High School (Maryland)
Preceptors: Dr. Lea Cunningham, Dr. Lori Wiener

# 156 Sasum Gassama
MicroRNA Target Mapping Using Novel m6A RNA Editor
E.L. Haynes Public Charter School (District of Columbia)
Preceptors: Mr. Ryan Stanton, Dr. Shuo Gu

# 157 Tom Givens
Immune Landscape of Ovarian Tumors in Old vs. Young Mice
Des Moines University College of Medicine and Health Science (Iowa)
Preceptor: Dr. Christina Annunziata

# 158 Tatum Horton
Interleukin 6: Connection Between Renal Cell Cancer and Idiopathic Membranous Nephropathy
Brunswick High School (Maryland)
Preceptors: Dr. Julio Valencia

# 159 Sharif Hosein
A Xeroderma Pigmentosum Founder Mutation and Its Relations to the African Slave Trade
SUNY Downstate College of Medicine (New York)
Preceptors: Dr. Kenneth Kraemer, Dr. John Digiovanna, Ms. Deborah Tamura, Dr. Sikandar Khan

# 160 Philip Huang
*Downregulation of Receptor Tyrosine Kinases: Opportunities for Cancer Therapy*
University of Michigan (Michigan)
Preceptors: Dr. David Wisniewski, Dr. Stanley Lipkowitz

# 161 Zahin Islam
*Prognosis Associated Tumor Immune Signatures in Pediatric Neuroblastoma*
Case Western Reserve University (Ohio)
Preceptors: Ms. Katherine Masih, Dr. Javed Khan

# 162 Samyak Jain, Elizabeth Willman (POSTER MOVED to the end of session 12)
*A Literature Study on Stealth Nanoparticles as a Tool for siRNA Delivery*
1Governor Thomas Johnson High School (Maryland), 2Brunswick High School (Maryland)
Preceptors: Dr. Anu Puri, Dr. Bruce Shapiro

# 163 Kela Johnson
*The Positive Implications of a Post-Mortem Repository for Covid-19 and Long Haul Syndrome Pathology*
Georgia State university (Georgia)
Preceptor: Dr. Stephen Hewitt

# 164 Hannah Justice
*The Power of Power BI: How Microsoft Power Platform Is Revolutionizing Offices*
Winthrop University (South Carolina)
Preceptors: Mr. Nihar Shah, Ms. Laura Mazujian

# 165 Zoey Kline
*Gene Set Enrichment Analysis (GSEA) of Differentially Expressed Genes in a Photosensitive Epilepsy Model*
University of Pennsylvania (Pennsylvania)
Preceptors: Dr. Jairaj Acharya, Dr. Govind Kunduri, Dr. Usha Acharya

# 166 Ethan Lac
*CD4 and CD8 T cells in Tumor Immune Microenvironment (TIME) Before and After the Administration of PROSTVAC*
Academy Of Health Sciences @ PGCC (Maryland)
Preceptors: Ms. Shania Bailey, Dr. Houssein Abdul Sater

# 167 Katherine Lei
*Comparison of Bone Lesions Seen on 18F-FDG and 18F-NaF PET/CT in Patients with Metastatic Genitourinary Tumors*
# 168 Fucheng Li
*Training a Variational Autoencoder on Curated CODEX Datasets and Developing Downstream Algorithms to Differentiate Cancer Types*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Peng Jiang, Dr. Jacob Luber

# 169 Eva Loewenstein
*A Digital Pathology Repository of COVID-19 Pathology*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Stephen Hewitt, Dr. Sabrina Ramelli

# 170 Natalia Loga
*CD4 and CD8 T cells in Tumor Immune Microenvironment (TIME) Before and After the Administration of PROSTVAC*
Northwood High School (Maryland)
Preceptors: Ms. Shania Bailey, Dr. Houssein Abdul Sater

# 171 Abigail Lopez Freire
*Analysis of microRNAs via mTOR Signaling in Human Lung Cancer*
Eleanor Roosevelt High School (Maryland)
Preceptors: Dr. Beverly Mock, Dr. Joe Nguyen

# 172 Jason Luo
*Analysis of Correlation of Cell Cycle Related Proteins and mRNA in Lung Cancers Using CPTAC Datasets*
Winston Churchill High School (Maryland)
Preceptors: Dr. Dunrui Wang, Dr. Douglas Lowy

# 173 Erika Martin
*COVID-19 Barriers and Facilitators of Time-restricted Eating Adherence*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Pat Boyd, Dr. Susan Czajkowski

# 174 Melissa Moreno
*MicroRNA Target Mapping Using Novel Cytidine Base Editor*
Wheaton High School (Maryland)
Preceptors: Mr. Ryan Stanton, Dr. Shuo Gu

# 175 Neerarika Nallapati
*Identifying Common Variants of Uncertain Significance in GIST and Understanding Their Role in Cancer*
University of Pittsburgh (Pennsylvania)
Preceptor: Dr. Karylyne Reilly

# 176 Jovitha Nelson
*Comparative Genomics of Canine and Human Osteosarcoma*
Northeast Ohio Medical University (Ohio)
Preceptors: Dr. Paul Meltzer

# 177 Isabel Park
*The HPV Serology Standardization Initiative: Update*
George Washington University School of Medicine and Health Sciences (District of Columbia)
Preceptors: Dr. Ligia Pinto, Dr. Troy Kemp

# 178 Anna Plank
*Searching for Viruses in Human Deep Sequencing Datasets*
Massachusetts Institute of Technology (Massachusetts)
Preceptors: Dr. Christopher Buck, Dr. Gabriel Starrett

# 179 Simran Singh
*Molecular Characterization of CNS Tumors at the Laboratory of Pathology at the NCI*
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Zied Abdullaev, Ms. Courtney Ketchum

# 180 Jayant Siva
*Comparative Analysis of Somatic SNV Detection Methods on SARS-CoV-2 and Tumor Sequencing Data*
Thomas Jefferson High School for Science and Technology (Virginia)
Preceptors: Dr. Cenk Sahinalp, Mr. Suraj Joshi

# 181 Adam Teixeira
*Neutrophils Concentrate in Necrotic Regions of 4T1 Mouse Tumors, a Model of Human Triple-Negative Breast Cancer*
Oakdale High School (Maryland)
Preceptors: Dr. Stephen Lockett, Dr. David Scheiblin, Mrs. Abigail Walke

# 182 Ray Wang
*How Information Technology Impacts and Supports Scientific Research*
Governor Thomas Johnson High School (Maryland)
Preceptors: Mrs. Roxanne Angell, - Anahita Gooya

# 183 Madeline Yuen
*Conceptual Design of Phage-based Application for the Treatment of Colorectal Cancer*
Vanderbilt University (Tennessee)
Preceptors: Dr. Manoj Rajaure, Dr. Subhash Verma
# 184 Linglan Zhu
*DIALipidIDR: A Comprehensive Lipid Identification R Package for Data-Independent LC-MS/MS Analysis*
University of California Los Angeles (California)
Preceptors: Dr. Thomas Velenosi, Dr. Frank Gonzalez

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

# 185 Ezinne Anyanwu
*Analyzing RMS (Rhabdomyosarcoma) Differentiation Using RNaseq*
Benjamin Banneker Academic High School (District of Columbia)
Preceptors: Dr. Katie Hebron, Dr. Marielle Yohe

# 186 Katherine Ho
*Cardiovascular Disease Mortality among Breast Cancer Survivors in the US by County Socioeconomic Status and Rurality, 2000-2018*
Yale School of Public Health (Connecticut)
Preceptors: Dr. Jacqueline Vo, Dr. Amy Berrington de González

# 187 Vivian Wang
*Assigning Lung-cancer Screening Intervals Using Individualized Risk-prediction Models vs a Deep-learning Algorithm*
Georgia Institute of Technology (Georgia)
Preceptors: Dr. Rebecca Landy, Dr. Hormuzd Katki

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

# 188 Dania Abid (POSTER MOVED to the end of session 78)
*Effects of GnRH Agonist Co-administration on Cyclophosphamide-induced Primary Ovarian Insufficiency in SLE Females*
Idaho College of Osteopathic Medicine (Idaho)
Preceptors: Dr. Sarfaraz Hasni

National Institute of Environmental Health Sciences (NIEHS) Lightning Talks

# 189 Theresa Boyer
Maternal Phthalate Exposure and Measures of Total Gestational Weight Gain
Johns Hopkins University (Maryland)
Preceptors: Dr. Paige Bommarito, Dr. Kelly Ferguson

# 190 Cynthia Fisher
Questionnaire-based Exposome-Wide Association Study (Ex-WAS) on Allergic Rhinitis in the Personalized Environment Genes Study Reveals Novel and Established Risk Factors
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. John House, Dr. Alison Motsinger-Reif

# 191 Alexander Grdzelishvili
Characterizing the SARS-CoV-2 Nsp15 EndoU Nuclease Domain: Insights into the Reaction Mechanism and SARS-CoV-2 Variants
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Meredith Frazier, Mr. Daniel Stewart, Dr. Robin Stanley

# 192 Kelly Rodriguez Navarro
Establishing a Role for Rev1 in Base Excision Repair
Academy Of Health Sciences @ PGCC (Maryland)
Preceptors: Mr. Ethan Brown, Dr. Samuel Wilson

Office of the Director (OD) – High School Scientific Training and Enrichment Program (HiSTEP) Lightning Talks

# 193 Grace Aboagye
The 2021 Virtual HiSTEP Experience
Charles Herbert Flowers High School (Maryland)
Preceptor: Dr. Kristen Zukosky

# 194 Folajimi Adejumo
The 2021 Virtual HiSTEP Experience
E.L. Haynes Public Charter School (District of Columbia)
Preceptor: Dr. Kristen Zukosky

# 195 Adaiba Agbu
The 2021 Virtual HiSTEP Experience
Eleanor Roosevelt High School (Maryland)
Preceptor: Dr. Kristen Zukosky

# 196 Krystal Amihere
The 2021 Virtual HiSTEP Experience
Academy of Health Sciences at Prince Georges Community College (Maryland)
# 197 Spencer Annor-Ampofo
*NIH HiSTEP Experience 2021*
Mount Vernon High School (Virginia)
Preceptor: Dr. Kristen Zukosky

# 198 Naana Asamoah
*The 2021 Virtual HiSTEP Experience*
James Hubert Blake High School (Maryland)
Preceptor: Dr. Kristen Zukosky

# 199 Gina Bonazelli
*The 2021 Virtual HiSTEP Experience*
Montgomery Blair High School (Maryland)
Preceptor: Dr. Kristen Zukosky

# 200 Falzah Farooq
*The 2021 Virtual HiSTEP Experience*
Dominion High School (Virginia)
Preceptor: Dr. Kristen Zukosky

# 201 Rusmika Fernando
*The Virtual Adventure of HiSTEP 2021*
John F. Kennedy High School (Maryland)
Preceptor: Dr. Kristen Zukosky

# 202 Andrea Flores
*The 2021 Virtual HiSTEP Experience*
Colonel Zadok Magruder High School (Maryland)
Preceptor: Dr. Kristen Zukosky

# 203 Nayely Garcia Herrera
*The 2021 Virtual HiSTEP Experience*
Capital City Public Charter School (District of Columbia)
Preceptor: Dr. Kristen Zukosky

# 204 Divine Isingo
*The 2021 Virtual HiSTEP Experience*
Montgomery Blair High School (Maryland)
Preceptor: Dr. Kristen Zukosky

# 205 Vim Jayalal
*The 2021 Virtual HiSTEP Experience*
Watkins Mill High School (Maryland)
Preceptor: Dr. Kristen Zukosky

# 206 Kendra Jimenez
The 2021 Virtual HiSTEP Experience
Magruder High School (Maryland)
Preceptor: Dr. Kristen Zukosky

# 207 Gabriel Kengni Jr
The 2021 Virtual HiSTEP Experience
Wheaton High School (Maryland)
Preceptor: Dr. Kristen Zukosky

# 208 Trinity Lee
The 2021 Virtual HiSTEP Experience
McKinley Technology High School (District of Columbia)
Preceptor: Dr. Kristen Zukosky

# 209 Jefferny Lin
The 2021 Virtual HiSTEP Experience
Montgomery Blair High School (Maryland)
Preceptor: Dr. Kristen Zukosky

# 210 Elmer Mendoza
The 2021 Virtual HiSTEP Experience
Wheaton High School (Maryland)
Preceptor: Dr. Kristen Zukosky

# 211 Britney Montecinos Salinas
The 2021 Virtual HiSTEP Experience
Wheaton High School (Maryland)
Preceptor: Dr. Kristen Zukosky

# 212 Alex Nguyen
The 2021 Virtual HiSTEP Experience
Springbrook High School (Maryland)
Preceptors: Dr. Kristen Zukosky

# 213 Alan Ramirez
The 2021 Virtual HiSTEP Experience
North County High School (Maryland)
Preceptor: Dr. Kristen Zukosky
# 214 Beatriz Vasquez Lopez
*The 2021 Virtual HiSTEP Experience*
Wheaton High School (Maryland)
Preceptor: Dr. Kristen Zukosky

# 215 Khardiatou Wane
*My Virtual Experience with HiSTEP 2021*
Fairmont Heights High School (Maryland)
Preceptor: Dr. Kristen Zukosky

# 216 Selamawit Wondimu
*The 2021 Virtual HiSTEP Experience*
Calvin Coolidge Senior High School (District of Columbia)
Preceptor: Dr. Kristen Zukosky

**Wednesday, August 4, 2021**
Clinical Center (NCI) Posters

# 217 Polycarpe Bagereka
*Using NIH-HEALS to Measure Post-op Coping in Gastrectomy Patients*
Carleton College (Minnesota)
Preceptors: Dr. Ninet Sinaii, Dr. Ann Berger, Dr. Heather Rusch, Dr. Rezvan Ameli

# 218 Emily Baniewicz
*Assessing and Treating Traumatic Brain Injury Remotely*
University of South Carolina (South Carolina)
Preceptor: Ms. Julia Fontana

# 219 Andy Chen
*Predicting Age and Five-year Survival From Abdominal CT Scans Using a Custom Variational Autoencoder Architecture*
Johns Hopkins University (Maryland)
Preceptors: Dr. Ronald Summers, Dr. Daniel Elton

# 220 Olivia Conway
*Investigation of HBV-mediated B Cell Malignant Transformation*
University of Texas at Austin (Texas)
Preceptors: Dr. Valeria De Giorgi, Dr. Amanda Henning

# 221 Luis Estrada
*The Use of Shear Wave Elastography in Assessing Hamstring Muscle Stiffness: A Scoping Review*
Pomona College (California)
Preceptors: Dr. Katharine Alter, Dr. Kevin Cipriano, Dr. Jordan Wickstrom

# 222 Anne-Sophie Fratzscher
*HapPy - Computational Haplotype Phasing Using Long Continuous Stretches of Homozygosity from the 1000 Genomes Project*
McGill University (Canada)
Preceptors: Dr. Kshitij Srivastava, Dr. Willy Flegel

# 223 Soumith Gadila
*The Role of MRI-based Radiomic Features in Assessment of Response to a Novel Therapy for RCC in Von Hippel Lindau*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Ashkan Malayeri, Dr. Pouria Yazdian, Dr. Aditi Chaurasia

# 224 Matthew Gelin
*Radiological Assessment of the Brain in Sickle Cell Patients after Stem Cell Transplantation*
Amherst College (Massachusetts)
Preceptor: Dr. Nadia Biassou

# 225 Regan Halverson
*Diversity, Phylogeny and Evolution of the Mitochondrial Genomes in Multiple Pneumocystis Species*
Emory University (Georgia)
Preceptors: Dr. Liang Ma, Dr. Joe Kovacs

# 226 Eesha Kaul¹, Caitlin Corbin²
*Using Machine Learning Algorithms to Classify Patients with Alzheimer’s Disease*
¹University of Maryland, College Park (Maryland), ²Ivy Tech Community College - Terre Haute (Indiana)
Preceptor: Mr. Kris Kim

# 227 Snigdha Marivada
*Changes in Quality-of-Life Parameters in Patients Receiving Interventions for Cancer-associated Anemia: A Systematic Review and Meta Analysis*
Nova Southeastern University (Florida)
Preceptors: Dr. Sandhya Panch, Dr. David Stroncek

# 228 Tarun Mattikalli
*Universal Lesion Detection in CT Using Neural Network Ensembles*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Ronald Summers, Dr. Tejas Mathai
# 229 Bilal Mohammad
*Predicting Quality of CT Segmentations Using Variational Autoencoder and Machine Learning Regression Models*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Daniel Elton, Dr. Ronald Summers

# 230 Zeynep Ozgur
*A macOS Application to Record Tumor Measurement Scan Review Findings and Index Lesions*
Northeast Ohio Medical University (Ohio)
Preceptor: Dr. Hadi Bagheri

# 231 Alec Peltekian
*Detecting Different Characteristics of Generated CT Images*
Case Western Reserve University (Ohio)
Preceptors: Mr. Tejas Mathai, Dr. Daniel Elton, Dr. Ronald Summers

# 232 Kristen Shaver
*Neurofibromatosis Type I and Functional Outcome Measures: A Natural History Study*
University of Texas Health Science Center at Houston School of Public Health (Texas)
Preceptors: Dr. Andrea Gross, Dr. Scott Paul

# 233 April Sokalsky
*A Thematic Analysis of Dietary Avoidances and Supplement Use in Patients with Myalgic Encephalomyelitis/Chronic Fatigue Syndrome and Healthy Controls*
George Washington University (District of Columbia)
Preceptors: Mrs. Sara Turner, Dr. Kirsten Zambell, Mrs. Shanna Yang

# 234 Lillian Spear
*NIH Student Intern Program (SIP) Radiology Training Made Completely Virtual*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Les Folio

# 235 Joshua Starost
*Longitudinal Human Epidermal and Dermal Transcriptomic Profiling at the Incisional Edge during Long Surgical Procedures*
Case Western Reserve University (Ohio)
Preceptors: Dr. Matt Sapio, Dr. Michael Iadarola, Dr. Andrew Mannes

# 236 Max Thurston
*Assistance or Resistance: How does Exoskeleton Control Mode Affect Gait Biomechanics and Muscle Activity in a Child with Crouch Gait from Cerebral Palsy?*
University of Jyvaskyla (Finland)
Preceptor: Dr. Thomas Bulea
# 237 Tina Zhu
*Microtubule Tyrosination as a Pathogenic Mechanism in Pulmonary Arterial Hypertension*
Texas Tech University Health Sciences Center School of Medicine (Texas)
Preceptors: Dr. Keytam Awad, Dr. Robert Danner

**National Institute on Aging (NIA) Posters**

# 238 Alhassan Bangura
*Characterizing Senescent Cell Heterogeneity by Surface Proteins: Single-cell CITE-Seq*
Western School of Technology and Environmental Science (Maryland)
Preceptor: Dr. Kotb Aly

# 239 Arushi Bhattacharyya
*Alternative Splicing Analysis Using Nanopore Sequencing*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Supriyo De, Mr. Nirad Banskota

# 240 Nina Cui
*Epigenetic Signature of Antigen Receptor Loci Enhancers*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Ranjan Sen, Dr. Xiang Qiu

# 241 Meghan Elliott
*Midlife Risk Factors for the Prediction of Cognitive Decline Three Decades Later Using a Machine Learning Approach*
University of Southern California (California)
Preceptor: Dr. Yi-Han Hu

# 242 Gabriela Hernández-Busot
*Characterization of Transposable Element Expression in the Human Brain*
University of Puerto Rico, Rio Piedras Campus (Puerto Rico)
Preceptor: Dr. Kimberley Billingsley

# 243 Aditya Khandeshi
*Alternative Splicing Events in TDP43 Knockdown IPSC-derived Neurons*
Johns Hopkins University (Maryland)
Preceptors: Dr. Emmanouil Maragkakis, Dr. Chris Lee

# 244 Ana Rivera-Planas (POSTER MOVED to the end of session 51)
*Maternal Exercise on Alzheimer’s Disease: A 5xFAD Mouse Model Study*
University of Puerto Rico, Mayaguez Campus (Puerto Rico)
Preceptors: Dr. Camila Vieira Ligo Teixeira, Dr. Simonetta Camandola, Dr. Rafael de Cabo
# 245 Joey Saavedra
*Characterizing Lung Function Reserve in Older Adults Free from Pulmonary Disease*
Iowa State University (Iowa)
Preceptor: Dr. Eleanor Simonsick

# 246 Rodrigo A. Sandon Veliz
*Large-scale Genomic Investigation of the Gut Microbiome on Parkinson’s Disease Etiology*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Sara Bandres-Ciga, Dr. Artur Francisco Schumacher Schuh

# 247 Lea Stith
*Tau Asymmetry in the Aging Brain*
University of California, Irvine (California)
Preceptors: Dr. Murat Bilgel, Dr. Lori Beason-Held, Dr. Susan Resnick

National Institute on Alcohol Abuse and Alcoholism (NIAAA) Posters

# 248 Rishitha Anumola
*In-Vivo Measurements of Endocannabinoid Signaling during Striatum-dependent Behaviors*
Virginia Commonwealth University (Virginia)
Preceptors: Dr. Shana Augustin, Dr. David Lovinger

# 249 Nwamaka Azinge
*Alcohol, Mice, and Anxiety: Are There Sex Differences between Male and Female Mice?*
University of Maryland, Baltimore County (Maryland)
Preceptors: Ms. Marlisa Shaw, Dr. Veronica Alvarez

# 250 Hartley Carlson
*Developing an Automated Rodent Behavior Analysis Pipeline to Study THC Effects on Irritability*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Andrew Kesner

# 251 Christina Kennard
*The Influence of CHRNA5 and Other Genes on Alcohol Sensitivity*
Pennsylvania State University (Pennsylvania)
Preceptors: Ms. Rhianna Vergeer, Dr. Shyamala Venkatesh, Dr. Vijay Ramchandani

# 252 Elisha Myers
*A Neuroimaging Investigation: Understanding Excessive Alcohol Use in Relation to Race and Early Life Stressors*
Charles E. Schmidt College of Medicine at Florida Atlantic University (Florida)
Preceptors: Dr. Lorenzo Leggio, Dr. Monica Faulkner

# 253 Kimia Samieinejad
*Developing an Open-source Automated Rodent Sleep-stage Scoring Analysis Pipeline for High-throughput Study of Effects of THC on Sleep*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Andrew Kesner

# 254 Blyss Swan
*Something to Take the Edge Off: How Stress from the COVID-19 Pandemic Is Impacting Minority Drinking Habits*
George Washington University (District of Columbia)
Preceptors: Dr. Bethany Stangl, Dr. Vijay Ramchandani

# 255 Eric Turnquist
*Executive Function Mediates the Relationship between Negative Emotionality and Alcohol Demand in the Addictions Neuroclinical Assessment*
American University (District of Columbia)
Preceptors: Dr. Tommy Gunawan, Dr. Vijay Ramchandani

# 256 Darian Weaver
*Changes in Drinking during the Covid-19 Pandemic and Underlying Factors*
American University (District of Columbia)
Preceptors: Dr. Vijay Ramchandani, Dr. Bethany Stangl

National Institute of Biomedical Imaging and Bioengineering (NIBIB) Posters

# 257 Noah Cubert
*Video Monitoring System For Automated Detection of Mouse Scratching Behaviors*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Ghadi Salem, Mr. Tom Pohida, Mr. Marcial Garmendia, Dr. Jianhua Zhang, Dr. William Simonds

# 258 Thomas Jones
*Low Frequency Actuator for MR Elastography Applications*
University of Maryland, College Park (Maryland)
Preceptors: Mr. Thomas Pohida, Mr. Randall Pursley, Dr. Magdoom Kulam, Dr. Peter Basser, Mr. Marcial Garmendia
# 259 Quentin Leifer
*Development of Mouse Behavior Detection Software to Enhance Calcium Neuroimaging Analysis for Somatosensory Studies*
University of Maryland, College Park (Maryland)
Preceptors: Mr. Jonathan Krynitsky, Dr. Ana Lourenco Inacio, Dr. Soohyun Lee, Mr. Tom Pohida

# 260 Hamzah Siddique
*FPGA-based Timing and Signal Generator for a Compact Electron Paramagnetic Resonance Imaging System*
University of Maryland, College Park (Maryland)
Preceptors: Mr. Randall Pursley, Dr. Devasahayam Nallathamby, Dr. Murali Krishna-Cherukuri, Mr. Tom Pohida

# 261 Jason Xie
*Fluorescence Lifetime Imaging: Approaches and Applications*
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Jay Knutson, Mr. Greg Alspaugh

**National Institute on Drug Abuse (NIDA) Posters**

# 262 Hamza Ahmed
*Neuronal Network Analysis on Fluorescent Images with Big Data Sets Collected through Light Sheet Microscopy*
University of Virginia (Virginia)
Preceptors: Dr. Marisela Morales, Dr. Shiliang Zhang, Dr. Alexy Shevelkin

# 263 Cecile Brinkley
**WITHDRAWN: Brain State Dynamics during Working Memory in Childhood**
University of Virginia (Virginia)
Preceptor: Dr. Hong Gu

# 264 Jason Clarke
*Nucleus Accumbens Projecting Neurons Involved in Behavioral Salience and Aversive Learning*
Prince George’s Community College (Maryland)
Preceptors: Dr. Chase Francis, Dr. Marisela Morales

# 265 Bryan Dong
*Analysis of Live Calcium Imaging of Nucleus Accumbens Neuronal Activity in Free-moving Mice*
Johns Hopkins University (Maryland)
Preceptors: Dr. Giovanni Barbera, Dr. Yan Zhang, Dr. Da-Ting Lin
# 266 Orlando Espinoza
*Role of the Dorsal Raphe Nucleus in the Reinstatement of Cocaine-seeking Behavior*
Johns Hopkins University (Maryland)
Preceptors: Dr. Marisela Morales, Dr. Flavia Barbano

# 267 Miglanche Ghomsi Nono
*Optimizing Fast-scan Cyclic Voltammetry Data Analysis*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Gianluigi Tanda, - Melinda Hersey

# 268 Brooke Gumataotao
*Drug Abuse in Adolescence*
University of California, Davis (California)
Preceptor: Mrs. Christie Brannock

# 269 Daniel Habib
*Mining Digital Media to Understand the Individual and Societal Impact of Substance Use Disorders*
Johns Hopkins University (Maryland)
Preceptors: Dr. Brenda Curtis, Mr. Salvatore Giorgi, Mr. Doug Bellew, Dr. TingTing Liu

# 270 McKenzie Hall
*RNAi Screen Identifies Key Players in Exodosis*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Emily Wires, Dr. Brandon Harvey

# 271 Oyenike ilaka
*Exploring the mechanisms of Sigma-1 receptor (Sig-1R) chaperone in regulating the vesicle velocity along axon through an action on glycolysis.*
Albany Medical College (New York)
Preceptors: Dr. Simon Couly, Dr. Yuko Yasui

# 272 Heesu (Ally) Kim
*Characterizing the Influence of Handedness in Common Functional Neuroimaging Tasks*
Wellesley College (Massachusetts)
Preceptors: Dr. Betty Jo Salmeron, Dr. Thomas Ross, Dr. Elliot Stein

# 273 Ermelinda Ndoka
*The Role of Sigma-1 Receptor in Opioid-induced Hyperalgesia: A Preliminary Study*
Loyola University Chicago Stritch School of Medicine (Illinois)
Preceptors: Dr. Hsiang-En Wu, Dr. Tsung-Ping Su

# 274 Julie Nguyen
*Using Deep Learning to Predict Drug Binding Affinities at DAT and hERG*
University of the Sciences (Pennsylvania)
Preceptors: Dr. Kuo Hao Lee, Dr. Lei Shi

# 275 Caleb Park
*The Effects of Cocaine Self-administration on Economic Decision Making*
Emory University (Georgia)
Preceptors: Dr. Geoffrey Schoenbaum, Dr. Matthew Gardner

# 276 Anika Park
*Analysis of Compulsive Grooming Behavior Triggered by Activation of Aversive Parvalbumin Expressing Neurons in the Anterior Hypothalamic Area*
Vanderbilt University (Tennessee)
Preceptors: Dr. Yeka Aponte, Dr. Brenton Laing

# 277 Ansel Schoenbaum
*Clear Volume Analysis with Machine Learning (CVA-ML): An Open-source Rat-optimized Pipeline to Identify Neuronal Ensembles Underlying Context-induced Reinstatement of Oxycodone Seeking*
Catonsville High School (Maryland)
Preceptors: Dr. Rajtarun Madangopal, Dr. Yavin Shaham

# 278 Massoud Sharif
*Investigating the Relationship between Peroxisome Proliferator Activated Receptors (PPARs) and the Endocannabinoid System*
Johns Hopkins University (Maryland)
Preceptors: Dr. Briana Hempel, Dr. Zheng-Xiong Xi

# 279 Ngan Vo
*Neural Representation of Reward Seeking in the Nucleus Accumbens*
University of Maryland (Maryland)
Preceptor: Dr. Yan Zhang

National Institute of Mental Health (NIMH) Posters

# 280 Katie Abramowitz
*Analyzing the Relationship between the Monetary Incentive Delay Task and the PHQ-8: Are Reaction Times Correlated with Depression Severity?*
Bates College (Maine)
Preceptors: Dr. Jennifer Evans, Ms. Claire Punturieri

# 281 Deniz Akdere (POSTER MOVED to the end of session 52)
*Whole-body PET Imaging of Cyclooxygenase-1 with [11C]PS13*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Robert Innis, Ms. Sara Rubovits, Ms. Bruny Kenou, Ms. Maia Van Buskirk

# 282 Maarya Akmal
*Health and Behavioral Impact of COVID-19 on the Offspring of Essential Workers*
Texas A&M University (Texas)
Preceptors: Dr. Kathleen Merikangas, Dr. Diana Paksarian

# 283 Bryan Alvarez-Carcamo
*The Effect of kappa Opioid Receptor Inhibition on the Expression of Platform-mediated Avoidance*
University of Pennsylvania (Pennsylvania)
Preceptors: Dr. Rodolfo Flores Garcia, Ms. Monique Awanyai, Dr. Hugo Tejeda

# 284 Mariane Ball
*Measles Vaccination of the Common Marmoset (Callithrix jacchus)*
College of William & Mary (Virginia)
Preceptor: Dr. Krystal Allen-Worthington

# 285 Yair Ben-Dor
*Perimenopausal Depression: Prospective Longitudinal Study of Women Transitioning Through the Menopause*
Charles E. Smith Jewish Day School (Maryland)
Preceptors: Dr. Peter Schmidt, Dr. Katherine Cole

# 286 Naama Ben-Dor
*Neuropsychological Assessment of Memory in Women Transitioning Through the Menopause*
Charles E. Smith Jewish Day School (Maryland)
Preceptors: Dr. Peter Schmidt, Dr. Katherine Cole

# 287 Clare Brandes
*Visual Tuning of Mouse V1 Neurons Predicts Sensitivity to Cell-Specific Optogenetic Input*
Georgetown University (District of Columbia)
Preceptors: Dr. Mark Histed, Ms. Nina Friedman, Ms. Hannah Douglas

# 288 Rachel Chen
*Characterizing Acute Effects of Ketamine on Reward Processing through a Monetary Incentive Delay Task*
University of Rochester (New York)
Preceptor: Dr. Jessica Gilbert

# 289 Donald Daniel
*Developmental Genes and Schizophrenia Risk*
Brown University (Rhode Island)
Preceptors: Dr. Daniel Eisenberg, Dr. Karen Berman

# 290 Jason Fernando
_Associations between Environmental Characteristics and Irritability in a Transdiagnostic Juvenile Sample_
University of Michigan (Michigan)
Preceptors: Dr. Julia Linke, Dr. Melissa Brotman, Dr. Ellen Leibenluft

# 291 Beata Gelman
_Hippocampal Receptor Quantification with R_
University of Maryland, College Park (Maryland)
Preceptors: Dr. Adi Cymerblit-Sabba, Ms. Michaela Cooke, Mr. Oliver Holmes, Dr. Scott Young, Dr. Su Hyun Lee, Ms. June Song

# 292 Laura Jett
_A Bridge between Modalities: Utilizing EEG and fMRI to Investigate the Effects of Behavioral Inhibition on Flanker Task Performance_
University of California, Davis (California)
Preceptors: Dr. Daniel Pine, Dr. Matt Moradi, Dr. Anderson Winkler

# 293 Dartanyon Jones
_A Quantification Method for Spatial Mapping of Gene Expression across the Antero-Posterior Axis of the Paraventricular Thalamus_
Howard University (District of Columbia)
Preceptors: Mrs. Claire Gao, Mrs. Alison Bashford, Dr. Mario Penzo

# 294 Aanika Kashyap
_Understanding Visual Cortical Computation: Novel Activity Patterns Generated with Holographic Optogenetic Stimulation Modify Neural Responses_
Rice University (Texas)
Preceptors: Ms. Hannah Douglas, Ms. Nina Friedman, Dr. Mark Histed

# 295 Alayna Kinkead
_Participation of Cholinergic Neurons in the Encoding of Approach and Avoidance Behaviors_
Georgetown University (District of Columbia)
Preceptors: Dr. David Talmage, Dr. Ronald Kim, Dr. Mala Ananth, Dr. Lorna Role

# 296 Meghna Krishnamurthy
_Association between Suicide Risk and a Mental Health Diagnosis: An Examination of Medical Patients by Race/Ethnicity_
College of New Jersey (New Jersey)
Preceptors: Dr. Lisa Horowitz, Dr. Maryland Pao, Ms. Annabelle Mournet, Mr. Nathan Lowry
# 297 Aileen Lo
*Characterization of PET Imaging Probes with Selectivity for the Glu2NA Subunit of the NMDA Receptor*
Princeton University (New Jersey)
Preceptors: Dr. Lisheng Cai, Dr. Victor Pike, Dr. Robert Innis

# 298 Sanjana Malla
*Exploring the Effects of Chronic Social Defeat Stress on Neurovasculature with Single Cell RNA-Seq*
Georgetown University (District of Columbia)
Preceptors: Dr. Michael Lehmann, Dr. Miles Herkenham

# 299 Matthew Miller
*Novel Metrics in the Sleep EEG to Assess Neurodevelopmental Trajectories.*
Yale College (Connecticut)
Preceptor: Dr. Ashura Buckley

# 300 Michael Mugerwa
*Using fNIRS to Examine Language Development between Verbal and Minimally Verbal Children*
Columbia University (New York)
Preceptors: Dr. Emma Condy, Dr. Audrey Thurm

# 301 Neethi Narasimha
*Use of Social Paradigms to Observe Behavioral Changes in Avpr1 and Oxt Knockout Mice*
University of South Florida (Florida)
Preceptors: Dr. Adi Cymerblit-Sabba, Mr. Oliver Holmes, Dr. W Scott Young

# 302 Chloe Noh
*Anatomical Architecture of Nucleus Accumbens D3 Receptor-expressing Neurons*
Harvard University (Massachusetts)
Preceptors: Mr. Juan Enriquez Traba, Dr. Hugo Tejeda

# 303 Corey Richier
*Implementation of a BrainAge Algorithm Using a Convolutional Neural Network Approach*
University of Illinois at Urbana-Champaign (Illinois)
Preceptors: Dr. Anderson Winkler, Dr. Chelsea Sawyers, Dr. Daniel Pine

# 304 Madeline Seeley-Hacker
*Association between Youth Suicide Risk and Parental Marital Status*
Catholic University of America (District of Columbia)
Preceptors: Dr. Lisa Horowitz, Dr. Maryland Pao, Mr. Nathan Lowry

# 305 Mohamed Sheikhi
*Cyclooxygenase Quantification in The Brain Using PET Radioligands*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Robert Innis, Ms. Bruny Kenou, Ms. Maia Van Buskirk, Ms. Sara Rubovits

# 306 Tesia Shi
*Whole Brain Neuronal Activity Mapping of Frustrative Nonreward in Mice*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Sarah Williams, Mr. Stephen Wisser, Dr. Ted Usdin

# 307 Ananya Swaminathan
*Melatonin as a Potential Biomarker for Sleep Patterns and Disturbances in Migraine and Depression*
Johns Hopkins University (Maryland)
Preceptor: Dr. Kathleen Merikangas

# 308 Liya Tadesse
*Applications of Reinforcement Learning*
Northern Virginia Community College (Virginia)
Preceptors: Ms. Miriam Janssen, Mr. Christopher Lewarne, Ms. Vanessa Morgan

# 309 Olufunmilayo Telli
*Neighborhood Resource Level as a Moderator of Symptom Severity and Impairment in a Sample of Transdiagnostic Youth*
University of Maryland, Baltimore County (UMBC) (Maryland)
Preceptors: Dr. Ellen Leibenluft, Dr. Elise Cardinale, Mr. Issac Morales

# 310 Pooja Varma
*Characterization of Fasciola Cinereum*
Nova Southeastern University (Florida)
Preceptors: Dr. Su Lee, Ms. Michaela Cooke, Dr. Scott Young

# 311 Julia Versel
Loyola University Chicago Stritch School of Medicine (Illinois)
Preceptors: Dr. Daniel Eisenberg, Dr. Karen Berman

# 312 Queenie Wang
*Characterization of Dynorphin-containing Neurons in the Medial Prefrontal Cortex*
Tulane University (Louisiana)
Preceptors: Ms. Sanne Casello, Mr. Hector Castillo, Dr. Hugo Tejeda

# 313 Joseph Wood
*Evaluating Language Milestones in Phelan-McDermid Syndrome*
Canisius College (New York)
Preceptors: Dr. Emma Condy, Dr. Audrey Thurm

# 314 Noam Yanay
*Impacts of Stressors on the Circadian System*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Maria Yurgel, Dr. Samer Hattar

# 315 Eunha Yim
*Examining Relations between Amygdala Connectivity and Psychopathology in Infancy*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Courtney Filippi, Dr. Daniel Pine

**National Institute of Neurological Disorders and Stroke (NINDS) Posters**

# 316 Muhammad Abdulla
*Modeling Studies of Calcium Dynamics Generating Periodic Sigh Activity in Respiratory Networks*
University of Florida (Florida)
Preceptors: Dr. Jeffrey Smith, Dr. Ryan Phillips

# 317 Rebeca Amaya Escobar
*Mouse Behavioral Performance in an Object Localization Task following Unilateral Whisker Deprivation.*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Patrick Wright, Dr. Emily Petrus, Dr. Alan Koretsky

# 318 Annika Backer
*Surgical and Non-surgical Factors Influencing Pain Relief in Chiari-1 Patients*
Smith College (Massachusetts)
Preceptors: Dr. Fredric Cantor, Dr. John Heiss

# 319 Aracely Barajas
*Targeting Protein Arginine Methyltransferase 5 for Glioblastoma Therapy*
Fort Lewis College (Colorado)
Preceptor: Dr. Yesh Banasavadi

# 320 Alex Bergeron
*PD-1 Inhibitor-associated Neurotoxicity: A Case Study and Literature Review*
Pacific Northwest University of Health Sciences (Washington)
Preceptor: Dr. Sophie Cho
# 321 Sonia Chandra
*Participation of Cholinergic Neurons in the Encoding of Freezing Behavior in Response to Aversive and Appetitive Stimuli*
University of Virginia (Virginia)
Preceptors: Dr. Ronald Kim, Dr. Mala Ananth, Dr. David Talmage, Dr. Lorna Role

# 322 Alice Chien
*Analysis of Brain Volume in HIV Individuals through Atlas-free Brain Classification Using Derivative-Based Features (C-DEF)*
University of California, Los Angeles (California)
Preceptors: Dr. Govind Bhagavatheeshwaran, Dr. Bryan Smith, Dr. Avindra Nath

# 323 Katherine Collamore
*Olfactory Deficits and Language Dysfunction in Parkinson’s Disease: An fMRI Study*
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Mark Hallett, Dr. Silvina Horovitz, Dr. Laura Pesantez Pacheco

# 324 Ana Danko
*Examining the Function of the Central Amygdala to Zona Incerta Pathway in Pain Modulation Using an Intersectional Approach*
University of Southern California (California)
Preceptors: Dr. Yarimar Carrasquillo, Ms. Barbara Benowitz

# 325 Britney Forsyth
*Deep Learning Algorithm for Classification of Hemorrhagic Transformation in MRI*
Pennsylvania State University (Pennsylvania)
Preceptors: Ms. Samantha Jackson, Dr. Lawrence Latour, Dr. Marie Luby

# 326 Paloma Garcia
*Participation of Cholinergic Neurons in the Encoding of Emotionally Salient Memories in Aging*
Brown University (Rhode Island)
Preceptors: Dr. Mala Ananth, Dr. Lorna Role

# 327 Deeya Garg
*Statins as a Neurotherapeutic Agent for HIV-mediated Neurotoxicity*
Duke University (North Carolina)
Preceptor: Dr. Joe Steiner

# 328 Isuru Herath
*Spinal Cord Atrophy and Cross-sectional Area Profiles in Syringomyelia*
Cornell University (New York)
Preceptors: Mr. Henry Dieckhaus, Dr. Govind Bhagavatheeshwaran
# 329 Margarito Hernandez Fuentes
*Examining Structural Plasticity in Medial Prefrontal Cortex-Ventral Hippocampal Circuits in a Mouse Model of the 22q11.2 Deletion Syndrome*
Arizona State University (Arizona)
Preceptor: Dr. Dave Kupferschmidt

# 330 Justin Hill
*Longitudinal Volumetric MRI Analysis Pipeline for Open-source Neuroimaging Platform (XNAT)*
Harvard University (Maryland)
Preceptors: Dr. Govind Bhagavatheeshwaran, Ms. Prasanna Parvathaneni

# 331 Frank Horrigan
*An Improved Image Processing Method for Accurate Measurement of Single-transporter Fluxes*
Poolesville High School (Maryland)
Preceptors: Dr. Gabriel Fitzgerald, Dr. Joseph Mindell

# 332 Charly Jensen
*Cryptococcal Meningitis with Hearing Loss: A Case Report and Literature Review*
Pacific Northwest University of Health Sciences (Washington)
Preceptor: Dr. Hyun Joo Cho

# 333 Rohith Kesaraju
*Examining Sex Differences in Neural Circuitry underlying Working Memory in an Animal Model of Schizophrenia Risk*
Washington University in St. Louis (Missouri)
Preceptors: Dr. Sofiya Hupalo, Dr. Joshua Gordon

# 334 Kenzo Kimura
*Computational Exploration of Voltage Signaling through a Realistic Dopaminergic Axon*
New York University (New York)
Preceptors: Dr. Zayd Khaliq, Mr. Alexander Sukharev

# 335 Allison Lambert
*Visualization and Averaging of Biological Structure Tomography*
Brigham Young University (Utah)
Preceptor: Dr. Xiaobing Chen

# 336 Keaton Mackey
*Characterization of Leadership in Tribal Colleges and Universities*
University of Pennsylvania (Pennsylvania)
Preceptor: Dr. Nina Schor

# 337 Erika McPhetridge
*Battling Erasure: Invisible Stroke Disparities in Indigenous People*
# 338 Dustin Mullaney
Immune Cell Profiling of Human Pituitary Adenomas and Adjacent Normal Glands
Northern Arizona University (Arizona)
Preceptors: Dr. David Asuzu, Dr. Prashant Chittiboina

# 339 Brendon Murphy
How Epilepsy Surgery Affects Quality of Life and Cognition
Mclean High School (Virginia)
Preceptor: Ms. Shareena Rahman

# 340 Hasita Nalluri
Analyzing the Relationship between Brain Iron Accumulation and Parkinson's Disease Progression through MRI
Thomas Jefferson High School for Science and Technology (Virginia)
Preceptors: Dr. Silvina Horovitz, Dr. Mark Hallett

# 341 Leah Nez
Responsible Conduct of Research with Urban Indian Populations: Addressing Gaps in Ethical Commitments
Metropolitan State University of Denver (Colorado)
Preceptor: Dr. Sara Hull

# 342 Shannon O'Hara Wiora
A Comparison of Algorithms for Predicting Membrane Protein Structures
Tidewater Community College (Virginia)
Preceptors: Dr. Lucy Forrest, Dr. Vanessa Leone Alvarez

# 343 Nina Opem
Exploring the Physiological Mechanism of Bradykinesia in Parkinson's Disease
Georgia Institute of Technology (Georgia)
Preceptors: Dr. Patrick McGurrrin, Dr. Debra Ehrlich

# 344 Elisabeth Oskoue
Computational Modeling of Resiniferatoxin Interactions with TRP Channels
Potomac School (Virginia)
Preceptors: Mx. Katherine Huffer, Dr. Kenton Swartz

# 345 Thomas Policicchio
Lessons Learned: Analysis of the Design and Execution of Six Neuromuscular Disorder Clinical Trials
Dartmouth College (New Hampshire)
# 346 Kyle Pu
*3D Reconstructions of Proteins in the Postsynaptic Density Using Cryo-Electron Microscopy and Tomography*
University of California, Los Angeles (California)
Preceptors: Dr. Xiaobing Chen, Dr. Thomas Reese

# 347 Lucianne Rosario-Rodriguez
*Neuroprotective Potential of Flavonoids*
George Washington University (District of Columbia)
Preceptor: Dr. Joe Steiner

# 348 Loic Sangwa
*Plot the Difference: Tools to Analyze Protein Symmetry*
Johns Hopkins University (Maryland)
Preceptors: Dr. Antoniya Aleksandrova, Dr. Lucy Forrest

# 349 Kandace St. John
*Identification of Guidance Molecules Affecting Migration of GnRH Neurons*
St. John's University (New York)
Preceptor: Dr. Susan Wray

# 350 Nandini Yellamelli
*How Does Serotonin Bind to the Human Serotonin Transporter?*
Lehigh University (Pennsylvania)
Preceptors: Dr. Lucy Forrest, Dr. Eva Hellsberg

# 351 Yalda Zarrabi
*Consequences of Age on the BFCN-BLA Circuit in Learning*
Georgetown University (District of Columbia)
Preceptors: Dr. Mala Ananth, Dr. Ronald Kim, Dr. Lorna Role, Dr. David Talmage

**National Library of Medicine (NLM) Posters**

# 352 Elaheh Aghaarabi
*Natural Language Processing to Capture Sentence Similarity from Electronic Health Records*
Towson University (Maryland)
Preceptors: Dr. Qingyu Chen, Dr. Zhiyong Lu

# 353 Goonmeet Bajaj
*Graph Attentive Networks for Synonymy Prediction at Scale in the UMLS Metathesaurus*
Ohio State University (Ohio)
Preceptors: Dr. Vinh Nguyen, Dr. Olivier Bodenreider

# 354 James Han
A Computational Investigation of Factors Affecting Fold-switching Behavior in the NusG Protein Superfamily
Yale University (Connecticut)
Preceptor: Dr. Lauren Porter

# 355 Vishesh Javangula
Inserting New Biomedical Terms into the UMLS Metathesaurus Using Deep Learning Models for Synonymy Prediction
George Washington University (District of Columbia)
Preceptors: Dr. Olivier Bodenreider, Dr. Vinh Nguyen

# 356 Kaily Johnson
Developing a Library to Pair Predicted Fold-switching and Single-folding Proteins with High Levels of Sequence Identity
University of Maryland, Baltimore County (Maryland)
Preceptor: Dr. Lauren Porter

# 357 Deniz Kavzak Ufuktepe
Machine Learning for Automated Malaria Diagnosis
University of Missouri - Columbia (Missouri)
Preceptor: Dr. Stefan Jaeger

# 358 Sreenidhi Sankararaman
Derived Variants of Two-component Systems in Bacterial Immune Systems
Thomas Jefferson High School for Science and Technology (Virginia)
Preceptors: Dr. L Aravind, Dr. Gurmeet Kaur

# 359 Thilini Wijesiriwardene
Pretraining Language Models for Synonymy Prediction at Scale in the UMLS
Artificial Intelligence Institute, University of South Carolina (South Carolina)
Preceptors: Dr. Vinh Nguyen, Dr. Olivier Bodenreider

# 360 Deahan Yu
Understanding What Is Learned in a Multitask Approach to Identification of Adverse Drug Events in Text
University of Michigan (Michigan)
Preceptor: Dr. Dina Demner Fushman
# 361 Ivvone Zhou
*Identifying Activators and Repressors in Cell Line-specific Regulatory Programs Using Deep Learning*
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Ivan Ovcharenko, Dr. Wei Song

Clinical Center (CC) Lightning Talks

# 362 Megan Jiao
*Developing a Virtual Deliberation Exercise to Promote Health Equity in the COVID-19 Pandemic Era*
McGovern Medical School, University of Texas Health Science Center at Houston (Texas)
Preceptor: Dr. Marion Danis

# 363 Pushkar Shinde
*Investigating the Role of Semaphorin 5A and 6B in LPS-induced Inflammation and Sepsis*
Emory University (Georgia)
Preceptors: Dr. Parizad Torabi-Parizi, Dr. Shreya Kanth, Dr. Salina Gairhe

# 364 Shriansh Singh
*Evaluating the Use of Religion and Spirituality Assessment Tools in Palliative Care*
College of William & Mary (Virginia)
Preceptors: Dr. Ann Berger, Dr. Margaret Mahon

National Institute on Aging (NIA) Lightning Talks

# 365 Kiana Allen
*The Impact of Sex-dependent Differences in Dietary and Pharmacological Interventions on Longevity and Healthspan*
Alcorn State University (Mississippi)
Preceptors: Dr. Laura Pomatto, Dr. Rafael de Cabo

# 366 Samuel Allotey
*Serum Cytokines and Biomarkers of Inflammation in a Population at Risk for Health Disparities: The HANDLS Cohort*
University of Notre Dame (Indiana)
Preceptors: Dr. Michele Evans, Dr. Nicole Noren Hooten

# 367 Tyler Amos
*Different Proliferation Rates of Young and Old B Cells Explained by Single Cell RNA Sequencing*
Johns Hopkins University (Maryland)
Preceptors: Mr. Carlos Ticas Rodas, Dr. Patricia Gearhart

# 368 Dhiksha Balaji
*Chronic Overexpression of Adenylyl Cyclase Type 8 in the Heart Markedly Enhances Cardiac Performance in Youth, but Leads to Heart Failure and Accelerated Aging Later in Life*
Case Western Reserve University School of Medicine (Ohio)
Preceptors: Dr. Edward Lakatta, Dr. Christopher Morrell

# 369 Claire Barlow
*Evaluation and Management of Frailty in the Context of MCI and Dementia*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Lana Sargent, Dr. Andrew Singleton

# 370 Elizabeth Bolarinwa
*The Association between Nerve Health and Taste/Fungiform Papillae Density*
Howard University (District of Columbia)
Preceptor: Dr. Ajoy Karikkineth

# 371 Ana Cunningham
*Heart Pathology and Morphology Changes across the Lifespan in the Study of Longitudinal Aging in Mice (SLAM)*
Centennial High School (Maryland)
Preceptors: Dr. Rafael de Cabo, Dr. Simonetta Camandola, Dr. Eleonora Duregon

# 372 Wasilat Dosunmu
*Analysis of i-Motifs and Their Potential Roles in Genome Homeostasis*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Robert Brosh

# 373 Daniel Etcheberrigaray
*Diagnostic Accuracy of Magnetic Resonance Spectroscopy in Alzheimer’s Disease: A Systematic Review and Meta-analysis*
Atholton High School (Maryland)
Preceptors: Dr. Kostantinos Avgerinos, Dr. Dimitrios Kapogiannis

# 374 Aarish Hanif
*Mechanisms of Action of Adenylyl Cyclase in the Heart*
University Of Maryland, Baltimore County (Maryland)
Preceptor: Dr. Khalid Chakir

# 375 Linnea Hertslet
*investigating the Diversity Gaps in Genetic Research across Neurodegenerative Diseases*
University of Maryland, College Park (Maryland)
Preceptors: Ms. Hampton Leonard, Ms. Julianne Lake, Dr. Mike Nalls
# 376 Shirin Ismayil
*Motif Analysis of NF-κB Binding Sites in Genes with Different Kinetic Patterns of Activation*
Pennsylvania State University (Pennsylvania)
Preceptors: Dr. Ranjan Sen, Dr. Noah Ollikainen

# 377 Albert Jackson
*Investigation on the Effects of Lipid Toxicities in Alzheimer's Disease Pathology in an in vitro Cell Culture Model*
Xavier University of Louisiana (Louisiana)
Preceptor: Dr. Liz Calzada

# 378 Andreanna Le
*Reorganization of Striosome Neuron Subtypes in Dopamine-depleted Mouse Models*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Huaibin Cai, Dr. Jie Dong, Ms. Breanna Sullivan

# 379 Brittany Linus
*AID Targeting in the IgH Variable Region*
Stanford University (California)
Preceptors: Dr. Patricia Gearhart, Ms. Stormy Ruiz

# 380 Paul Ly
*Modulation of Autophagy in Mice with ADCY8 Overexpression*
Tufts University (Massachusetts)
Preceptor: Dr. Maria Perino

# 381 Anirban Mahanty
*Time Restricted Feeding and Calorie Restriction Differentially Modulate Lung Disease Burden in Adult Female Mice*
Virginia Commonwealth University (Virginia)
Preceptors: Dr. Eleonora Duregon, Dr. Simonetta Camandola, Dr. Rafael De Cabo

# 382 Yomiyu Mekonnen
*Polygenic Risk Score Analyses of Psychiatric Disorders Linked to C9orf72-Mediated ALS*
Johns Hopkins University (Maryland)
Preceptor: Dr. Sara Saez

# 383 Cynthia Moya
*Drug Repurposing to Target ALS Pathways*
Montgomery College (Maryland)
Preceptors: Dr. Sara Saez, Dr. Bryan Traynor
# 384 Chineny Nwachukwu  
*Relationships between Serum Cytokines, DNA Methylation Status and Demographic Parameters in a Middle Aged Cohort*  
University of Pittsburgh (Pennsylvania)  
Preceptors: Dr. Nicole Hooten, Dr. Michele Evans

# 385 Sylvia Okafor  
*Developing a Motor Function Index in a Rodent Model of Normal Cognitive Aging*  
University of Toronto St. George Campus (Canada)  
Preceptors: Dr. C'iana Cooper, Dr. Peter Rapp

# 386 Emily Perez-Rodriguez  
*Inflammatory Cytokines in Relation to Biomarkers and Social Determinants of Health in the HANDLS Cohort*  
Johns Hopkins University (Maryland)  
Preceptors: Dr. Nicole Noren Hooten, Dr. Michele Evans

# 387 Robert Rabelo-Fernandez  
*Developing Deep Learning Algorithms for Ki-67 Proliferation Index Assessment of Malignant Neoplasms*  
University of Puerto Rico at Rio Piedras (Puerto Rico)  
Preceptors: Dr. Eleonora Duregon, Dr. Rafael de Cabo, Dr. Simonetta Camandola

# 388 Anish Raju  
*Using Machine Learning to Discover Features and Regulatory Interactions of mRNA Decay*  
University of Arizona (Arizona)  
Preceptors: Dr. Emmanouil Maragkakis, Dr. Showkat Dar

# 389 Chase Rector  
*Hippocampal Knockout of p300 Affects Learning and Memory in Mouse*  
Howard University (District of Columbia)  
Preceptors: Ms. Lin Wang, Dr. Payel Sen

# 390 Tavia Roache  
*Consequences of Genomic DNA Mono-ribonucleotides for Chromosomal Stability*  
Howard University (District of Columbia)  
Preceptor: Dr. Robert Brosh

# 391 Arthur Robinson  
*Single-cell RNAseq Analysis of Mouse Aortic Cells*  
Dartmouth College (New Hampshire)  
Preceptor: Dr. Krystyna Mazan-Mamczarz
# 392 Pritish Sahoo
_Hippocampal NPAS4 Expression in a Rat Model of Normal Cognitive Aging_
Touro College of Osteopathic Medicine (New York)
Preceptors: Dr. Craig Myrum, Dr. Cristina Bañuelos

# 393 Kirsten Tran
_Age-Related Accumulation of 5-Hydroxymethylcytosine in the Liver_
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Payel Sen, Mr. James Occean

# 394 Bhargav Vemuri
_Machine Learning to Predict mRNA Translation Efficiency from Sequence Features_
University of Cincinnati (Ohio)
Preceptor: Dr. Matthew Payea

# 395 Joy Youn
_Circuitry Serving Early and Late Non-motor Symptoms of Parkinson’s Disease_
University of California, Los Angeles (California)
Preceptors: Dr. Sarah Hawes, Mr. Braden Oldham, Dr. Huabin Cai

# 396 Eric Zhu
_An Overview of the Genetics of Chronic T-cell Dysfunction_
University of Maryland, College Park (Maryland)
Preceptor: Dr. Nan-ping Weng

National Institute of Biomedical Imaging and Bioengineering (NIBIB) Lightning Talks

# 397 Deborah Acheampong
_Identifying the Effects of Taxane-based Chemotherapy on Actomyosin Cortical Properties in Paclitaxel Sensitive and Resistant Cancers_
University of Maryland, College Park (Maryland)
Preceptors: Dr. Alexander Cartagena-Rivera, Ms. Chynna Smith, Ms. Jamie Neal

# 398 Diya Dinesh
_Enhanced Augmented Reality Visualization and Manipulation of 3D Clinical and Biomedical Data through Gesture and Gaze with the HoloLens 2_
Thomas Jefferson High School for Science and Technology (Virginia)
Preceptors: Dr. Peter Basser, Dr. Raisa Freidlin, Mr. Marcial Garmendia, Mr. Thomas Pohida

# 399 Francis Oparaocha
_Developing a Raspberry Pi-based Freezer Monitoring Solution for the NIH Campus_
University of Maryland, College Park (Maryland)
Preceptors: Mr. Tom Pohida, Mr. John Kakareka, Mr. Randy Pursley, Mr. Brent Abel, Mr. Warren Herder, Mr. Aziz Hanonu

National Institute on Drug Abuse (NIDA) Lightning Talks

# 400 Lu Collina
The Effectiveness of Learning Classifications on Individuals with Learning Disabilities
The Senia School (Maryland)
Preceptor: Ms. Christie Brannock

# 401 Sofia Flores-Rojas
Spirituality's Manifestations in Addiction Treatment Facilities
Rice University (Texas)
Preceptor: Ms. Christie Brannock

# 402 Shayari Peiris
Heritability of the Positive-Negative Brain Connectome Mode: A Twin Study on ABCD Project
Wake Forest University (North Carolina)
Preceptor: Dr. Xiang Xiao

National Institute of Mental Health (NIMH) Lightning Talks

# 403 Olivia Clarke
The Association of Suicide and Trauma History with Self-reported Fear, Anxiety and Anxiety Sensitivity
Mount Holyoke College (Massachusetts)
Preceptors: Dr. Elizabeth Ballard, Dr. Angel de la Cruz Landrau

# 404 Harry Feng
WITHDRAWN: SynGap1 Deletion Effects on GABAergic Cortical Neuron Cell Morphology
Emory University (Georgia)
Preceptors: Dr. Soohyun Lee, Mr. Shovan Naskar

# 405 Sam Mansfield
A Summary of Radioligands Targeting GluN2B
Brigham Young University (Utah)
Preceptors: Dr. Lisheng Cai, Dr. Victor Pike

# 406 Rachel Noorani
ECT Practice in the USA: Survey Rationale and Design
University of Maryland, College Park (Maryland)
Preceptors: Dr. William Regenold, Dr. Sarah Lisanby

# 407 Pooja Shankar
*Treatments for Acute Suicidality: Review and Recommendations*
American University (District of Columbia)
Preceptor: Dr. Mani Yavi

# 408 Katie Shrout
*Magnetoencephalography during a Naturalistic Viewing Task*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Allison Nugent, Dr. Jeff Stout

# 409 Ellen Sojka
*Quantification and Classification of Dendritic Spines in Hippocampal CA1 throughout Development*
Colgate University (New York)
Preceptors: Dr. Zheng Li, Mr. Kevin Keary

# 410 Avani Venkatesh
*Foot-shock Stress Induced Effects on cFos and per2 Expression in the Suprachiasmatic Nucleus of the Hypothalamus*
Virginia Commonwealth University (Virginia)
Preceptor: Ms. Claire Gao

# 411 Elizabeth Wat
*Relationship between Prereading Measures and Inter-subject Connectivity: An fMRI Study*
University of Virginia (Virginia)
Preceptors: Dr. Peter Molfese, Dr. Peter Bandettini

National Institute of Neurological Disorders and Stroke (NINDS) Lightning Talks

# 412 Marcus Alexander
*Single Cell Resolution Multiomic Study of Sporadic Pituitary Adenoma Pathogenesis*
Frank H. Netter MD School of Medicine (Connecticut)
Preceptor: Dr. Prashant Chittiboina

# 413 Amin Attari
*Detection of Radiologically Isolated Syndrome (RIS) Using Lower Limb Vibration*
George Washington University (District of Columbia)
Preceptors: Dr. Irene Cortese, Dr. Shila Azodi
# 414 Christopher Bi
*Mapping Communication between Neurons through Analysis of Single Unit Spiking Data*
Rice University (Texas)
Preceptor: Dr. Kareem Zaghloul

# 415 Shoshenna Chee
*The Association of Suicide Attempts and Anhedonia With Self-reported Fear, Anxiety, and Anxiety Sensitivity*
Dine College (Arizona)
Preceptor: Dr. Elizabeth Ballard

# 416 Chyanne Eaton
*The Placebo Effect in the Treatment of Cervical Dystonia*
University of South Florida (Florida)
Preceptors: Dr. Mark Hallett, Mr. Terance Camacho

# 417 Elizabeth Gillette
*Comparison of Brain Tissue Classification Methods in Structurally Abnormal Brains*
University of Pittsburgh (Pennsylvania)
Preceptor: Dr. Sara Inati

# 418 Charlotte Ishikawa
*Patterns of Sleep in Epilepsy Patients*
Southern Adventist University (Tennessee)
Preceptor: Dr. Shareena Rahman

# 419 Delores Luttrell
*Presence of Viral Proteins in CSF of People Living with Managed HIV as a Potential Marker of Disease Progression*
George Mason University (Virginia)
Preceptors: Dr. Lisa Henderson, Dr. Avi Nath

# 420 Cullen Nockideneh
*In silico Analysis of Candidate Transcription Factors Regulating the Expression of Nicotine Acetylcholine Receptor, D alpha 1*
Northern Arizona University (Arizona)
Preceptors: Dr. Quan Yuan, Dr. Jun Yin

# 421 Sydney Ragland
*Individual and Neighborhood Socioeconomic Status and Elevated Brain Amyloid: The ARIC-PET Dtudy*
Howard University (District of Columbia)
Preceptor: Dr. Rebecca Gottesman
# 422 Uzma Rentia  
*Single-cell RNA-Seq Analysis of Oligodendrocytes in DTA-mediated Oligodendrocyte Ablation Model*  
George Washington University (District of Columbia)  
Preceptors: Dr. Jing-Ping Lin, Ms. Alexis Brake, Dr. Brian Popko, Dr. Daniel Reich

# 423 Krystal Santiago Colon  
*Measuring Every Move: Kinematic Analysis of a Simple Behavior in Mice*  
University of Puerto Rico, Cayey Campus (Puerto Rico)  
Preceptors: Ms. Isabelle Hua, Dr. Fabricio Do Couto Nicola, Dr. Ariel Levine

National Library of Medicine (NLM) Lightning Talks

# 424 Maryori Maloney Lopez  
*Costs and Benefits of Sexual Selection*  
Benjamin Banneker Academic High School (District of Columbia)  
Preceptors: Dr. Nash Rochman, Dr. Eugene Koonin

# 425 Tochi Oguguo  
*Self-supervised Learning for Echocardiography View Classification in Open World Settings*  
Charles Herbert Flowers High School (Maryland)  
Preceptors: Dr. Ghada Alzamzmiga, Dr. Sameer Antani

# 426 Solome Teferi  
*The Costs and Benefits of Sexual Selection*  
Springbrook High School (Maryland)  
Preceptors: Dr. Nash Rochman, Dr. Eugene Koonin

Thursday, August 6, 2021

National Center for Advancing Translational Sciences (NCATS) Posters

# 427 Maria Antony  
*Designing an Assay to Identify LC3 Binders for Autophagosome Targeting and Lysosomal Degradation*  
University of Connecticut School of Medicine (Connecticut)  
Preceptors: Mr. Tino Sanchez, Dr. Mark Henderson,

# 428 Sellers Hill  
*Quantitative Analysis of Vascular Networks in an in vitro Model of the Lung's Lower Respiratory Tract*
Harvard University (Massachusetts)
Preceptors: Ms. Esther Sim, Dr. Marc Ferrer

# 429 William Kariampuzha
*Epidemiological Information Extraction for Rare Diseases from PubMed*
Texas Tech University (Texas)
Preceptor: Dr. Qian Zhu

# 430 Tracey Oellerich
*Deep Learning on Embedded Protein-Protein Interaction Networks to Prioritize Disease Targets*
George Mason University (Virginia)
Preceptors: Dr. Vishal Siramshetty

# 431 Deborah Rodriguez
*Polo-like Kinases 1 PROTACs (PLK-1 PROTACs) Serving as Potential Anti-cancer Agents*
University of Minnesota-Twin Cities (Minnesota)
Preceptor: Dr. Sandeep Rana

# 432 Wenyu Zeng
*Predicting Bioassay Activity Outcome: Bayesian Modeling and Probabilistic Programming*
George Washington University (District of Columbia)
Preceptors: Mr. Dac-Trung Nguyen, Dr. Alexey Zakharov

# 433 Irene Zhang
*Quantitative Analysis of Vascular Networks in an in vitro Model of the Lung’s Lower Respiratory Tract*
Arizona State University (Arizona)
Preceptors: Ms. Esther Sim, Dr. Marc Ferrer

National Center for Complementary and Integrative Health (NCCIH)
Poster

# 434 Jacqueline de Melo
*Investigating Differences in Neuronal Activation across Lateralization, Cell Type, and Sex in the Central Amygdala*
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Yarimar Carrasquillo, Ms. Jeitzel Torres-Rodriguez
# 435 Kairo Baylor
*Using Nanopore Long Read Sequencing to Analyze Splicing Behavior of Retinal Pigment Epithelial Transcript Isoforms*
Bard College at Simon's Rock (Massachusetts)
Preceptors: Dr. Olga Postnikova, Dr. T. M. Redmond

# 436 Selina Chan
*Behavioral and Physiological Effects of Water Control on Rhesus Macaques*
University of Pennsylvania, School of Veterinary Medicine (Pennsylvania)
Preceptor: Dr. James Raber

# 437 Samuel Cubillos
*Variations of Retinal Synaptic Terminals in Hibernating Ground Squirrels*
University of Illinois College of Medicine- Chicago (Illinois)
Preceptors: Dr. John Ball, Dr. Wei Li

# 438 Diego Dominguez
*A Longitudinal Study of Cone Photoreceptors in Retinitis Pigmentosa*
Oklahoma State University College of Osteopathic Medicine (Oklahoma)
Preceptors: Dr. John Giannini, Dr. Johnny Tam

# 439 Agnes Ezekwesili
*Seeing in Color: Inclusion and Characterization of Hereditary Eye Disease in African Americans*
Perelman School of Medicine, University of Pennsylvania (Pennsylvania)
Preceptor: Dr. Wadih Zein

# 440 Emily Galvan
*A Comparative Analysis of Available RPE65 Crystal Structures in Lipid and Non-lipid Environments*
Florida State University (Florida)
Preceptors: Dr. Michael Redmond, Dr. Sheetal Uppal

# 441 Riley Hoffman
*Neuronal Representation of Color in V4: What Makes a 4-AFC Task "Difficult"?*
Harvard University (Massachusetts)
Preceptors: Dr. Daniel Garside, Dr. Bevil Conway

# 442 Timothy Jiang
*Profiling TCR Repertoires of IL-17A Producing Gamma-Delta T Cells Elicited by Ocular Commensal via Single-cell TCR Sequencing*
University of Pennsylvania (Pennsylvania)
Preceptors: Dr. Xiaoyan Xu, Dr. Vijay Nagarajan, Dr. Rachel Caspi

# 443 Hailey Kim
*Identification of Genes Involved in Photoreceptor Fate Determination in Zebrafish*
Northwestern University (Illinois)
Preceptors: Dr. Wei Li, Dr. Juan Angueyra-Aristizabal, Ms. Laura Patak, Dr. Katie Kindt

# 444 Hong Le
*Quantitative Assessment of Fluorescently-labeled Retinal Pigment Epithelial Cells in Living Human Eyes*
Medical College of Virginia/Virginia Commonwealth University School of Medicine (Virginia)
Preceptors: Dr. Joanne Li, Dr. Johnny Tam

# 445 Deja Rush
*An Epidemiological Study to Evaluate Environmental Effects as Potential Progenitors of Coloboma*
Howard University College of Medicine (District of Columbia)
Preceptors: Dr. Brian Brooks, Dr. Tiziana Cogliati

# 446 Daniel Sanchez-Mendoza
*Analyzing Differentially Expressed Genes Important for Optic Fissure Closure and Coloboma Observed between Different Species*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Brian Brooks, Dr. Tiziana Cogliati, Dr. Elangovan Boobalan, Dr. David McGaughey

# 447 Hector Sandoval
*OCT Parameters of Geographic Atrophy Associated with Age-related Macular Degeneration*
State University of New York: Downstate College of Medicine (New York)
Preceptors: Dr. Emily Chew, Dr. Catherine Cukras, Dr. Tiarnán Keenan, Dr. Tharindu De Silva

# 448 Rajiv Sastry
*Evaluation of iPSC-Retinal Pigment Epithelium Manual Segmentation across Six Reviewers for Machine Learning Training*
Harvard University (Massachusetts)
Preceptors: Dr. Davide Ortolan, Dr. Kapil Bharti

# 449 Jade Tai
*Investigating Structural Remodeling in the Outer Plexiform Layer of Hibernating Ground Squirrel Retina*
University of California, Los Angeles (California)
Preceptors: Dr. John Ball, Dr. Wei Li

# 450 Rachel Tam
*A Spatial Analysis of Ellipsoid Zone Loss in Eyes with Hydroxychloroquine Toxicity*
Princeton University (New Jersey)
Preceptor: Dr. Catherine Cukras

# 451 Nu Bao Tran Ton
*Automated Segmentation and Quantitation of Retinal OCT Images in Animal Models*
University of Oklahoma (Oklahoma)
Preceptors: Dr. Michael Redmond, Dr. Yan Li, Ms. Danielle Yee

# 452 Natalie Toth
*Characterization of Cone Photoreceptor Structure in Retinitis Pigmentosa Using Adaptive Optics Retinal Imaging*
Hamilton College (New York)
Preceptors: Dr. John Giannini, Dr. Johnny Tam

# 453 Amday Wolde
*Evaluating the Use of Artificial Intelligence for Detection of Reticular Pseudodrusen in Adaptive Optics Retinal Imaging*
Ohio State University College of Medicine (Ohio)
Preceptors: Dr. Joanne Li, Dr. Jianfei Liu, Dr. Johnny Tam

# 454 Alice Zhu
*Transmembrane Domain of OCA2 Protein: Computational Analysis of Structure and Function*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Yuri Sergeev

National Human Genome Research Institute (NHGRI) Posters

# 455 Ruby Carter-Ogden
*Perceptions of Black Women on NIPT for Sickle Cell Disease*
North Carolina State University (North Carolina)
Preceptors: Mr. Vence Bonham, Ms. Ashley Buscetta, Dr. Shameka Thomas, Ms. Khadijah Abdallah

# 456 Jonathan Feige
*Performance of Somatic Mutations in Classification of Endometrial Carcinomas with CpG Island Methylator Phenotype*
Ohio University (Ohio)
Preceptor: Dr. Laura Elnitski

# 457 Quinn Hauck
*Exploring Characteristics of Conserved Noncoding Elements (CNEs)*
Johns Hopkins University (Maryland)
# 458 Elizabeth Kaji
*Cognitive Function in Homozygote and Heterozygote GBA1 Mutation Carriers with and without Parkinsonism*
University of Missouri-Kansas City School of Medicine (Missouri)
Preceptors: Dr. Ellen Sidransky, Dr. Grisel Lopez

# 459 Evanjelin Mahmoodi
*Myopia in Highly Aggregated Amish Pedigrees Significantly Linked to Multiple Risk Loci, Including Colorblindness Gene CNGB3, Using Whole Genome Sequence Data*
University of California Santa Cruz (California)
Preceptors: Dr. Joan Bailey-Wilson, Dr. Anthony Musolf

# 460 Alexis McCraw
*Caregiver Esteem, Impact on Schedule, and Mental Health: A Study of Parents of Chronically Ill Children*
University of Tennessee Knoxville (Tennessee)
Preceptors: Dr. Jasmine Manalel, Dr. Melissa Zajdel

# 461 Aubrey Robinson
*Social Demographic, Biological, Lifestyle of African American Participants and Their Risk Factors Related To Cardiovascular Disease*
University Of San Francisco (California)
Preceptors: Dr. Rumana Khan, Dr. Sharon Davis

# 462 Sarah Royka
*Global Vaccine Allocation: Ethical Theory and Public Opinion*
Duke University (North Carolina)
Preceptor: Dr. Benjamin Berkman

# 463 Maya Sinha
*Exploring the Role of K3 Homologs in Determining Poxvirus Host Range*
University of California, Los Angeles (California)
Preceptors: Mr. Michael Chambers, Dr. Meru Sadhu

# 464 Skyler Sung
*Functionally Annotating a Pathogen's Genome: Exploring SNPs in Candida auris Isolates from Chicago*
Amherst College (Massachusetts)
Preceptors: Dr. Julie Segre, Dr. Diana Proctor, Dr. Sean Conlan

# 465 Lina Takemaru
*Phylostratigraphy Reveals Diverse Evolutionary Histories of Disease-associated Genes*
# 466 Clementine Adeyemi
*The Role of Apolipoprotein A-II on Triglyceride Metabolism*
University of Cincinnati (Ohio)
Preceptor: Dr. Alan Remaley

# 467 Vandana Agarwala
*Deblurring Spiral MR Images Using Convolutional Neural Networks*
Pennsylvania State University (Pennsylvania)
Preceptors: Dr. Ahsan Javed, Dr. Felicia Seemann

# 468 Oluwaseyi Akinrodemi
*Investigating the Association between Neighborhood Deprivation Index and Health-related Outcomes in African Americans in Washington, D.C., Neighborhoods*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Kosuke Tamura, Dr. Tiffany Powell-Wiley, Dr. Ulrike Klenke

# 469 Zainab Apalara
*Incorporating Effects of Rare Variants into Polygenic Risk Score for Disease Risk Prediction Using WES data*
University of California, Davis (California)
Preceptors: Dr. Mehdi Pirooznia, Dr. Yun-Ching Chen

# 470 Natalie Badillo
*Analysis of Migration of Myosin 10 Knockout Dendritic Cells under Confinement*
McDaniel College (Maryland)
Preceptors: Dr. John Hammer, Dr. Anjelika Gasilina

# 471 Alexa Bailey¹, Evan Gray²
*Frozen in Time: The Value of NHLBI Human Biospecimens*
¹Brigham Young University (Utah), ²Morehouse College (Georgia)
Preceptors: Ms. Susan Wong, Mr. Andrew Charneco, Ms. Darlene Allen

# 472 Alexis Burns
*Identification, Prioritization, and Functional Prediction of lncRNA in Heart Disease*
Georgetown University (District of Columbia)
Preceptors: Dr. Mehdi Pirooznia, Dr. Fayaz Seifuddin, Dr. Komudi Singh
# 473 Rachel Chae
*Deep Learning-based Automatic Lung Segmentation for MR Images*
Massachusetts Institute of Technology (Massachusetts)
Preceptors: Dr. Felicia Seemann, Dr. Ahsan Javed

# 474 Alisha Desai
*tSNE, Trimap, and UMAP for Visualization and Dimensionality Reduction of Multicolor Flow Cytometry Data*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Ankit Saxena, Dr. J. Philip McCoy

# 475 Alessandro Gagarin
*Effect of Hydration on Aging: Clinical Data Analysis of Biological Age versus Chronological Age with Relation to Serum Sodium*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Manfred Boehm, Dr. Natalia Dmitrieva

# 476 Grace Ge
*A Computational Method to Discover Genes Associated with Elastin Fiber Production via scRNA-seq Analysis*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Delong Liu, Dr. Beth Kozel

# 477 Miranda Guerriero
*From Clot to Cough: Clues to How Platelets Contribute to Airway Disease*
Lake Erie College of Osteopathic Medicine (Pennsylvania)
Preceptor: Dr. Andrew Johnson

# 478 Kevin Handoko
*Simulation of Kinesin Binding in the Presence of Tau*
Carnegie Mellon University (Pennsylvania)
Preceptors: Dr. Keir Neuman, Dr. Jing Xu

# 479 Daniall Masood
*Investigating Platelet Reactivity in Diabetic Participants of the Framingham Heart Study*
Georgetown University (District of Columbia)
Preceptors: Dr. Melissa Liu, Dr. Andrew Johnson

# 480 Joanna Mendez-Silva
*The Potential Impact of Psychosocial and Environmental Stressors on Lipid Profile in African American Women: A Pilot Study*
University of Nevada-Las Vegas (Nevada)
Preceptors: Dr. Tiffany Powell-Wiley, Dr. Yvonne Baumer
# 481 Sarah Noonan
*The Potential Impact of Psychosocial and Environmental Stressors on Amino and Fatty Acids in African American Women: A Pilot Study*
University of South Carolina (South Carolina)
Preceptors: Dr. Tiffany Powell-Wiley, Dr. Yvonne Baumer, Ms. Veronica Gray

# 482 Angelina Parrizzi
*Immunopeptidomic Identification of Antigens Derived from Renal Cell Carcinoma-associated Proteins*
Colgate University (New York)
Preceptors: Dr. Stefan Barisic, Mr. Robert Reger, Dr. Richard Childs

# 483 Sana Rahman
*Association between Alcohol Consumption and Liver and Kidney Function among Hispanics/Latinos: The Hispanic Community Health Study/Study of Latinos (HCHS/SOL)*
Georgetown University (District of Columbia)
Preceptors: Dr. Eliseo Perez-Stable, Dr. Erik Rodriquez

# 484 Shalini Ramachandra
*Changes in Cardiac Function and Morphology following Hematopoietic Stem Cell Transplantation for Sickle Cell Disease*
American University (District of Columbia)
Preceptor: Dr. Neal Jeffries

# 485 Arth Sharma
*Evaluating the Association of C3 Gene Variants with Venous Thrombosis in Sickle Cell Disease*
Frank H. Netter M.D. School of Medicine (Connecticut)
Preceptors: Dr. Arun Shet, Dr. Bindu Gopalan

# 486 Justin Shi
*The Role of Myosin 10 in the Migration of Dendritic Cells*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Anjelika Gasilina, Dr. John Hammer

National Institute of Allergy and Infectious Diseases (NIAID) Posters

# 487 Kimia Dasteh Goli
*Structure and Sequence Analysis of Alpha and Beta Tryptase Variants*
University of Illinois at Chicago (Illinois)
Preceptors: Dr. David Garboczi, Mr. Matthew Spencer
# 488 Simon Debesai
*Understanding the piRNA Pathway in Geographically Diverse Aedes aegypti and Its Role in Anti-viral Interactions*
Yale University (Connecticut)
Preceptor: Mrs. Adeline Williams

# 489 Shiva Deljookorani
*Molecular Mechanisms of IFN-γ Dependent Cell Death in APECED: Regulation and Therapeutics*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Michail Lionakis, Dr. Vasileios Oikonomou

# 490 Sophia Dort
*Understanding Differential Gene Expression in Cells Infected with Influenza B*
Duke University (North Carolina)
Preceptor: Dr. Allison Roder

# 491 Varvara Folimonova
*Optimizing Library Search Parameters for Mass Spectrometry Analysis of Cerebral Spinal Fluid Samples*
University of Florida (Florida)
Preceptor: Dr. Lisa Olano

# 492 Nicole Haynes
*Chronic Granulomatous Disease: An Autopsy Case Series*
George Washington University (District of Columbia)
Preceptor: Dr. Christa Zerbe

# 493 Andrew Jiang
*Role of HIV Envelope-Target Cell Interactions in the Pathogenesis of HIV Infection*
University of Southern California (California)
Preceptors: Dr. Da Wei Huang, Dr. Claudia Cicala, Dr. James Arthos

# 494 Trisha Maheshwari
*Optimizing Transient CHO-DG44 Production: DNA Concentration, Valproic Acid Addition, and Temperature Shift*
University of Virginia (Virginia)
Preceptor: Dr. Elizabeth Scheideman

# 495 Franck Mbuntcha Bogni
*High Dimensional Phenotypic Analyses of Human B Cell Populations*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Lela Kardava, Dr. Susan Moir
# 496 Karina McDonald
*Exploring the Role of ITGA1 and CXCR6 in Mouse Models of Cryptococcal Meningoencephalitis*
University of Maryland Global Campus (Maryland)
Preceptor: Dr. Jessica Hargarten

# 497 Lindsey Njanja
*Identification of Biomarkers in Samples after Treatment with Interleukin 7*
Rutgers University (New Jersey)
Preceptors: Dr. Hana Schmeisser, Dr. Paolo Lusso

# 498 Aakash Patel
*Novel Small Regulatory RNA Discovery in Klebsiella pneumoniae*
University of Tennessee Health Science Center College of Pharmacy (Tennessee)
Preceptors: Dr. Gisela Storz, Dr. Aoshu Zhong

# 499 Audrey Randall
*The Role of PKC-delta during Inflammasome Activation*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Clinton Bradfield

# 500 Courtney Shuck
*Transplant Evaluation: Assessment of Adverse Events and Their Grading*
Elon University (North Carolina)
Preceptor: Ms. Corin Kelly

# 501 Connor Smith
*Multiomic Single-cell Analysis of Immune Cells during HIV Infection*
University of Virginia (Virginia)
Preceptors: Dr. Felipe Lopes de Assis, Dr. Susan Moir

# 502 Manjari Sriparna
*Evaluating the mRNA-1273 Vaccine against SARS-CoV-2 Variants of Concern*
Medical College of Virginia (Virginia)
Preceptor: Dr. Kizzmekia Corbett

# 503 Kathryn Willebrand
*SARS-CoV-2 Within-host Evolution*
Yale School of Public Health (Connecticut)
Preceptors: Dr. Vincent Munster, Dr. Stephanie Seifert, Dr. Danielle Adney

# 504 Jacquelyn Willis
*Evaluation of Group 1 and Group 2 Influenza A Subtype Virus Titrations in a Replication Restricted Reporter Virus System*
Spelman College (Georgia)
Preceptors: Dr. Jessica Trost, Dr. Adrian McDermott

# 505 Brian Xi
Sample Collection and Analysis from Potential Echinococcus multilocularis Infected Maryland Foxes
University of Maryland, College Park (Maryland)
Preceptor: Dr. Elise O'Connell

# 506 Christopher Xie
Investigating Key Genomic Signatures of Influenza B Infection Response Using Differential Gene Expression
University of Virginia (Virginia)
Preceptors: Dr. Allison Roder, Dr. Elodie Ghedin, Ms. Stephanie Banakis

# 507 Jenny Yarmovsky
Analysis and Iterative Refinement of Computational Models of IL6 Signaling
University of Maryland, College Park (Maryland)
Preceptors: Dr. Martin Meier-Schellershein, Dr. Fengkai Zhang, Dr. Christopher Boughter

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

# 508 Julia Bhuiyan
Plymouth High School (Michigan)
Preceptors: Dr. Tazim Dowlut-McElroy, Dr. Roopa Kanakatti Shankar

# 509 Julie Bocetti
Do uORFs Effect Ded1-dependence on Translation Initiation?
Wellesley College (Massachusetts)
Preceptors: Dr. Michelle Gibbs, Dr. Fujun Zhou, Dr. Jon Lorsch

# 510 Abigail Burkhart
Finding New Small RNA Genes in Pseudomonas aeruginosa
South Dakota State University (South Dakota)
Preceptors: Dr. Gisela Storz, Dr. Philip Adams

# 511 Bei Chang
Expression of Marker Genes of Immune Cell Types in Pheochromocytoma and Paraganglioma
University of Maryland, College Park (Maryland)
Preceptors: Dr. Karel Pacak, Mr. Suman Ghosal
# 512 Melanie Danso
Finding New Small RNA Genes in Shewanella oneidensis
University of Maryland, College Park (Maryland)
Preceptors: Dr. Gisela Storz, Dr. Philip Adams

# 513 Syeda Fatima
A Prospective Evaluation of Cortisol Awakening Response for Changes in Body Composition of Children and Adolescents
Virginia Commonwealth University (Virginia)
Preceptor: Dr. Jack Yanovski

# 514 Ayantu Feyissa
Zfp110 in the Maintenance of Genome Stability
Howard University (District of Columbia)
Preceptors: Dr. Melania Bruno, Dr. Todd Macfarlan

# 515 Austin Gable
Molecular Mechanisms underlying Traumatic Brain Injury-induced Behavioral Deficits
University of Cincinnati (Ohio)
Preceptors: Dr. Claire Le Pichon, Ms. Mor Alkaslasi

# 516 Julia Grafstein
Exploration of Phenotypes Related to Casq2 Deficiency
University of Maryland, College Park (Maryland)
Preceptors: Dr. Karl Pfeifer, Mr. Connor Kean

# 517 Matin Haghighi Ara
Development of High Throughput General User Interface for the Analysis of Low Field Data
University of Maryland, College Park (Maryland)
Preceptors: Dr. Peter Basser, Dr. Velencia Witherspoon

# 518 Michelle Hajdenberg¹, Omar Gharib²
Aortic Dissection in Cushing’s Syndrome
¹Washington University in St. Louis (Missouri), ²Bethesda Chevy Chase High School (Maryland)
Preceptors: Dr. Christina Tatsi, Dr. Crystal Kamiliris

# 519 Ameen Islaw
Loss of Irp2 Promotes Neural Degeneration in the CNS
Montgomery College (Maryland)
Preceptor: Ms. Christina Porras

# 520 Kaitlyn Kerr
Extracting Membrane Properties through Undulation Analysis
# 521 Kevin Le
**Sex-specific Effects on Gene Expression in CASQ2 Mutants**
University of Pennsylvania (Pennsylvania)
Preceptors: Dr. Karl Pfeifer, Mr. Connor Kean

# 522 Alexa Moore
**Finding New Small RNA Genes in** *Borrelia burgdorferi*
Howard University (District of Columbia)
Preceptors: Ms. Kyla Roland, Dr. Gisela Storz, Dr. Henry Levin

# 523 Marshall Nakatani
**Analysis of Cell-type Specific Covariation of Ion Channel Expression Using Publicly Available Single-cell RNA-seq Datasets**
George Washington University (District of Columbia)
Preceptors: Dr. Jonathan Murphy, Dr. Dax Hoffman, Dr. Jiahua Hu

# 524 Candice Nicholas
**Finding New Small RNA Genes in** *Borrelia burgdorferi*
Montgomery College (Maryland)
Preceptors: Dr. Gisela Storz, Dr. Philip Adams, Mr. Daniel Tetreault

# 525 Delight Nweneka
**Exploring the Spatial Organization of KRAB-zinc Finger Gene Clusters**
Massachusetts Institute of Technology (Massachusetts)
Preceptors: Dr. Melania Bruno, Dr. Todd Macfarlan, Ms. Ayantu Feyissa

# 526 Malaika Nyawara
**Finding New Small RNA Genes in** *Shewanella oneidensis*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Gisela Storz

# 527 Katherine Ogle
**Psychosocial Assessments in Male Hormonal Contraception Clinical Trial**
University of Texas at Austin (Texas)
Preceptors: Dr. Diana Blithe, Dr. Min Lee, Dr. Jill Long, Ms. Frances Fernando

# 528 Priyanka Ravi\(^1\), Winston Scambler\(^2\)
**A Pipeline for in-toto 3D Segmentation and Modelling of the Zebrafish Posterior Lateral Line Primordium**
\(^1\)University of Maryland, College Park (Maryland), \(^2\)University of Oklahoma (Oklahoma)
Preceptors: Dr. Ajay Chitnis, Dr. Damian Dalle Nogare
# 529 Jared Redmond
*Variations of the Anti-Müllerian Hormone among Populations*
University of Miami (Florida)
Preceptors: Dr. Veronica Gomez-Lobo, Ms. Allison Kumnick

# 530 Katelyn Robertson
*Expression of Glutamate Receptor Subunit Genes in Neurons Involved in PPI*
Howard University (District of Columbia)
Preceptor: Dr. Harold Burgess

# 531 Aditya Santoki
*Characterizing Motor Neurons in a Mouse Model of SPTLC1 ALS-linked Mutations*
Duke University (North Carolina)
Preceptors: Dr. Claire Le Pichon, Ms. Zoe Piccus

# 532 Jackson Scheidhauer
*Presenting Niemann-Pick Disease, Type C (NPC) Patient Data through Machine Learning*
University of Maryland, College Park (Maryland)
Preceptors: Ms. Nicole Farhat, Mr. Derek Alexander, Ms. Dorothy Scordilis, Dr. Forbes Porter

# 533 Christine Shatrowsky
*Candidate Hippocampal Pin1 Target Proteins Identified Using Known Pin1 Binding Sites in mGluR1/5 and Kv4.2 Proteins*
Vanderbilt University (Tennessee)
Preceptors: Dr. Dax Hoffman, Dr. Jonathan Murphy, Dr. Jiahua Hu

# 534 Kimberly Siguenza Depaz
*Identifying and Designing Tools to Study Vascular RHOA Effectors in Zebrafish*
Shenandoah University (Virginia)
Preceptors: Dr. Laura Pillay, Dr. Brant Weinstein

# 535 Daniel Soliman
*The Search for Novel Small RNAs in the Genome of Legionella pneumophila*
University of North Carolina at Chapel Hill (North Carolina)
Preceptors: Dr. Matthias Machner, Dr. Devanand Bondage

# 536 David Song
*Identifying Small Regulatory RNAs in Photorhabdus luminescens*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Gigi Storz

# 537 Timothy Stocker
*Searching for Small Regulatory RNAs in Klebsiella pneumoniae*
Northern Virginia Community College (Virginia)
Preceptors: Dr. Gisela Storz, Dr. Paul Atkins

# 538 Ayden Teye
Finding New Small RNAs in Acinetobacter baumannii
University of California, Irvine (California)
Preceptors: Dr. Gisela Storz, Dr. Stephanie Lehman, Dr. Philip Adams

# 539 Maya Wilson
Reviewing Molecular Roles of Lipids in Disease
University of Pennsylvania (Pennsylvania)
Preceptor: Dr. Alexander Sodt

National Institute on Deafness and Other Communication Disorders (NIDCD) Posters

# 540 Neha Bharadwaj
Sedation in Individuals with CLN3-related Disease
Johns Hopkins University (Maryland)
Preceptors: Dr. An Dang Do

# 541 Victoria Idowu (POSTER MOVED to the end of session 11)
Auditory and Otologic Findings in Relapsing Polychondritis
Southern Illinois University (Illinois)
Preceptors: Dr. Carmen Brewer, Mrs. Julie Christensen M.S, Dr. Jeff Kim

# 542 Sydney Nixon
Characterization of a Mouse Model for the Study of Intermediate Cells in the Stria Vascularis
George Mason University (Virginia)
Preceptors: Dr. Michael Hoa, Dr. Rafal Olszewski, Dr. Shoujun Gu

# 543 Haley Ogbemudia
Understanding the Role of Arginase during Neomycin-induced Hair Cell Death in Cultured Utricles
New York University (New York)
Preceptors: Dr. Cathy Sung, Dr. Lisa Cunningham

National Institute of Dental and Craniofacial Research (NIDCR) Posters

# 544 Shelby Hodges
P16 Overexpression in Acinic Cell Carcinoma
Howard University (District of Columbia)
Preceptors: Ms. Kalie Dominick, Dr. Blake Warner

# 545 Janet Mostrom
*Characterization of Human Neural Crest Cell 3D Culture Model through Comparative Interspecies Transcriptomics*
Johns Hopkins University (Maryland)
Preceptors: Dr. Surangi Perera, Dr. Laura Kerosuo

# 546 Christy Qian
*Molecular Identification of Distinct Spinal Ascending Neurons*
University of Virginia (Virginia)
Preceptors: Dr. Yuanyuan Liu, Ms. Lauren Hayashi

# 547 Victoria Shen
*Immune Cell Repertoire in the Salivary Gland and Lacrimal Glands during Murine Chronic Graft-versus-Host Disease*
Northeastern University (Massachusetts)
Preceptors: Dr. Jacqueline Mays, Dr. Ana Costa da Silva, Dr. Rubina Sharma

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

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

# 549 Kavisha Chandrawarakkalage
University of Maryland, College Park (Maryland)
Preceptors: Dr. John Hanover, Dr. Amber Lockridge

# 550 Eric Fields
*Investigating MEPAN Syndrome and MECR-1 Function in the Nematode C. elegans*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Peter Kropp, Dr. Andy Golden

# 551 Diamond Gallimore
*Renal Pathologies in Insulin Resistance Mutations*
# 552 Hilary Ann Lakin
_Erythropoietin Response Associated with Mouse Muscle Fiber_
Oregon State University (Oregon)
Preceptors: Dr. Jeeyoung Lee, Dr. Connie Noguchi

# 553 Kelsey Lewis
_An Unusual Mutation within RNA Polymerase of an Adherent Invasive E. coli Pathobiont May Contribute to Crohn’s Disease Pathogenesis_
Saginaw Valley State University (Michigan)
Preceptors: Dr. Debbie Hinton, Mrs. Melissa Arroyo-Mendoza

# 554 Anaissa Medina
_Identification of Cell Types That Express Type 2 Deiodinase in the Cochlea Utilizing the Dio2-Cre Mouse Line_
California State University, Stanislaus (California)
Preceptors: Dr. Douglas Forrest, Dr. Lily Ng, Dr. Ye Liu

# 555 Matthew Menkart
_More Than Just an Emulsifier: Bile Acids, the Ligand, and the Effect Viral Infections Have on Them_
Emory University (Georgia)
Preceptor: Dr. Theo Heller

# 556 Jenna Oringher
_It’s Not Chopped Liver: The Impact of Bile Acids and the Microbiome on Cirrhosis_
University of Maryland, College Park (Maryland)
Preceptor: Dr. Theo Heller

# 557 Ellen Oskoui
_Cyclic Hypercortisolism in Ectopic Cushing's Syndrome: Overcoming Diagnostic Challenges_
University of Edinburgh (Scotland)
Preceptor: Dr. Lynnette Nieman

# 558 George Strawbridge
_Assessing the Binding of alpha-Synuclein to Low-density Lipoprotein Using smFRET_
Harford Community College (Maryland)
Preceptor: Dr. Sara Sohail

# 559 Joshua Thomas
_Influence of Amyloid Beta Peptide on ApoE4 Conformation Studied by Single–molecule FRET_
Montgomery College (Maryland)
Preceptor: Dr. Sara Sohail

# 560 Christine Thompson
Regulation of Host and Viral Genes by a Novel Viral-encoded, Putative RNA Chaperone
Cedarville University (Ohio)
Preceptors: Dr. Deborah Hinton, Dr. Bokyung Son

# 561 Kunani Tuttle
Prebiotics for Mitigating Metformin Induced Gastrointestinal Side Effects in Youth with Type 2 Diabetes: A Pilot Randomized Crossover Trial
University of Utah (Utah)
Preceptors: Dr. Stephanie Chung, Ms. Samantha Matta

# 562 Vijay Viswanath
Cardiometabolic Risk Associations between Children and Adult Family Members in an Urban American Indian Population
Emory University (Georgia)
Preceptors: Dr. Madhumita Sinha, Dr. Elsa Vazquez Arreola

# 563 Jerry Yang
Structural Predictions of a Family of Tube-forming Lipid Transport Proteins
University of Maryland, College Park (Maryland)
Preceptors: Dr. William Prinz, Dr. Alexandre Toulmay

National Institute on Minority Health and Health Disparities (NIMHD) Posters

# 564 Caleb Colbert
Vaccine Willingness among Rural Black, Latino, and White Adults: Results from the COVID-19’s Unequal Racial Burden (CURB) Survey
University of Maryland, College Park (Maryland)
Preceptors: Dr. Anna Napoles, Dr. Paula Strassle

# 565 Maryam Elhabashy
Exploring the Experiences and Perceptions of Cigar Craving and Addiction among Young Adult Black Smokers
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Julia Chen-Sankey, Dr. Lilianna Phan, Dr. Kelvin Choi
# 566 Jacquita N. Johnson
*Drilling Down on Inflammatory Disparities in the United States: Examining the Association between Sociodemographics, Socioeconomic Factors and Inflammatory Markers among Mexican-Americans*
Texas A&M University (Texas)
Preceptors: Dr. Sharon Jackson, Dr. Faustine Williams, Dr. Francisco Ishino

# 567 Tina Liu
*The Tale of Two Pandemics: Increasing Anti-Asian Racism and Xenophobia during COVID-19 and Its Effects on Mental Health among Asian American Individuals*
Harvard University (Massachusetts)
Preceptors: Dr. Lilianna Phan, Dr. Julia Chen-Sankey, Dr. Kelvin Choi

# 568 Kwaniyah Tuffour
*Validation of Mobile Sensors in a Health Behavior Project*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Kelly Jones, Dr. Shannon Zenk

National Institute of Nursing Research (NINR) Poster

# 569 Heidi Piña
*Identifying the Effects of a High Fat Diet on Motivated Behavior in Mice*
University of Arizona (Arizona)
Preceptors: Dr. Paule Joseph, Dr. Hugo Tejeda, Dr. Rosario Jaime-Lara

National Center for Advancing Translational Sciences (NCATS) Lightning Talk

# 570 Anup Challa
*Clinical Trial Emulation Can Identify New Opportunities to Enhance the Regulation of Drug Safety in Pregnancy*
Vanderbilt University (Tennessee)
Preceptors: Dr. Noel Southall, Dr. Min Shen

National Eye Institute (NEI) Lightning Talks

# 571 Sarah Abouassali
*In vivo Imaging of Fluorescently Labeled Human Photoreceptors in Carriers of Choroideremia*
Virginia Commonwealth University (Virginia)
Preceptors: Dr. Andrew Bower, Ms. Nancy Aguilera, Dr. Laryssa Huryn, Dr. Johnny Tam
# 572 Mariya Ahmed
*Phenotype-driven Variant Prioritization for Molecular Diagnostics of Developmental Ocular Disorders*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Robert Hufnagel

# 573 Meghana Chalasani
*Comparison of Automated, Manual, and Machine Learning DNA Segmentation during iPSC-derived RPE Maturation*
Northeast Ohio Medical University (Ohio)
Preceptors: Dr. Kapil Bharti, Dr. Davide Ortolan, Dr. Andrei Volkov, Dr. Pushkar Sathe

# 574 Deshawn Ejiogu
*Transcriptional Profiling of IL-35-producing Regulatory B-cells (i35 Bregs)*
Walt Whitman High School (Maryland)
Preceptors: Dr. Charles Egwuagu, Dr. Evaristus Mbanefo

# 575 Raina Kikani
*Comparing Actin Segmentation Outputs from Manual, Automated, and Machine Learning Algorithms during iPSC-RPE Maturation*
Cornell University (New York)
Preceptors: Dr. Kapil Bharti, Dr. Davide Ortolan, Dr. Pushkar Sathe, Dr. Andrei Volkov

# 576 Jasmine Serpen
*Clinical Features of Spinocerebellar Ataxia Type 7*
Case Western Reserve University School of Medicine (Ohio)
Preceptor: Dr. Laryssa Huryn

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

# 577 Marilyn Baffoe-Bonnie
*Measuring Medical Mistrust: A Multi-institutional Approach*
Rutgers University (New Jersey)
Preceptor: Mr. Vence Bonham

# 578 Sam Christenson
*Identification of a Novel Dedifferentiating Cell Population during Tail Regeneration by scRNAseq*
University of Maryland, Baltimore County (Maryland)
Preceptors: Dr. Shawn Burgess, Dr. Jason Sinclair
# 579 Jordan Connors
*Subphenotypes of Sickle Cell Disease: Whole Genome Sequence Analysis of Sickle Cell Patients with Leg Ulcers*
University of North Carolina at Charlotte (North Carolina)
Preceptors: Dr. Candace Middlebrooks, Dr. Joan Bailey-Wilson

# 580 Noah Crooks¹, Emmanuel Spanos²
*Bioinformatic Diagnosis of Rare Diseases: Conversion of Cutting-edge Graph Aligner and Post-alignment Analysis Workflow to GRCh38*
¹Vassar College (New York), ²Cornell University (New York)
Preceptor: Dr. Thomas Markello

# 581 Michelle Dwyer
*Analysis of Deep Learning in Genetic Conditions: A Scoping Review*
Virginia Polytechnic Institute and State University (Virginia)
Preceptors: Dr. Benjamin Solomon, Dr. Suzanna Ledgister Hanchard

# 582 Ava Edison
*Identification of DNA Regulatory Elements Involved in Zebrafish Adult Hair Cell Regeneration*
Creighton University (Nebraska)
Preceptor: Dr. Erin Jimenez

# 583 Sophie Hoffman
*Chromosome-specific Epigenetic Profiling of Human rDNA Arrays*
University of Michigan (Michigan)
Preceptor: Dr. Adam Phillippy

# 584 Mahin Hossain
*Investigating the Presence of Hepatic Steatosis in Hermansky-Pudlak Syndrome*
Ohio State University (Ohio)
Preceptors: Dr. Bernadette Gochuico, Dr. William Gahl

# 585 Francina Kolluri
*Assessing Stroke Risk: Development of an Algorithm for the Families SHARE Nigeria Project*
Paint Branch High School (Maryland)
Preceptors: Dr. Calandra Whitted, Dr. Laura Koehly

# 586 Vidhyanand Mahase
*Comparison of Imputation Methods Using Whole Genome Sequence Data from Individuals of African Descent with Sickle Cell Disease*
Howard University (District of Columbia)
Preceptors: Dr. Joan Bailey-Wilson, Dr. Candace Middlebrooks, Dr. Anthony Musolf, Dr. Deyana Lewis
# 587 Maureen (Molly) Merlo-Coyne
*Understanding the Role of Genetic Literacy on Genetic Testing Perceptions for Autism Spectrum Disorder*
Montgomery Blair High School (Maryland)
Preceptors: Ms. India Little, Dr. Chris Gunter

# 588 Louis Nwuha
*How Medical Students’ Attitudes towards a Patient in a Virtual Clinical Setting Are Impacted by the Patient’s Genetic Predisposition to Obesity*
Duval High School (Maryland)
Preceptors: Dr. Alison Jane Martingano, Dr. Susan Persky

# 589 Ijeoma Okoro
*How Patient and Physician Race Impacts Medical Students’ Attitudes towards Virtual Patients with Obesity*
Gaithersburg High School (Maryland)
Preceptors: Dr. Alison Jane Martingano, Dr. Susan Persky

# 590 Taylor Robinson
*Parental Caregivers’ Awareness of Experimental Treatment for Children Affected by Inherited Metabolic Disorders*
Emory University (Georgia)
Preceptor: Dr. Dawn Lea

National Heart, Lung, and Blood Institute (NHLBI) Lightning Talks

# 591 Isabel Jabara
*Analysis of Clonal Hematopoiesis of Indeterminate Potential in Idiopathic Lymphocytopenia Patients*
University of California, Los Angeles (California)
Preceptors: Mr. Yifan Zhou, Dr. Cynthia Dunbar

# 592 Christa Mahlobo
*Exploring the Socioeconomic, Psychosocial, and Environmental Determinants of Health*
Pennsylvania State University (Pennsylvania)
Preceptors: Dr. Tiffany Powell-Wiley, Dr. Foster Baah

# 593 Stefan Thomas
*Decay Suite: Fluorescence Tools for Robust Analysis, Cross-validation, and Simulation*
City College of New York (New York)
Preceptors: Dr. Jay Knutson, Mr. Greg Alspaugh
National Institute of Allergy and Infectious Diseases (NIAID) Lightning Talks

# 594 Adrienne Bruch
Identifying Phosphatidylserine Binding Sites in Chemokines by Sequence and Structure Analysis
University of California, Santa Barbara (California)
Preceptors: Dr. Liya Muslinkina, Dr. David Garboczi

# 595 Audrey Czuchna
The Role of Plexin-C1 in Lymphocyte Migration
Princeton University (New Jersey)
Preceptors: Dr. Joshua Farber, Dr. Angika Bhasym

# 596 Tiffany Fang
Utilizing Transcriptome Modularity to Design Targeted Panels to Capture Diverse Human Cell States with Single Cell RNAseq
Yale University (Connecticut)
Preceptors: Dr. Andrew Martins, Dr. John Tsang

# 597 Ailis Grieshaber
Virtual Image Analysis of Salmonella Infected Intestine
University of Idaho (Idaho)
Preceptors: Dr. Olivia Steele-Mortimer, Dr. Olof Nilsson, Dr. Audrey Chong

# 598 Nathaniel Higdon
Optimization of Data Analysis, Representation and Cell Line Development for Reporter Influenza Virus-based Assays
Iowa State University (Iowa)
Preceptors: Dr. Masaru Kanekiyo, Dr. Julia Lederhofer, Dr. Adrian Creanga, Dr. Barney Graham

# 599 Bishoy Ibrahim
Designing a CRISPR Assay to Study the Molecular Mechanism of CTCF Mutations in Neurodevelopmental Disorders
Frederick High School (Maryland)
Preceptors: Dr. Emma Price, Dr. Victor Lobarinov

# 600 Harris Malik
Domain Modeling of the Major Surface Glycoprotein in Pneumocystis Using Phyre2
University of Maryland, College Park (Maryland)
Preceptors: Dr. Apostolos Gittis, Dr. David Garboczi

# 601 Sophia Martinez
New Insights and Challenges in WHIM Syndrome from Comprehensive Patient Phenotyping
# 602 Ian McBain  
*Correlation Analysis of Patient Variables with COVID-19*  
New York University Abu Dhabi (United Arab Emirates)  
Preceptor: Dr. Pamela Schwartzberg

# 603 Rebecca Oluwasanmi  
*Mucosal-associated Invariant T (MAIT) Cells as Vaccine Candidates*  
Academy Of Health Sciences @ PGCC (Maryland)  
Preceptors: Ms. Sydnee Gould, Dr. Daniel Barber

# 604 Joanna Rodriguez  
*Characteristics of SHIVAD8-EO Infection in Rhesus Macaques*  
Colgate University (New York)  
Preceptors: Dr. Joana Dias, Dr. Richard Koup

# 605 Jerry Shen  
*Development of a Pathway Enrichment and Network Analysis Workflow (to Analyze Transcriptomic Data)*  
University of Maryland, College Park (Maryland)  
Preceptors: Ms. Samiksha Borkar, Dr. Li Yin

# 606 Keelee Storrud  
*Virtual Quantification of Salmonella Infected Epithelial Cells*  
Utah State University (Utah)  
Preceptors: Dr. Olivia Steele-Mortimer, Dr. Olof Nilsson

# 607 Favan Tekle  
*Reviewing the Clinical Utility of Identifying CTCF Mutations in Neurodevelopmental Disorders*  
Wheaton High School (Maryland)  
Preceptors: Dr. Emma Price, Dr. Victor Lobanenkov

# 608 Sara Verschleisser  
*Structure-based Design of Compensatory Antibody Variants for Common SARS-CoV-2 Mutants*  
Yeshiva University (New York)  
Preceptors: Dr. Javeed Ahmad, Dr. Jiansheng Jiang, Dr. Kannan Natarajan, Dr. David Margulies

# 609 Elise Withers  
*Visualization Tools for Antibodyomics 3*  
Emory University (Georgia)  
Preceptors: Dr. Reda Rawi, Dr. Peter Kwong
# 610 Kaitlin Abrantes
*Monitoring Ca2+ Regulation by VDAC in Live Cells and Effects of Mitochondrial Dysfunction in Parkinson's Disease*
Columbia University (New York)
Preceptors: Dr. Sergey Bezrukov, Dr. Megha Rajendran

# 611 Brianna Bergfalk
*Effect of Synuclein-VDAC Interaction on Mitochondrial Bioenergetics in Parkinson's Disease*
Montgomery Blair High School (Maryland)
Preceptors: Dr. Megha Rajendran, Dr. Sergey Bezrukov

# 612 Delyar Delavari, Faranguisse Sadrieh
*Examining the Documentation Process of Skin Lesions by Dermatologists*
1University of Maryland, College Park (Maryland), 2University of Maryland, College Park (Maryland)
Preceptors: Dr. Amir Gandjbakhche, Dr. Mehran Armand, Mr. Wei-Lun Huang

# 613 Omar Gharib
WITHDRAWN: *Changes in Red Blood Cells in Cushing’s Syndrome*
Bethesda Chevy Chase High School (Maryland)
Preceptor: Dr. Crystal Kamilaris

# 614 LilyAnne Grieve
*Molecular Characterization of MEHMO Syndrome Mutations*
Murray State University (Kentucky)
Preceptors: Dr. Sara Young-Baird, Dr. Thomas Dever

# 615 Eliza Lloyd
*Characterization of Neuronal Changes Associated with Spinal Cord Microgliosis in a Peripheral Nerve Injury Model*
Colgate University (New York)
Preceptors: Dr. Sangeetha Hareendran, Dr. Claire Le Pichon

# 616 Lauren McQuaide
*Identifying Small, Regulatory RNAs (sRNAs) in Photorhabdus luminescens*
Western Kentucky University (Kentucky)
Preceptors: Dr. Gisela Storz, Dr. Nicole Ellis

# 617 Caleb Mertus
*Analyzing Vessel Regrowth after Injury in Adult Zebrafish*
# 618 Jessica Pierce  
*The Role of Dopamine in Controlling Arousal*  
Salisbury University (Maryland)  
Preceptors: Dr. Jennifer Panlilio, Dr. Harold Burgess

# 619 Onajia Stubblefield  
*Molecular Dynamics Simulations of Lipid Tubes and Pores*  
University of Louisville (Kentucky)  
Preceptors: Dr. Andrew Beaven, Mr. Alexander Sodt

# 620 Dawit Teshome  
*Studying the Roles of Kdm4a in Cell Regulation during Neurodevelopment*  
Springbrook High School (Maryland)  
Preceptors: Dr. Miranda Marvel, Dr. Brant Weinstein

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National Institute of Deafness and Other Communication Disorders (NIDCD) Lightning Talks

# 621 Andrew Wadley  
*Esthesioneuroblastoma in the Mouse: A Brief Overview*  
Howard University College of Medicine (District of Columbia)  
Preceptor: Dr. Nyall London

# 622 Redeit Woldebirhan  
*Investigating Pro-survival Pathways That Prevent Drug-induced Hearing Loss*  
Bucknell University (Pennsylvania)  
Preceptors: Dr. Lisa Cunningham, Ms. Nicole Folan, Dr. Melanie Barzik

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

# 623 Nanette Amihere  
*Analysis of Ribosome Profiling Datasets of Cellular Stress Response and Viral Infections*  
Charles Herbert Flowers High School (Maryland)  
Preceptors: Dr. Agnes Karasik, Dr. Nicholas Guydosh
# 624 Jaslyn Blanco
*Analyzing Gene Expression of Proteins Involved in Lipid Droplet Size within the Liver of Hsd17b13 KO Mice*
Duval High School (Maryland)
Preceptors: Dr. Lila Gonzalez Hodar, Dr. Yaron Rotman

# 625 Vivian Cao-Dao
*Cytoscape Analysis of Gene Networks Impacted by the SARS-CoV-2 Entry Inhibitor Mitoxantrone*
University of Virginia (Virginia)
Preceptors: Dr. Yihong Ye, Dr. Lihui Wang

# 626 Stephany Castillo
*The State of Food Insecurity Today*
University of Massachusetts Boston (Massachusetts)
Preceptors: Dr. Marci Gluck, Dr. Tommy Cabeza De Baca

# 627 Sean Duane
*Standard Chow Devaluation Is Contingent on High-fat Diet Composition*
George Washington University (District of Columbia)
Preceptors: Dr. Amy Sutton, Dr. Michael Krashes

# 628 Ayse Ecer
*Determining the Effects of Cellular Stress on Translation by Ribo-seq Analysis*
Georgetown University (District of Columbia)
Preceptors: Dr. Sezen Meydan, Dr. Nicholas Guydosh

# 629 Favour Fatusin
*Ethnic Differences in the Role of Free Fatty Acids Kinetics and Well-known Postabsorptive Insulin Resistance Surrogate Measures*
Chesapeake Math and IT Academy North (Maryland)
Preceptors: Mr. Hubert Fan, Dr. Ranganath Muniyappa

# 630 Katerina Melnyk
*HIRA: An Epigenetic Factor Involved in Erythropoiesis*
Yale University (Connecticut)
Preceptors: Dr. Ann Dean, Dr. Khoa Tran

# 631 Abigail Newbury
*Modeling Gene Networks with Stochastic Differential Equations*
University of Virginia (Virginia)
Preceptor: Dr. Vipul Periwal
# 632 Bessie Turcios
*Ethnic Differences in the Relationship between Free Fatty Acids Kinetics and Well-known Predictive Insulin Resistance Indices*
Capital City Public Charter School (District of Columbia)
Preceptors: Ms. Grace Padgett, Dr. Ranganath Muniyappa

# 633 David Wu
*Methods to Investigate Epigenetic Regulation of Adipogenesis*
University of Maryland, College Park (Maryland)
Preceptors: Dr. Kai Ge, Dr. Ji-Eun Lee, Ms. Susanna Maisto

# 634 Julie Xu
*Bile Acids: A Potential Key Player in Age-associated Chronic Liver Diseases*
Illinois Wesleyan University (Illinois)
Preceptors: Dr. Jake Liang, Dr. Joselyn Allen, Ms. Madeleine Leek

# 635 Jack Yang
*Using Metadata Analysis to Identify Key Genes in Alzheimer’s Disease*
University of Maryland, College Park (Maryland)
Preceptor: Dr. Weiping Chen

National Institute of Nursing Research (NINR) Lightning Talk

# 636 Alexandra Cuc
*The Bipolar Population*
Vanderbilt University (Illinois)
Preceptor: Dr. Jim Holdnack