

# NIH SUMMER RESEARCH PROGRAM POSTER DAY - JULY 29, 2016

 MORNING SESSION
 AM
 9:00 AM-11:00 AM

 LUNCH SESSION
 LCH
 11:00 AM-1:00 PM

 AFTERNOON SESSION
 PM
 1:00 PM-3:00 PM

#### SESSION INSTITUTE OR CENTER

#### **POSTER NUMBER**

AM	Clinical Center (CC)
AM	National Center for Advancing Translational Sciences (NCATS)
AM	National Institute of Allergy and Infectious Diseases (NIAID)
AM	National Institute of Dental and Craniofacial Research (NIDCR)
AM	National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)160-231
AM	National Institute of Neurological Disorders and Stroke (NINDS)232-314
LCH	Center for Information Technology (CIT)1-3
LCH	National Center for Complementary and Integrative Health (NCCIH)
LCH	National Eye Institute (NEI)
LCH	National Human Genome Research Institute (NHGRI)
LCH	National Heart, Lung, and Blood Institute (NHLBI)
LCH	National Institute on Aging (NIA)
LCH	National Institute of Biomedical Imaging and Bioengineering (NIBIB)152-165
LCH	Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)166-223
LCH	National Institute on Drug Abuse (NIDA)
LCH	National Institute on Deafness and Other Communication Disorders (NIDCD)243-253
LCH	National Institute of Mental Health (NIMH)
LCH	National Institute on Minority Health and Health Disparities (NIMHD)
LCH	National Institute of Nursing Research (NINR)
РМ	National Cancer Institute (NCI)
РМ	National Cancer Institute – Division of Cancer Epidemiology and Genetics (NCI – DCEG) 242-268
РМ	National Institute on Alcohol Abuse and Alcoholism (NIAAA)
РМ	National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)
РМ	National Institute of Environmental Health Sciences (NIEHS)
РМ	National Library of Medicine (NLM)
РМ	Office of the Director (OD)

NOTE: the complete program for Summer Poster Day 2016, including poster titles, can be found at <a href="https://www.training.nih.gov/assets/2016\_Summer\_Poster\_Day\_Program.pdf">https://www.training.nih.gov/assets/2016\_Summer\_Poster\_Day\_Program.pdf</a>.



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# NIH Summer Internship Program – Poster Day 2016

# **Cinical Center (CC)**

#### AM-001. Natalia Alexandridi

Improved Accuracy of Automatic Patellofemoral Segmentation from 3D Magnetic Resonance Images Using Guided Recursive Ray Tracing

State University of New York at Buffalo (New York)

Preceptors: Dr. Frances Gavelli, Dr. Ruida Cheng

## AM-002. Shaina Alvarez

Prescription Assistance Program: Ensuring Access to Affordable Medication University of Maryland, Baltimore School of Social Work (Maryland)

Preceptors: Ms. Lynn Hardesty LCSW-C, BCD, Ms. Kathy Baxley MHA, MBA, LICSW, LCSW

#### AM-003. Daniel Amchin

Drug-Dose Distribution in Liver Following Chemoembolization with Image-Able Beads University of Southern California (California) Preceptors: Dr. Andrew Mikhail, Dr. Bradford Wood

## AM-004. Vanisha Amin, Skyler Bordeaux

Validation of OPAL against GAITrite to assess gait parameters in typically developing children University of Michigan - Ann Arbor (Michigan), Fort Lewis College (Colorado) Preceptor: Dr. Minal Jain

## AM-005. Dhanya Asokumar

Assessment of Novel TRPV1 Capsaicinoid Analogs University of Chicago Laboratory Schools (Illinois)

Preceptors: Dr. Michael Iadarola, Ms. Danielle Lapaglia, Dr. Andrew Mannes

#### AM-006. Christina Badaracco

Location of food preparation and dietary composition among African immigrant, African American, and White American women University of California, Berkeley (California) Preceptors: Dr. Amber Courville, Ms. Shanna Bernstein

#### AM-007. Priscilla Badu

Role of Ebolavirus Proteins in Viral Mediated Lymphocyte Apoptosis Harvard University (Massachusetts) Preceptors: Dr. Daniel Chertow, Mr. Jason Kindrachuk

#### AM-008. Dalton Bermudez

The Quality of CT-based Attenuation Correction in SPECT/CT Clinical Images City College of New York - Grove School of Engineering (New York)

Preceptors: Dr. Ali Civelek, Dr. Roberto Maass-Moreno

## AM-009. Cornell Brooks

Analysis of the Relative Expression of FLT3 and FLT3LG in Cell Lines Transfected with microRNA and GATA2

Amherst College (Massachusetts)

Preceptors: Dr. Katherine Calvo, Dr. Weixin Wang, Mr. Eri Anastas

## AM-010. Brian Cone

Determining the relationship between muscle synergies and kinematic-based complexity measures during gait

University of North Carolina (North Carolina)

Preceptors: Dr. Thomas Bulea, Dr. Diane Damiano

#### AM-011. Derick Ekekwe

Conditions that may impair cognitive development in pediatric sickle cell patients Towson University (Maryland)

Preceptors: Mrs. Mary Myers, Dr. Paul Wong, Mrs. Diane Lawrence

#### AM-012. Laura Felix

Effects of ionizing radiation on genomic variance in metastatic prostate cancer cells (DU 145) Thomas More College (Kentucky)

Preceptors: Dr. Igor Panyutin, Dr. Irina Panyutin, Mr. Ian Powell-Castilla, Dr. Ronald Neumann

#### AM-013. Julia Fink

Expression and Characterization of the Pneumocystis murina a Factor Pheromone Receptor University of Southern California (California)

Preceptors: Ms. Lisa Bishop, Dr. Joseph Kovacs

#### AM-014. Sarah Fortna

Role of Neurosteroids in Mood Disorders Associated with Menopause Cornell University (New York)

Preceptors: Dr. Steven Soldin, Mr. Brian Stolze

## AM-015. Nikhil Goyal

First NIH Clinical Center Experience Replacing Handwritten RECIST Forms with Digital Data Management - a Technical Approach to an Antiquated Practice

University of Maryland, College Park (Maryland)

Preceptor: Dr. Les Folio

## AM-016. Spencer Grissom

Car Surface Density Analysis on T Cells and Correlation with Clinical Outcome in Patients with B-ALL

Clarksburg High School (Maryland)

Preceptors: Dr. Steven Highfill, Dr. David Stroncek

## AM-017. Sabrina Guedes, Ju Yeon Lee

The Development and Analysis of Haloperidol Capsules for Neuropsychiatric Patients
Richard Montgomery High School (Maryland), Korean Minjok Leadership Academy (Non-U.S.)
Preceptors: Mr. Ram Agarwal, Dr. Peng Yuan, Mrs. Deborah Sperling

## AM-018. Uyen Hoang

Computer Aided Kidney Tumor Characterization using Multi-Spectrum MRI and Machine Learning.

San Diego State University (California)

Preceptor: Dr. Jack Yao

### AM-019. Jon Hochstein

Development of a Portable Robotic Exoskeleton Control System for Cerebral Palsy Patients Presenting Crouch Gait

Johns Hopkins University (Maryland)

Preceptors: Dr. Diane Damiano, Dr. Thomas Bulea, Dr. Zachary Lerner, Dr. Robert Lutz

#### AM-020. ChaKaria Hunter

Sensor-less Trans-perineal Fusion Guided Prostate Biopsy Device Using a Phase Changing Continuum Manipulator

University of Georgia (Georgia)

Preceptors: Dr. Reza Seifabadi, Dr. Brad Wood

#### AM-021. Patrick Jensen

Material Decomposition in Photon Counting Computed Tomography

University of Chicago (Illinois)

Preceptors: Dr. Amir Pourmorteza, Mr. Tyler Cork, Dr. Manu Lakshmanan, Dr. David Bluemke

## AM-022. Claire Kaiser

Comparison of Novel CAD System, Reader-based Study, and Histopathology, for Volumetric Analysis of Prostate Cancer Lesions in High Risk Populations
University of Rochester (New York)

Preceptors: Dr. Ronald Summers, Dr. Nathan Lay, Dr. Baris Turkbey

## AM-023. Lei (Linda) Kang

Increasing Understanding of Postictal Psychosis

University of Pennsylvania (Pennsylvania)

Preceptors: Ms. Diane Lawrence, Dr. Paul Wong, Ms. Mary Myers

## AM-024. Nicole Leggiero

Comparison of Quantitaive Muscle Anaylsis (QMA) Testing Techniques for Hip Extension Towson University (Maryland)

Preceptor: Mr. Joe Shrader

#### AM-025. Hillary Liu

Effect of ionizing radiation on the proliferation of hESCs and their competition with non-irradiated cells

University of Virginia (Virginia)

Preceptors: Dr. Irina Panyutin, Dr. Igor Panyutin, Dr. Ronald Neumann

#### AM-026. Jacob Martin

Understanding Depression in Patients Diagnosed with Cushing's Disease Clemson University (South Carolina)

Preceptors: Dr. Paul Wong, Mrs. Mary Myers, Mrs. Diane Lawrence

#### AM-027. Danielle Martinez-McCormack

Using Business Intelligence to Enhance Total Quality Management Wharton School of University of Pennsylvania (Pennsylvania)

Preceptors: Mrs. Norma Street, Dr. Andrew Mannes

## AM-028. Latonia Miller

Dysregulated JNK signaling contributes to the anti-apoptotic phenotype of BMPR2-silenced endothelial cells

Howard University College of Medicine (District of Columbia)

Preceptors: Dr. Keytam Awad, Dr. Robert Danner

#### AM-029. Erin Mistretta

Spirituality in women with HIV: A look at the HEALS questionnaire

Catholic University of America (District of Columbia)

Preceptors: Dr. Danetta Sloan, Dr. Ann Berger

## AM-030. Chase Morgan

Characterization of CRISPR/Cas9-mediated IQGAP1 knockout human cell lines Columbia University (New York)

Preceptors: Dr. Andrew Hedman, Dr. David Sacks

## AM-031. Megan Morley

The Effects of Granulocyte Donation in Healthy Volunteers on Bone Mineral Density and Renal Function

Clemson University (South Carolina)

Preceptors: Dr. Cathy Cantilena, Dr. Kamille West, Ms. Yu Ying Yau, Ms. Sarah Pogue

#### AM-032. Trileena Myles

Providing Visa Extension Services for Non-Immigrant Clinical Center Patients and Patient Support

West Virginia University (West Virginia)

Preceptors: Ms. Lynn Hardesty, Ms. Kathy Baxley

## AM-033. Chisomam Osuji

The Utility of Information in Clinical Research Protocols in Constructing Likelihoods of Clinical Problems Found in the Electronic Health Record

Columbia University (New York)

Preceptor: Dr. David Herion

## AM-034. Mallory Perper

Patient Tray Accuracy Can Be Increased Through Strategic Process Improvement Efforts University of Georgia (Georgia)

Preceptors: Mr. John Palino, Mr. David Folio, Mrs. Laura Cramp, Mrs. Anita Bailey

## AM-035. Benjamin Pesante

Quantification of Delayed Hand Relaxation Time in Patients with Muscular Dystrophy The Catholic University of America (District of Columbia) Preceptors: Mr. Andrew Gravunder, Dr. Thomas Bulea

## AM-036. Hope Peterson

Concurrent Validity of the Rey Tangled Line Test in TBI Wake Forest University (North Carolina)

Preceptors: Ms. Shannon McNally, Dr. John Dsurney, Dr. Leighton Chan

## AM-037. Kristin Peterson, Jennifer Tan

Zika, Dengue and Chikungunya Virus Assays: RT-PCR and Multi-Pathogen Chip Validation in a Study of Blood Transfusion-Transmission Risk Among Travelers (16-CC-0124) Sidney Kimmel Medical College at Thomas Jefferson University (Pennsylvania), University of California, Berkeley (California)

Preceptors: Dr. Robert Allison, Dr. Valeria De Giorgi, Dr. Harvey Alter

#### AM-038. Christian Quiros

Where's the B.E.A.F: The Development of the NIH Clinical Center's Budget Execution and Formulation Database

University of Pittsburgh (Pennsylvania)

Preceptor: Mr. Juris Mohseni

## AM-039. Thomas Risoleo, Andie Weiser-Schlesinger

Development of an Isolated Lung Perfusion System and Model of Lung Injury

Maret School (District of Columbia), Livingston Senior High School (New Jersey) Preceptors: Dr. Steve Solomon, D. Cui Xizhong, Ms. Victoria Xu

#### AM-040. Amil Sahai

Application of Diffusion Weighted Imaging in Characterization of Hereditary Renal Cell Cancers University of Maryland, College Park (Maryland)

Preceptor: Dr. Ashkan Malayeri

## AM-041. Ashley Santamarina

Mathematical modeling of 18Fluorodeoxyglucose uptake for improved clinical risk stratification: Tracer kinetics vs spatial resolution

Catholic University of America (District of Columbia)

Preceptors: Dr. Mark Ahlman, Dr. Roberto Maass-Moreno

#### AM-042. Sachein A R Sharma

*IL-6 Receptor Expression in Bone Marrow Myeloid and Lymphoid Cell Lineages* Univeristy of Texas Health Science Center McGovern Medical School (Texas) Preceptors: Dr. Irina Maric, Mrs. Jamie Hahn-Ellis

# AM-043. Ethan Smith, Dhanya Asokumar, Noah van Ekdom

Transcriptomic profiling after selective ablation of TRPV1+ neurons in human and veterinary clinical trials for pain control.

University of Toronto (Non-U.S.), University of Chicago Laboratory Schools (Illinois), Colorado College (Colorado)

Preceptors: Dr. Matthew Sapio, Dr. Michael Iadarola, Dr. Andrew Mannes

#### AM-044. Charlotte Story

Preliminary Assessment of Urinary Free Thyroid Metabolites in Select Clinical Scenarios University of North Carolina at Chapel Hill (North Carolina)

Preceptors: Dr. Steven Soldin, Mr. Brian Stolze

## AM-045. Xiangliang Sui

Clinical Center Service Center and Clinical Center Desktop Support Metrics of the Department of Clinical Research Informatics

Winston Churchill High School (Maryland)

Preceptor: Mr. Bertram Brown

#### AM-046. Kirsten Turnbull

Evaluating the Effectiveness of E-Strategies in Research Volunteer Enrollment Boston University (Massachusetts)

Preceptors: Ms. Dinora Dominguez, Ms. Ingrid Frey

#### AM-047. Noah van Ekdom

Transcriptomic Profiling of Halogenated Anesthesia and Electroconvulsive Shock in Rat Frontal Lobe and Hippocampus

Colorado College (Colorado)

Preceptors: Dr. Andrew Mannes, Dr. Michael ladarola, Dr. Matthew Sapio

## AM-048. Amanda Weerasooriya

An fMRI investigation of cortical activation during imagined walking in adults with traumatic brain injury

University of Maryland, College Park (Maryland) Preceptors: Dr. Diane Damiano, Dr. Silvina Horovitz

#### AM-049. Robert Weinstein

Suitability of MR-HIFU for treatment of liver tumors: A retrospective study

Vanderbilt University (Tennessee)

Preceptor: Dr. Navid Farr

# **National Center for Advancing Translational Sciences (NCATS)**

## AM-050. Rohith Battina

Identifying Differentiating Compounds in Melanoma University of Maryland, College Park (Maryland) Preceptors: Mr. Christopher Dextras, Dr. Marc Ferrer

#### AM-051. Carina Danchik

Characterizing Small Molecule Inhibitors of ALDH1A1 by Establishing High Throughput Cellbased Assays

Franciscan University of Steubenville (Ohio)

Preceptor: Dr. Natalia Martinez

## AM-052. David Greenblott

The Total Synthesis of Stable DHA Analogs for the Treatment of Neurodegenerative Diseases Thomas Sprigg Wootton High School (Maryland)

Preceptors: Mr. Raul Calvo, Dr. Juan Marugan, Dr. Madhu Lal

#### AM-053. Jessica Hall

Development of an AlphaLISA proximity assay to identify small molecule inhibitors of the ASAP1-Arf1 interaction from high-throughput screens

Wake Forest University (North Carolina)

Preceptors: Dr. Matthew Hall, Dr. Paul Randazzo, Dr. Nathan Coussens

#### AM-054. William Kuenstner

Miniaturization and Optimization of a Fluorescence Polarization Assay to Interrogate a Protein-Peptide Interaction

Wake Forest University (North Carolina)

Preceptors: Mr. Adam Yasgar, Dr. Bolormaa Baljinnyam

#### AM-055. Allen Kuncheria

Development of QSAR Models to Predict the Promising Compounds Against Different Cancer Cell Lines

Adlai E. Stevenson High School (Illinois)

Preceptors: Mr. Dac-Trung Nguyen, Dr. Alexey Zakharov

## AM-056. Delaney Lehmann

Identification of Novel Small Molecule Inhibitors of PMP22 for the Treatment of CMT1A Hillsdale College (Michigan)

Preceptors: Ms. Diane Luci, Dr. David Maloney

## AM-057. Christopher Look

Text Mining and Protein Sequence Analysis for Protein-Protein Interaction Prediction Pooeslville High School (Maryland)

Preceptors: Mr. Dac-Trung Nguyen, Dr. Alexey Zakharov, Dr. Rajarshi Guha

#### AM-058. Michael Lu

Evaluation of pharmacological effect of different cyclodextrins on cholesterol reduction in NPC1 cells

University of Pennsylvania (Pennsylvania)

Preceptors: Dr. Sheng Dai, Dr. Wei Zheng

## AM-059. Jacob Roth

Optimizing the Cellular Thermal Shift Assay to Validate Target Engagement in Cancer Drug Development

Goshen College (Indiana)

Preceptors: Mr. Tobie Lee, Dr. Ken Cheng, Dr. Matthew Hall

#### AM-060. Samuel Solomon

The Development of a High Throughput Assay for Acetylcholinesterase

Charles E. Smith Jewish Day School (Maryland)

Preceptors: Dr. Shuaizhang Li, Dr. Ruili Huang, Dr. Menghang Xia

#### AM-061. Maxime Usdin

Molecular Modeling in Drug Development: From Dual Inhibitors to Stabilized Helical Peptides Northwestern University (Illinois)

Preceptors: Dr. Ashish Thakur, Dr. Germit Grewal, Dr. Greg Tawa

#### AM-062. Brooke Whitehill

Utilizing CRISPR-Cas9 Technology to Regulate alpha-Synuclein Expression in SH-SY5Y Cells.

Franciscan University of Steubenville (Ohio)

Preceptors: Dr. Mark Henderson, Ms. Elizabeth Cunningham

## **National Institute of Allergy and Infectious Diseases (NIAID)**

## AM-063. Rachel Alexander, Ashlyn Thomas

Reproductive Fitness of Phlebotomine Sand Flies Maintained at Different Temperatures Thomas Jefferson High School for Science and Technology (Virginia), Chantilly High School (Virginia)

Preceptors: Dr. Kashinath Ghosh, Dr. David Sacks

#### AM-064. Shira Anton

Role of T cell receptor C beta domain in allosteric signaling

Florida international university (Florida)

Preceptors: Dr. David Margulies, Dr. Kannan Natarajan

## AM-065. Assanatou Bamogo

Assessment of the functionality and stability of Prefusion RSV F (DSCAV1) glycoprotein variants

University of Central Florida (Florida)

Preceptors: Dr. Barney Graham, Dr. Azad Kumar, Dr. Syed Moin, Ms. Joan Ngwuta

#### AM-066. Alyson Barnes

Sequence Analysis of Anti-Ebola B-Cell Receptors

University of Virginia (Virginia)

Preceptors: Dr. Nancy Sullivan, Dr. John Misasi, Dr. Kendra Leigh

## AM-067. Sawyer Bawek

Development of a control replication-deficient adenoviral vector vaccine for future pre-clinical evaluation of malaria vaccine candidates

Upper Iowa University (Iowa)

Preceptors: Mrs. Holly Torano, Dr. Shaji Daniel, Mr. Munir Buhaya, Dr. Patrick Duffy

## AM-068. Brittany Brookner

Detection and Analysis of the Binding of Fluorescence-Tagged Norovirus VLPs to Human Cell Lines

Carleton College (Minnesota)

Preceptors: Dr. Eric Levenson, Dr. Stanislav Sosnovtsev, Dr. Kim Green

## AM-069. Victoria Brooks

Differential responses of STAT3-deficient human keratinocytes to external stimuli Howard University (District of Columbia)

Preceptors: Dr. Inka Sastalla, Dr. Sandip Datta

#### AM-070. Ben Cabrera

Evaluating MERS Coronavirus Full-length Spike protein Vaccination in Mice James Hubert Blake High School (Maryland)

Preceptors: Dr. Kizzmekia Corbett, Dr. Barney Graham

#### AM-071. Binh Cao

Effect of IFIT1 Entry into Nucleus in Toll-like Receptor Activated Gene Expression West Valley - Mission College (California)

Preceptors: Dr. Iain Fraser, Dr. Sinu John

#### AM-072. Julia Casazza

Quantification of Mycobacterium bovis BCG Using Real-time PCR (rtPCR) Princeton University (New Jersey)

Preceptors: Dr. Tricia Darrah, Dr. Robert Seder

## AM-073. Christian Chapman

Cellular Evaluation of B Cell Proliferation of Non-CTLA4 Deficient Human Subjects Northern Virginia Community College (Virginia)

Preceptors: Dr. Steven Holland, Dr. Su Hua, Dr. Gulbu Ouzel, Mr. Anuj Kashyup

#### AM-074. Elizabeth Chen

Inhibitory Receptors on Peripheral Blood Eosinophils: Expression and Regulation of Siglec-7 and Siglec-8

Thomas S. Wootton High School (Maryland)
Preceptors: Dr. Fanny Legrand, Dr. Amy Klion

#### AM-075. Justin Cheung

Structural Optimization of Small Molecule Immunostimulants that Mediate Clearance of Established Tumors

Stony Brook University (New York)

Preceptors: Dr. Geoffrey Lynn, Dr. Neeha Zaidi, Dr. Robert Seder

## AM-076. Elim Cho

Transplantation of human skin microbiota in models of atopic dermatitis Williams College (Massachusetts)

Preceptors: Dr. Ian Myles, Dr. Sandip Datta

#### AM-077. Charlotte Costello

Analysis of Differential Glycosylation of Anti-Ebola Antibody KZ52 University of Maryland, College Park (Maryland) Preceptors: Dr. Nancy Sullivan, Dr. John Misasi, Dr. Kendra Leigh

## AM-078. Kevin Crosby

Transcriptional modification and its role in autophagic control of Cryptococcus neoformans viability

Prince George's Community College (Maryland)

Preceptors: Dr. Guowu Hu, Dr. Peter Williamson

## AM-079. Jack crow

Elucidating Salivary Protein Function in Disease-carrying Arthropods

Kenyon College (Ohio)

Preceptors: Dr. Eric Calvo, Dr. Ines Martin-Martin, Dr. Jose Ribeiro

## AM-080. Jianne De Raya

Recombinant Production, Refolding, Purification, and Biophysical Characterization of the G3/L5 Subunit from the Vaccinia Virus Entry-Fusion Complex

Mount St. Mary's University (Maryland)

Preceptor: Dr. Ulrike Diesterbeck

## AM-081. Duyhoang Dinh

High Throughput Measurement of Antibodies Against Various Infectious Agents in HIV-Infected Ugandans

University of Maryland, College Park (Maryland)

Preceptors: Dr. Krystelle Nganou-Makamdop, Dr. Daniel Douek

## AM-082. Nathaniel Dwyer

Functional Characterization of New STAT1 Gain-of-Function Mutations

Walt Whitman High School (Maryland)

Preceptors: Dr. Elizabeth Sampaio, Dr. Li Ding, Dr. Steven Holland, Dr. Steven Holland

#### AM-083. Alexander Feistritzer

Comparison of Quantification Tools in Label-Free Proteomics

University of Chicago (Illinois)

Preceptor: Dr. Lisa Olano

## AM-084. Emilie Fisher

Contribution of PMT, a toxin exporter, to Staphylococcal pathogenesis

Scripps College (California)

Preceptors: Mr. Joshua McCausland, Dr. Gordon Cheung, Dr. Michael Otto

#### AM-085. Meheret Gebreegziabher

Relationship between expression of glucocorticoid receptor isoforms and glucocorticoid resistance in HES

University of Maryland, Baltimore County (Maryland)

Preceptors: Dr. Kindra Stokes, Dr. Amy Klion, Dr. Paneez Khoury, Ms. Pryscilla Yoon

## AM-086. Stephanie Golub

Understanding the Unfolded Protein Response in Recombinant CHO Cell Lines Johns Hopkins University (Maryland)

Preceptors: Dr. Althaf Hussain, Dr. Venkata Mangalampalli, Dr. Hussain Dahodwala, Dr. Richard Schwartz

#### AM-087. Adam Goodwin

Using bacterial infections to control Leishmaniasis
California Baptist University, College of Engineering (California)
Preceptors: Dr. Luiz Oliveira, Dr. Jesus Valenzuela

#### AM-088. Kira Griswold

Host Factors for Respiratory Syncytial Virus
University of Maryland, College Park (Maryland)
Preceptors: Dr. Ulla Buchholz, Dr. Peter Collins, Dr. Masfique Mehedi

#### AM-089. Sarah Harrison

Investigating the Association Between Non-Pathogenic and Pathogenic Intestinal Protozoa in a Heavily Parasitized Burmese Refugee Population

University of Notre Dame (Indiana) Preceptor: Dr. Elise O'Connell

#### AM-090. Travis Henke

Elucidating synergistic and antagonistic effects between B cell receptors and various toll-like receptors

Portland State University (Oregon)

Preceptors: Dr. Munir Akkaya, Dr. Susan Pierce

#### AM-091. Francisco Hernandez

Identification of Genomic and Nutrient Transporter Mechanisms Involved in Heightened Virulence of Fungal Infection

Charter School of Wilmington (Delaware)

Preceptor: Dr. Sarah Davis

#### AM-092. Isabel Hsu

N-Terminal Sulfation Switches Binding Profile Between Ccr1 and Ccr1L1 Princeton University (New Jersey)

Preceptors: Dr. Sergio Pontejo, Dr. Philip Murphy

#### AM-093. Lutfi Huq

Using IgA-seq, IgG-seq and 16s rRNA Amplification to Identify HIV-Associated Immunostimulatory Gut Bacteria.

Cornell University (New York)

Preceptors: Dr. Yasmine Belkaid, Dr. Ivan Vujkovic-Cvijin

## AM-094. Christopher Isaac

Comparing Different CD4 Positive T Cell Purification Techniques for Induced Treg (iTreg) Differentiation Efficiencies and Suppression Abilities

Montgomery Blair High School (Maryland)

Preceptors: Dr. Billur Akkaya, Dr. Ethan Shevach

#### AM-095. Bobby Jones

ClonePix seeding optimization for generation of clonal CHO cell lines for vaccine development Meharry Medical College (Tennessee)

Preceptors: Dr. Elizabeth Scheideman, Dr. Althaf Hussain, Dr. Richard Schwartz

## AM-096. Barbora Kabatova

Genetic Stability of Packaged and Pre-fusion Stabilized Respiratory Syncytial Virus Fusion Glycoprotein in a Bivalent Live Attenuated Parainfluenza Type 3 Vectored Vaccine University of Maryland School of Pharmacy (Maryland)

Preceptors: Dr. Bo Liang, Dr. Shirin Munir, Dr. Peter Collins

## AM-097. Emily Kaplan

Phase I Challenge Study of Healthy Adult Volunteers with Respiratory Syncytial Virus Yale University (Connecticut)
Preceptor: Dr. Lesia Dropulic

## AM-098. Jay Khurana

Using the Placental Malaria Variant Antigen Gene VAR2CSA as a Model for Assembling Polyclonal Sequences

Brown University (Rhode Island)

Preceptors: Dr. Patrick Duffy, Mr. Bob Morrison

#### AM-099. Jonathan Kim

Cryptococcal Meningitis: A Novel Phenotype Discovered with an X-linked Mutation Affecting the NF-κB Essential Modulator (NEMO)

Davidson College (North Carolina)

Preceptor: Dr. Anil Panackal

#### AM-100. David Le

Development of Absolute Protein Quantification Assays for Poly(ADP-ribose) Polymerases and Glycohydrolases

Baylor University (Texas)

Preceptors: Dr. Casey Daniels, Dr. Nathan Manes, Dr. Aleksandra Nita-Lazar

#### AM-101. Haoran Li

C2GAP2 Mediates Ras Signaling and is Essential for Chemotaxis in Dictyostelium discoideum Winston Churchill High School (Maryland)

Preceptors: Dr. Xuehua Xu, Dr. Xi Wen, Dr. Tian Jin

## AM-102. Laren Lofchy

Characterization of High Concentration Monoclonal Antibody Formulations Using Diffusion Interaction Parameter

University of Michigan (Michigan)

Preceptors: Dr. Sashikanth Banappagari, Dr. Lisa Kueltzo

## AM-103. Gina LoMastro

Exploration of Norovirus virus-like particles as a platform for a placental malaria vaccine. Cornell University (New York)

Preceptors: Dr. Nicholas MacDonald, Dr. David Narum, Mr. Vu Nguyen, Mr. Raul Herrera

#### AM-104. Matthew Marino

Exploring the Phosphorylation Sites of MARCKS in the LPS Induced Toll-Like Receptor 4 Signaling in Macrophages.

Jonathan Law High School (Connecticut)

Preceptors: Dr. Aleksandra Nita-Lazar, Mr. Sebastian Montalvo

## AM-105. Sean McNeely

An Immunofluorescence Microscopy Assay for Granulibacter bethesdensis in Fixed Tissue Samples

Bethesda - Chevy Chase High School (Maryland)

Preceptors: Dr. Kol Zarember, Dr. John Gallin

## AM-106. Kaela Mohardt

Identifying the DNA binding motif of essential two-component system prrAB in Mycobacterium tuberculosis

Virginia Polytechnic Institute and State University (Virginia)

Preceptors: Dr. Gareth Prosser, Dr. Helena Boshoff, Dr. Clifton Barry

## AM-107. Matthew Myers

Agent-based Modeling of Damage Propagation in Traumatic Brain Injury

University of Maryland, College Park (Maryland)

Preceptors: Dr. Martin Meier-Schellersheim, Dr. Dorian McGavern, Dr. Bastian Angermann

## AM-108. Sky Myers

Immunogenicity of Group 2 hemagglutinin stabilized-stem nanoparticles

Spelman College (Georgia)

Preceptors: Dr. Syed Moin, Dr. Barney Graham

## AM-109. Bergeline Nguemwo Tentokam

Impact of viral antigen on half-time of Anti Ebola Virus antibody

Georgia State University (Georgia)

Preceptors: Dr. Nancy Sullivan, Mr. Carr Derrick, Dr. Aurelie Ploquin, Dr. Olivier Mbaya

## AM-110. Quang Nguyen

HIV RNA Alternative Splicing: The Effect of CD4 Down-Regulation during Early Acute HIV-1 Infection

Duke University (North Carolina)

Preceptors: Dr. Joseph Casazza, Dr. Richard Koup

## AM-111. Kyra Nicholson

Identification of Quaternary-Specific Influenza Hemagglutinin Stem Antibodies

Southern Illinois University School of Medicine (Illinois)

Preceptors: Dr. Barney Graham, Dr. Masaru Kanekiyo, Dr. Rebecca Gillespie, Dr. Sarah

**Andrews** 

#### AM-112. Lauren Norris

Charting the Life Cycle of Artemisinin-resistant Plasmodium falciparum

University of North Carolina at Chapel Hill (North Carolina)

Preceptors: Ms. Kimberly Faldetta, Dr. Amanda Hott, Dr. Rick Fairhurst

#### AM-113. Cynthia Okoye

Assessing Cross-Resistance of Malaria Parasites to Electron Transport Chain Inhibitors

Williams College (Massachusetts)

Preceptors: Dr. Kristin Lane, Dr. Thomas Wellems

#### AM-114. Bryan Peacker

Characterization of Murine Monocyte Response to Toxoplasma gondii

Harvard University (Massachusetts)

Preceptors: Dr. Dragana Jankovic, Dr. Alan Sher

## AM-115. Natalia Perez

Use of Luciferase Immunoprecipitation Systems (LIPS) Assay to Detect Allergen-specific IgE Georgetown University (District of Columbia)

Preceptors: Dr. Adora Lin, Dr. Thomas Nutman

## AM-116. Ian Peters

Use of Diagnostics in Malaria Clinical Trials

University of Maryland, College Park (Maryland)

Preceptors: Dr. Sara Healy, Dr. Agnes Mwakingwe, Mrs. Jacquelyn Lane

#### AM-117. Elisheva Prero

T-Cell Receptor-induced ASCT2 Expression in Atopic Dermatitis

Bros Yisroel of Baltimore (Maryland)

Preceptor: Dr. Joshua Milner

#### AM-118. Bowen Ren

The Impact of a V3 loop Deletion on the Antigenicity of the V1/V2 Domain of a Subtype E HIV gp120 Glycoprotein

Richard Montgomery High School (Maryland)

Preceptor: Dr. Jim Arthos

#### AM-119. Yvette Robbins

Optimizing Plasmodium chabaudi chabaudi AS (Pcc AS) Sporozoite production using C57BL/6 as host and A. stephensi as vector

North Carolina Agricultural and Technical State University (North Carolina)

Preceptors: Dr. Patrick Duffy, Mr. Solomon Conteh

#### AM-120. Launick Saint-Fort

Developing a multi-locus, multiplex typing scheme for detecting population genetics in cryptosporidium.

Pennsylvania State University - Berks Campus (Pennsylvania)

Preceptors: Dr. Asis Khan, Dr. Michael Grigg

## AM-121. Erick Salvador Rocha

Searching for Markers of Exposure to Assess the Efficacy of Vector Control Interventions Miami Dade College (Florida)

Preceptors: Dr. Maha Abdeladhim, Dr. Jesus Valenzuela

## AM-122. Emily Schneider

Towards a Cure for WHIM Syndrome: Preferential Engraftment of CXCR4 Haploinsufficient Hematopoietic Stem Cells

Princeton University (New Jersey)

Preceptors: Dr. Philip Murphy, Dr. Ji-Liang Gao, Ms. Erin Yim

## AM-123. Samhita Sengupta

Evaluating the Binding of Broadly Neutralizing anti-HIV-1 Antibodies to Human and Rhesus Neonatal Fc Receptors

University of Maryland, College Park (Maryland)

Preceptor: Dr. Amarendra Pegu

## AM-124. Kush Shanker

Using Nucleic Acid Amplification Tests (NAAT) to Determine the Relative Risk of Tuberculosis Transmission

Monta Vista High School (California)

Preceptors: Dr. Lori Dodd, Dr. Yingda Xie

#### AM-125. Julia Sheehan

Persistent Aminotransferase Elevations following HCV Clearance in Adults with and without HIV Northeastern University (Massachusetts)

Preceptors: Dr. Colleen Hadigan, Ms. Louisa Howard

## AM-126. Sonia Shenoi

Validation of Liver Proteomics through Western Blot Analysis Scripps College (California)

Preceptors: Dr. Michal Fried, Dr. Brittany Pease

## AM-127. Harsh Singh

Computational approaches in determining the epitopes of Malarial proteins

Landon School (Maryland)

Preceptor: Dr. Michael Dolan

## AM-128. Kritika Singh

The expression of gametocyte regulatory genes in in vivo malaria infections in the wet and dry seasons in Kenioroba. Mali

Thomas Jefferson High School for Science and Technology (Virginia)

Preceptors: Dr. Carole Long, Dr. Yaw Adomako-Ankomah

#### AM-129. Sonali Srivastava

Cytoadherence Inhibitory Activity of IgG Depleted Plasma in Placental Malaria

Cornell University (New York)

Preceptors: Dr. Justin Y. A. Doritchamou, Dr. Patrick Duffy

## AM-130. Karthikeyan Sundar

Evaluation of the viral quasispecies in mononuclear cells isolated from the brains of SIV infected rhesus macaques

University of Maryland, College Park (Maryland)

Preceptors: Dr. Cheri Lee, Dr. Vanessa Hirsch

## AM-131. Chantal Uwiringiyimana

The Evaluation of Transmission Blocking Vaccines

Arizona State University (Arizona)

Preceptors: Dr. Patric Duffy, Dr. Camila Coelho

## AM-132. Tina Vaziri

Post-transcriptional Regulation of IL1beta by Colonic Macrophages Johns Hopkins University (Maryland)

Preceptors: Dr. Brian Kelsall, Dr. Byunghyun Kang

## AM-133. Shavonn Whiten

Putative Adult Female Aedes aegypti Midgut Peritrophic Matrix Proteins: Expression, Purification, and Gene Expression Profiling Virginia Polytechnic Institute and State University (Virginia)

Preceptors: Dr. Eric Calvo, Dr. Jose Ribeiro

## AM-134. Ellen Wu

Analysis of HIV Envelope Expression in CEM.NKR cells Washington University in Saint Louis (Missouri) Preceptor: Dr. Kristin Boswell

## AM-135. Bolong Xu

Preparation of Modified PLGA Nanoparticles for use as a Vaccine-Carrier Candidate Brown University (Rhode Island)

Preceptors: Dr. Puthupparampil Scaria, Mr. Christopher Rowe, Dr. Sojung An, Ms. Beth Chen

## AM-136. Derek Zhang

Cloning and Characterization of M. tuberculosis 1-Deoxy-D-Xylulose 5-Phosphate Synthase (DXS), an Essential Enzyme in Isoprenoid Synthesis University of Maryland, College Park (Maryland)

Preceptors: Dr. Andaleeb Sajid, Dr. Helena Boshoff, Dr. Clifton Barry

## AM-137. ChengYan Zheng

The Effects of pH on the Binding and Elution of a Malaria Vaccine Candidate, Pvs25M, Using Anion Exchange Chromatography
Gaithersburg High School (Maryland)

Preceptors: Dr. David Narum, Mr. Richard Shimp

# National Institute of Dental and Craniofacial Research (NIDCR)

#### AM-138. Siavash Aarabi

Effects of Eukaryotic translation factor (eIF5A) depletion on mammalian cells Howard Community College (Maryland)

Preceptors: Dr. Swati Dadhich, Dr. Myung Hee Park, Dr. Ajeet Mandal, Dr. Erika Barr

#### AM-139. Sarah Anvery

The Role of Mucin-type O-Glycosylation in Packaging and Secretion of O-Glycosylated Proteins Howard University College of Dentistry (District of Columbia)

Preceptors: Dr. Zulfeghar Syed, Dr. Leslie Revoredo, Dr. Kelly Ten Hagen

#### AM-140. Blake Bandeff

Skeletal Characterization of CD146 Deficient Mice

University of Connecticut School of Dental Medicine (Connecticut)

Preceptors: Dr. Pamela Robey, Dr. Luis Fernandez de Castro Diaz

#### AM-141. Sean Burke

Establishment of polarized acinar-like structures as an in vitro model for salivary gland dysfunction

University of Connecticut School of Dental Medicine (Connecticut)

Preceptor: Mr. Mayank Tandon

#### AM-142. Cara Chao

Neuropilin-1: A Thymus Derived Regulatory T Cell Marker?

American University (District of Columbia)

Preceptors: Dr. Dunfang Zhang, Dr. Wanjun Chen

#### AM-143. Ethan Chen

Creating Extracellular Matrix Stiffness Gradients to Study 3D Cell Migration Montgomery Blair High School (Maryland)

Preceptors: Dr. Kenneth Yamada, Dr. Andrew Doyle, Dr. Emilios Dimitriadis

#### AM-144. Susan Chow

Examining the CFTR Gene Mutation Landscape in the DNA of Patients with Sjogren's Syndrome

New York University (New York)

Preceptors: Dr. Ilias Alevizos, Dr. Leyla Teos

#### AM-145. Anthony Contratto

3D Cephalometric Analysis of Variation in Class II and Class III Skeletal Development University of Missouri - Kansas City School of Dentistry (Missouri)

Preceptors: Dr. Payal Verma, Dr. Denise Liberton, Dr. Janice Lee

## AM-146. Eric Coy

Identification of mandibular prognathism related secondary variants in ClinSeq exomes Towson University (Maryland)

Preceptors: Dr. Rashmi Mishra, Dr. Murat Sincan, Dr. Janice Lee, Dr. Leslie Biesecker

## AM-147. Tarek Ellis

Role of Myb Transcription Factor in Salivary Gland Differentiation

Georgia State University (Georgia)

Preceptors: Dr. Jennifer Symonds, Dr. Matthew Hoffman

### AM-148. Lucas Harrison

Studies on the Contribution of the Neural Crest to Hematopoietic Organ Development Ohio University (Ohio)

Preceptors: Dr. Károly Markó, Dr. Éva Mezey

## AM-149. Tiffany Hu

Quality of life in patients with hypoparathyroidism on PTH 1-34 replacement therapy University of Maryland, College Park (Maryland)

Preceptor: Dr. Rachel Gafni

#### AM-150. Asia Jones

Investigation of PGANT(GalNAc-T) localization and mucin-type O-glycosylation in Drosophila S2R+ cell

Benjamin Banneker Academic High School (District of Columbia)

Preceptors: Dr. Sue Na Ji, Dr. Kelly Ten Hagen

#### AM-151. Jack knudson

Role of Osteocytes In Hematopoietic Lineage Differentiation Robbinsdale Cooper High School (Minnesota)

Preceptors: Dr. Lynn Cross, Dr. Vamsee Myneni, Dr. Eva Mezey

## AM-152. Hiba Mohiuddin

Identification of Upregulated miRNA in Sjögren's Syndrome Patients Using Digital PCR University of Pittsburgh (Pennsylvania)

Preceptors: Dr. Ilias Alevizos, Dr. Shyh-ing Jang, Mr. Mayank Tandon, Mr. Mohammad Hadavand

## AM-153. Larry Nguyen

Elucidating the Mechanism of Polypeptide N-acetylgalactosaminyltransferase 2 (GalNAc-T2) Mediated Catalysis Using X-ray Crystallography

University of Florida (Florida)

Preceptors: Dr. Nadine Samara, Dr. Lawrence Tabak

## AM-154. Varun Pemmaraju

Characterization and Purification of polyclonal SARAF antibody University of Maryland, College Park (Maryland) Preceptors: Dr. Aran Son, Dr. Shmuel Muallem

## AM-155. Isaiah Rogers

Role of Btbd7 in cancer cell invasion

St. Thomas University (Florida)

Preceptors: Dr. Kenneth Yamada, Dr. William Daley, Mr. Joshua Collins

## AM-156. Brittany Spivey

Epfn and Tbx1 regulate dental epithelial stem cell fate to the ameloblast lineage Northern Virginia Community College (Virginia)

Preceptors: Mr. Yuta Chiba, Dr. Yoshihiko Yamada

#### AM-157. Christine Straka

Characterization of domains required for GalNAc-T Golgi localization Case Western Reserve University (Ohio) Preceptors: Dr. Larry Tabak, Dr. Duy Tran

## AM-158. Doga Tasdemir

Analysis of Bone Regeneration in Young and Old Mice Post-Rib Resection Surgery Thomas Sprigg Wootton High School (Maryland) Preceptors: Dr. Janice Lee, Ms. Kate Malchester

#### AM-159. Fahd Yazdanie

Pharmacokinetic and Endocrine Analysis of Clinical Trial Data during Clobetasol Oral Rinse Use Downstate College of Medicine (New York)

Preceptor: Dr. Jacqueline Mays

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

#### AM-160. Jessica Allen

TSH Does Not Induce Proliferation of Human Thyroid Cells University of Maryland, College Park (Maryland) Preceptors: Dr. Sarah Morgan, Dr. Marvin Gershengorn

#### AM-161. Esti Anflick

Activation of Human BAT by a β3-AR Agonist Demonstrates a Dose-Dependent Response Women's Institute of Torah Seminary (Maryland) Preceptors: Dr. Aaron Cypess, Dr. Kong Chen

#### AM-162. Martin Arreola

Investigating the role of Double Stranded Breaks in Long-term Potentiation University of California, San Diego (California) Preceptor: Dr. Rafael Daniel Camerini-Otero

## AM-163. Brittany Begaye

Ethnic Variations of Vitamin D in Women and Its Relationship to Insulin Resistance and Bone Health

Northern Arizona University (Arizona) Preceptor: Dr. Stephanie Chung

## AM-164. Tiffany Bellomo

A Furosemide Excretion Stress Test Predicts Mortality in a Mouse Model of Sepsis Oakland University (Michigan)

Preceptors: Dr. Jonathan Street, Dr. Peter Yuen, Dr. Robert Star

## AM-165. Harout Boujakjian

Modeling single cell gene expression in developing Caenorhabditis elegans George Mason University (Virginia)

Preceptor: Dr. Vipul Periwal

## AM-166. Joseph Lance Casila

Genetic Variation Associated with Diabetic Nephropathy in American Indians - Replication Assessment in Families with Kidney Failure from Guam and Saipan University of Guam (Guam)

Preceptors: Dr. Ivica Masindova, Mr. Darin Mahkee, Dr. Leslie Baier

## AM-167. Grace Cheung

How Bacteria Use Self-Organized Patterns to Position Cell Division...And How to Stop It! (BAF edition)

Richard Montgomery High School (Maryland)

Preceptors: Dr. Kiyoshi Mizuuchi, Dr. Anthony Vecchiarelli, Dr. Min Li

#### AM-168. Andre C. Christie

Understanding Functional Distinction of HSP-70s That Underlies their Different Effects on Amyloid In-vitro.

CUNY Bronx Community College (New York)

Preceptors: Dr. Jyotsna Kumar, Dr. Daniel Masison

#### AM-169. Michelle Chung

Identification of Hepatitis B Virus Covalently Closed Circular DNA Associated Host Factors Boston College (Massachusetts)

Preceptors: Dr. Jake Liang, Dr. Yuchen Xia, Dr. Xiaoming Cheng

## AM-170. Ria Das

Hidden Markov Model of the Organization of Bacterial Genomes

Philips Exeter Academy (New Hampshire)

Preceptor: Dr. Vipul Periwal

#### AM-171. Samuel Deck

Purification and Characterization of Recombinant Envelope Glycoproteins E1 and E2 of Hepatitis C Virus

University of California, Davis (California)

Preceptors: Dr. Zhensheng Zhang, Dr. T. Jake Liang

#### AM-172. Alexandra Elchert

Why does Piwi like to be with U? College of Wooster (Ohio)

Preceptors: Dr. Astrid Haase, Mr. Chad Stein

## AM-173. Alejandra Flores

Effect of Different Lipid Source and Caloric Intake on Lipid Storage in Flies University of Illinois at Urbana-Champaign (Illinois)

Preceptors: Dr. Brian Oliver, Dr. Maria Jaime

#### AM-174. Ellen Freebern

Characterizing Lipid Droplets in C.elegans fitm-2 Mutants Ursinus College (Pennsylvania) Preceptors: Dr. Andy Golden, Ms. Aditi Chandra

#### AM-175. Drew Gerber

Effects of an Oxygen Carrier on 293F Cells Growing in Shake Flasks Duke University (North Carolina)

Preceptors: Dr. Alejandro Negrete, Dr. Joseph Shiloach

#### AM-176. Janhavi Giribhattanavar

African American Adults Have Greater Pancreatic Beta-Cell Responsivity than Caucasian Adults Despite Similar Insulin Sensitivity
College of William and Mary (Virginia)

Preceptor: Dr. Ranganath Muniyappa

## AM-177. Hannah Guan

Systemic microbial translocation and vascular injury in the context of HIV/hepatitis C virus coinfection

University of Maryland School of Medicine (Maryland)

Preceptor: Dr. Theo Heller

## AM-178. Kaitlyn Haskie

Investigation of select metabolic and hormonal predictors of weight change Northern Arizona University (Arizona)

Preceptors: Dr. Karyne Vinales, Dr. Marci Gluck, Dr. Jonathan Krakoff

#### AM-179. Laura Hernández Díaz

Variability in physiological responses to maximal and submaximal exercise: Correlates to free-living behavior

University of Puerto Rico (Puerto Rico)

Preceptors: Dr. Kong Chen, Mr. Brooks Leitner, Ms. Courtney Duckworth, Dr. Robert Brychta

## AM-180. Emily Hernandez-Avila

Poly(I:C) increases plasma levels of APOL1 in BAC/APOL1 transgenic mice: a possible model for APOL1 nephropathy

Cornell University (New York)

Preceptors: Dr. Koji Okamoto, Dr. Shashi Shrivastav, Mrs. Huiyan Lu, Dr. Jeffrey Kopp

#### AM-181. Bryan Ho

Characterizing Rab GTPases Involved in Misfolding-Associated Protein Secretion Yale University (Connecticut)

Preceptors: Dr. Jin-Gu Lee, Dr. Yihong Ye

## AM-182. Wendy Jiang

Mice under Chronic Thermoneutrality Develop Obesity with Improved Insulin Sensitivity and Reduced Triglycerides

Vestavia Hills High School (Alabama)

Preceptors: Dr. Lee Weinstein, Dr. Yong-Qi Li

#### AM-183. Alexander Jordan

A common Arg4Ser missense substitution in the signal peptide of gastrin-releasing peptide is associated with BMI in Pima Indians and Caucasians

Bethune-Cookman University (Florida)

Preceptors: Dr. Michael Traurig, Dr. Leslie Baier

## AM-184. Brenda Kaczorowski

The C-terminus of SAS-6 is Required for Centriole Duplication

Northeast Wisconsin Technical College (Wisconsin)

Preceptors: Dr. Nicole DeVaul, Dr. Kevin O'Connell

#### AM-185. Rachel Kester

Domain Mapping of the Nuclear Long Non-Coding RNA Meg3 in Pancreatic Islet Beta-Cells to study Nuclear Localization and Regulatory Regions

Syracuse University (New York)

Preceptors: Dr. Sucharitha Iyer, Dr. Sunita Agarwal

#### AM-186. Claire Kittock

Prediction of functional impacts of Gnb5 missense mutations through comparative molecular modeling

Colgate University (New York)

Preceptors: Dr. Jianhua Zhang, Dr. Mritunjay Pandey, Dr. Poorni Adikaram, Dr. William Simonds

## AM-187. Avantika Krishna

The Effect of Erythropoietin Over-Expression on Learning Behavior in Mice Mt. Hebron High School (Maryland)

Preceptors: Dr. Soumyadeep Dey, Dr. Constance Noguchi, Ms. Folane Zeleke

## AM-188. Pranab Krishnan

Analyzing innate immune associations with autoimmune diabetes through analysis of gene expression changes in diabetes-susceptible mouse strains

Thomas Jefferson Highschool for Science and Technology (Virginia)

Preceptor: Dr. Kristin Tarbell

#### AM-189. Mitchell Lee

Identification of novel genes required for the secretion of BFT toxin by enterotoxigenic strains of Bacteroides fragilis

Duke University (North Carolina)

Preceptors: Dr. Jessica Pierce, Dr. Harris Bernstein

### AM-190. Justine Lottermoser

Determining the Potency of New P2Y14R Antagonists by Flow Cytometry University of Maryland, Baltimore County (Maryland)

Preceptors: Dr. Kenneth Jacobson, Dr. Ramachandran Balasubramanian, Dr. Kiran Toti

## AM-191. Molly Lutrey

An RNAi Screen for Genes that affect Nuclear Morphology in C.elegans University of Maryland, College Park (Maryland)

Preceptors: Dr. Mohammad Rahman, Dr. Simona Rosu, Dr. Orna Cohen-Fix

#### AM-192. Melissa Mai

Characterizing the Role of FOG-1 in Erythroid Gene Expression Johns Hopkins University (Maryland) Preceptors: Dr. Ivan Krivega, Dr. Ann Dean

#### AM-193. Brandon Marshall

Effects of Leptin on Energy Expenditure in Patients with Lipodystrophy Michigan State University College of Human Medicine (Michigan)

Preceptor: Dr. Rebecca Brown

# AM-194. Kaikeline McCarthy

Glucose Metabolism Differences Between FVB and C57BL/6 Mice Fed a High-Fat Diet and Treated with Erythropoietin

Chaminade University of Honolulu (Hawaii)

Preceptors: Mrs. Heather Rogers, Dr. Constance Noguchi

### AM-195. Hanna McKown

Rapid Creation and Genotyping of CRISPR/Cas9-Derived Knockout Mice University of Virginia (Virginia)

Preceptors: Dr. Benjamin Clarke, Dr. Richard Proia

## AM-196. Marda Mengesha

Leptin's Diet Independent Effects on Lipid Metabolism in Patients with Lipodystrophy University of Maryland, College Park (Maryland)
Preceptors: Dr. Rebecca Brown, Mr. Areli Valencia

## AM-197. Charlotte Merzbacher

Global searches for small RNA regulators within the genome of the human pathogen B. pertussis using RNA-seq

Brown University (Rhode Island)

Preceptors: Dr. Kyung Moon, Dr. Deborah Hinton

## AM-198. Rohith Nagari

GPCR Expression Profile in Skeletal Muscle Cells Brown University (Rhode Island) Preceptors: Dr. Jaroslawna Meister, Dr. Jurgen Wess

#### AM-199. Siri Neerchal

Correlated Modes in G-Protein Coupled Receptor Sequence Alignments Centennial High School (Maryland)

Preceptor: Dr. Vipul Periwal

#### AM-200. Tuyet Nguyen

The Role of Sup35NM Non-Amyloid Oligomers in DnaJB6 Mediated Amyloid Inhibition and Prion Curing

Montgomery Blair High School (Maryland)

Preceptors: Dr. Michael Reidy, Dr. Daniel Masison

#### AM-201. Joshua Ohde

Nutrient-dependent O-GlcNAc cycling in pituitary development University of Kentucky (Kentucky)

Preceptors: Dr. Stephanie Olivier-Van Stichelen, Dr. John Hanover

# AM-202. Ji Youn Park

Investigation of the Function of Non-Enzymatic Ovastacin in the Post-Fertilization Block to Sperm Penetration

University of Virginia (Virginia)

Preceptors: Dr. Jurrien Dean, Dr. Keizo Tokuhiro

## AM-203. Evan Pasternak

Optimization of a Nucleic Acid Test for the Detection of HIV using a PNA based Enzyme-Linked Assay

Yale University (Connecticut)

Preceptors: Dr. Elizabeth Rastede, Dr. Daniel Appella

#### AM-204. Kenneth Pham

TGF-beta Signaling Regulates Brown Adipogenesis and Thermogenesis Columbia University (New York)

Preceptors: Dr. Young Jae Bahn, Dr. Sushil Rane

## AM-205. Abhilash Potluri

Mathematical Modeling of the Effect of Infant Formula on Childhood Growth from Birth R.C. Clark High School (Texas)

Preceptor: Dr. Kevin Hall

#### AM-206. Michael Preston

Open Behavior: Accelerating Research through Collaboration and Open-source Sharing

The American University (District of Columbia)

Preceptor: Dr. Alexxai Kravitz

## AM-207. Siri Ranganath

Personalized Statin Therapy and Coronary Atherosclerotic Plaque Burden in Asymptomatic Low/Intermediate Risk Individuals

Thomas S. Wootton High School (Maryland)

Preceptor: Dr. Ahmed Gharib

#### AM-208. Rachel Reed

Phenotypic analysis of mouse model of PCBP1 deficiency

Princeton University (New Jersey)

Preceptors: Dr. Olga Protchenko, Dr. Caroline Philpott

#### AM-209. Michael Roa

Functional Analysis of Genomic Binding Sites for Thyroid Hormone Receptors in the Pituitary Gland

University of Texas Rio Grande Valley (Texas)

Preceptors: Dr. Young-Wook Cho, Dr. Douglas Forrest

#### AM-210. Jonah Rosenblum

The Effects of Chronic Liver Diseases on Quality of Sleep

Bethesda-Chevy Chase High School (Maryland)

Preceptor: Dr. Christopher Koh

## AM-211. Catherine Royston

Pharmacokinetic Fate of Sucralose, a Common Artificial Sweetener, with Focus on its Presence in Saliva

University of North Carolina at Chapel Hill (North Carolina)

Preceptor: Dr. Kristina Rother

#### AM-212. Ankita Sahoo

Neurotensin receptor 1 agonist, PD149163, induces hypothermia in C57 mice

Thomas S. Wootton High School (Maryland)

Preceptors: Dr. Oksana Gavrilova, Mrs. Shalini Jain

## AM-213. Leeza Santiago-Millán

Role of Histone Acetyltransferase CBP and p300 in Adipogenesis University of Puerto Rico, Humacao (Puerto Rico) Preceptors: Dr. Kai Ge, Dr. Younghoon Jang

## AM-214. Holly Shan

Optimizing Conditions for Assembly of HIV-1 Intasomes Richard Montgomery High School (Maryland)

Preceptors: Dr. Holly Shan, Dr. Min Li

#### AM-215. Isabella Sheldon

beta-Arrestin-dependent ERK 1/2 Activation Mediates TSHR-induced Hyaluronan Secretion German School, Washington D.C. (Maryland)

Preceptors: Dr. Christine Krieger, Dr. Marvin Gershengorn

#### AM-216. Juncheng Shen

Generation of a Reactivatable Bombesin Receptor Subtype 3 Knockout Mouse (Brs3 LoxTB) Johns Hopkins University (Maryland)

Preceptors: Dr. Marc Reitman, Dr. Cuiying Xiao

## AM-217. Jiye Son

Structure Activity Relationships of a Novel Assembly Inhibitor of Hepatitis C Virus Graduate Center of City University of New York, Advanced Science Research Center, Brooklyn College (New York)

Preceptors: Mr. Adam Rolt, Mr. Derek Le, Dr. Zongyi Hu, Dr. Jake Liang

#### AM-218. De'Seana Stewart

Differences in cerebral cortical measures after manual rectification of FreeSurfer surfaces Alabama Agricultural and Mechanical University (Alabama)

Preceptors: Dr. Vipul Periwal, Dr. Deborah Striegel

## AM-219. Adaya Sturkey

Factitious Hypoglycemia in Children and Adolescents with Diabetes

Hampton University (Virginia)

Preceptor: Dr. Kristina Rother

## AM-220. Rujia Teng

Nitric oxide pathways in rodent skeletal muscle

Vanderbilt University (Tennessee)

Preceptors: Dr. Barbora Piknova, Dr. Alan Schechter, Dr. Constance Noguchi

#### AM-221. Dawit Teshome

Exploring the Structural Characteristics of Opa1 by Tryptic Limited Proteolysis and Mass Spectrometry

West Potomac High School (Virginia)

Preceptors: Dr. Andrew Kehr, Dr. Jenny Hinshaw

### AM-222. Timothy Thoner

The effect of IFN-γR blocking on type 1 interferon responses in autoimmune NOD mice Randolph-Macon College (Virginia)

Preceptors: Dr. Kristin Tarbell, Dr. Jubayer Rahman

#### AM-223. Kristin Valdez

Identification of hepatitis C virus-host interactions using functional genomics and bioinformatics approaches

University of Texas at El Paso (Texas)

Preceptors: Dr. Jake Liang, Dr. Qisheng Li, Ms. Brianna Lowey, Dr. Fathi Elloumi

#### AM-224. Rachel Vanjoske

Assessing the Role of O-GlcNAcase as a Histone Acetyltransferase: The Specific Influence of O-GlcNAc and O-GlcNAc Transferase

University of Maryland, College Park (Maryland)

Preceptors: Dr. Katryn Harwood, Dr. John Hanover

## AM-225. Ann Marie Weideman

Mathematical Modeling of Pancreatic Islets

University of Maryland, Baltimore County (Maryland)

Preceptors: Dr. Patrick Fletcher, Dr. Arthur Sherman

#### AM-226. Alisa Yan

Knockouts of GPCRs in Dictyostelium discoideum

Richard Montgomery High School (Maryland) Preceptors: Dr. Netra Meena, Dr. Alan Kimmel

### AM-227. Banruo Yang

Investigating How a Viral Protein Impairs Host Cell Division University of Richmond (Virginia)

Preceptors: Dr. Deborah Hinton, Dr. Jennifer West

## AM-228. Longfei Yang

STAT5 Binding Across Various Gene Loci Richard Montgomery High School (Maryland)

Preceptor: Ms. Michaela Willi

## AM-229. Stephen Yu

Sex Differences in Physical and Metabolic Activity of Transgenic Mice Overexpressing Erythropoietin

Aragon High School (California)

Preceptors: Dr. YuanYuan Zhang, Dr. Constance Noguchi

## AM-230. Sokena Zaidi

Investigation of Adipogenesis in Mll3, Mll4 –SET, and Mll3/Mll4-SET Knockout White Preadipocytes

University of California, Davis (California) Preceptors: Dr. Ji-Eun Lee, Dr. Kai Ge

#### AM-231. Folane Zeleke

Brain-Specific Human Erythropoietin Over-Experssion and Learning Behavior in Mice Montgomery Blair High School (Maryland)

Preceptors: Dr. Soumyadeep Dey, Dr. Constance Noguchi

# National Institute of Neurological Disorders and Stroke (NINDS)

#### AM-232. Stephanie Anders

Functional analysis of Kv paddle chimera in planar lipid bilayer Eastern Mennonite University (Virginia)

Preceptors: Dr. Chanhyung Bae, Dr. Gilman Toombes, Dr. Kenton Swartz

#### AM-233. Jennifer Arai

An Investigation of Context and Content Reinstatement during Paired Associates Memory Task University of Maryland, College Park (Maryland)

Preceptors: Mr. Robert Yaffe, Dr. Kareem Zaghloul

## AM-234. Jacqueline Aredo

Inclusion of Adolescent Girls in Clinical Trials: A Review of Protections for Unanticipated

**Pregnancies** 

Georgetown University (District of Columbia)

Preceptor: Dr. Barbara Karp

#### AM-235. Aakash Basu

Ultrastructural analysis of recovery from APP-induced neurodegeneration in mouse olfactory bulb

Neuqua Valley High School (Illinois)

Preceptors: Dr. Leonardo Belluscio, Dr. Li Bai

# AM-236. Hriday Bhambhvani, David Castellano

The Effects of Novel Protein Shisa7 on GABAergic Synaptic Transmission and Development University of Alabama at Birmingham (Alabama), Columbia University (New York) Preceptors: Dr. Wei Lu, Dr. Jun Li

## AM-237. Skyler Bordeaux, Vanisha Amin

Validation of OPAL against GAITrite to assess gait parameters in typically developing children Fort Lewis College (Colorado), University of Michigan (Michigan)

Preceptors: Mrs. Cris Zampieri, Ms. Minal Jain

#### AM-238. Claudia Carcamo

Functional characterization of a multidrug transporter from Staphylococcus aureus Vassar College (New York)

Preceptors: Dr. Christopher Mulligan, Dr. Joseph Mindell

## AM-239. Shuvam Chakraborty

Automatic Detection and Quantitative Evaluation of Central Veins in Inflammatory Lesions Berkshire School (Massachusetts)

Preceptors: Dr. Govind Bhagavatheeshwaran, Dr. Daniel Reich

## AM-240. Emily Charlip

Spinal cord atrophy in Multiple sclerosis

University of Maryland, College Park (Maryland)

Preceptors: Dr. Shila Azodi, Dr. Govind Nair, Dr. Joan Ohayon, Dr. Steven Jacobson

#### AM-241. Kelly Chen

Tomographic Analysis of Mouse Photoreceptor Cells to Determine Light-Induced Changes in Protein Composition

Amador Valley High School (California)

Preceptor: Dr. Xiaobing Chen

## AM-242. Yue (Polly) Chen

Rodent cage change frequencies: Is less really more? University of California, Berkeley (California)

Preceptor: Dr. LaTesa J. Hughes

#### AM-243. James Chief

Mapping Projections of GABAergic Neurons in Respiratory Regions in Adult Transgenic Rats Montana State University (Montana)

Preceptors: Dr. Jeffrey Smith, Dr. Shahriar Sheikhbahaei

## AM-244. Chaitali Chitnis

Comparison of Automatic Segmentation Softwares for Lesion Detection in HIV Patients Thomas S Wootton High School (Maryland)

Preceptors: Dr. Govind Bhagavatheeshwaran, Ms. Paba Dealwis

## AM-245. Michael Clark

Neurophysiological Findings in Subjects with C9ORF72 Hexanucleotide Repeat Expansion Johns Hopkins University (Maryland)

Preceptor: Dr. Mary Kay Floeter

#### AM-246. Mara Cohen

The effects of activation of inhibitory DREADD in the substantia nigra pars reticulata on motor cortex activity and dyskinesia in a rodent model of Parkinson's disease

Franklin & Marshall College (Pennsylvania)

Preceptors: Dr. Kristin Dupre, Dr. Judith Walters

## AM-247. Jared Collina

3D Reconstruction of Astrocytes Within Rat Brainstem Regions Containing Respiratory Circuits Haverford College (Pennsylvania)

Preceptors: Dr. Jeffrey Smith, Dr. Shahriar Sheikhbahaei

## AM-248. JoAnne Compo

Rehabilitation intervention leads to strength and functional improvement in Spinal and Bulbar Muscular Atrophy patient: a single case study

White Swan High School (Washington)

Preceptors: Mrs. Angela Kokkinis, Dr. Christopher Grunseich, Dr. Joseph Shrader, Dr. Kenneth Fischbeck

## AM-249. Uriah Contreras

Hyper phosphorylation of proteins involved in Alzheimer's Disease by Cdk5/p25 Fort Lewis College (Colorado)

Preceptors: Mr. Raymond Fields, Dr. Binukumar Balachandran Krishnamma

## AM-250. Cole Dittentholer

Receptor Biology

White Swan High School (Washington)

Preceptor: Dr. Katherine Roche

## AM-251. Katelyn Donaldson

Correlating Serum Biomarkers with Tumor Burden and Growth in Neurofibromatosis Type 2 University of Vermont College of Medicine (Vermont)

Preceptors: Dr. Prashant Chittiboina, Dr. John Heiss

## AM-252. Judah Eisenman

Appearance of Proteins Produced Immediately after Pain Stimulation in the Spinal Cord of Mice with Spinal Cord Injury

University of Maryland, College Park (Maryland)

Preceptors: Dr. Ariel Levine, Dr. Anupama Sathyamurthy

## AM-253. Francia Fang

Development of an inducible IDH1 R132H mutation cell model for the study of glioma pathogenesis

Duke University (North Carolina)

Preceptors: Dr. Zhengping Zhuang, Dr. Herui Wang

## AM-254. Austin Feng

Structural Study of AKAP Membrane Targeting to the Post-synaptic Membrane University of Maryland, College Park (Maryland)

Preceptors: Dr. Thomas Reese, Dr. Xiaobing Chen, Mrs. Christine Winters

## AM-255. Graeme Fenton

Distinct missense mutations at spastin residue 499 produce varied clinical manifestations University of California, Berkeley (California)

Preceptors: Ms. Houda Boucekkine, Dr. Craig Blackstone

## AM-256. Davetrina Gadson, Lanre Oshin

Influence of neurological function domains on disability measured contemporaneously in the sub-acute phase of stroke in humans

University of Georgia (Georgia), Duke University (North Carolina)

Preceptor: Dr. Lawrence Latour

#### AM-257. David Gao

Potentiation of D1 dopamine receptor signaling pathways using positive allosteric modulators (PAMs)

University of Chicago (Illinois)

Preceptors: Dr. Kathryn Luderman, Dr. David Sibley

#### AM-258. Aniket Goel

Automated Dynamic Imaging Analysis of Neural Networks Fundamental for Breathing University of Maryland, College Park (Maryland)

Preceptors: Dr. Shariar Sheikhbahaei, Dr. Jeffrey Smith

## AM-259. Selena Gonzalez

Exploring Pain Threshold in the Awake Behaving Rodent Model of Parkinson's Disease Using Neurophysiological Techniques

University of California, Los Angeles (California)

Preceptors: Mr. Alexander Weiss, Dr. Judith Walters

## AM-260. Harvey Herman

Characterization of Exosomes from viral infected cells

Creighton University (Nebraska)

Preceptors: Ms. Monique Anderson, Dr. Steven Jacobson

## AM-261. Chana Heyman

Does Abnormal Autonomic Cardiovascular Regulation Predict Parkinson's Disease?

Bnos Yisroel of Baltimore (Maryland)

Preceptor: Dr. David Goldstein

## AM-262. Randall Hughes

Determining the effect of progranulin mutations on autophagy in genetically-engineered iPSCs

Fort Lewis College (Colorado)

Preceptor: Dr. Michael Ward

## AM-263. Catherine Jean

Neural Protective Activity of Statins

Paint Branch High School (Maryland)

Preceptors: Ms. Muzna Bachani, Dr. Nasir Malik, Dr. Joseph Steiner

#### AM-264. Tibin John

Contribution of Transient Receptor Potential (TRP) Channels to Respiratory Pattern Generation as Analyzed in Mouse Brainstem Circuits by Dynamic Calcium Imaging

Kalamazoo College (Michigan)

Preceptors: Dr. Jeffrey Smith, Dr. Nao Koshiya, Dr. Hidehiko Koizumi

## AM-265. Carly Kaplan

Analysis of Intracranial EEG Data during Memory Tasks in Epilepsy Patients

Brown University (Rhode Island)

Preceptors: Dr. Sara Inati, Dr. Kareem Zaghloul

## AM-266. Hyong Kim

Lipophorin receptors regulate dendrite morphogenesis in developing Drosophila larval visual circuit

University of Pennsylvania (Pennsylvania)

Preceptors: Dr. Quan Yuan, Dr. Jun Yin

## AM-267. Natasa Kostic, Zachary Skemp, Alex Fuksenko

Crowd-Sourced System for Labeling of 3D Electron Microscopy Connectome Data: Functionality Upgrade

Cornell University (New York), University of Virginia (Virginia), University of Maryland, College Park (Maryland)

Preceptors: Dr. Kevin Briggman, Mr. Amarendra Yavatkar, Dr. Yang Fann

## AM-268. Roey Lazarovits

Analyzing MEP Variability Using Random and Semi-Random TMS Paradigms Los Angeles Pierce College (California)

Preceptors: Dr. Mark Hallett, Dr. Traian Popa, Dr. Nivethida Thirugnanasambandam, Dr. Qinglu Yang

#### AM-269. Jane Lee

Resident and Infiltrating Macrophages Repopulate the Meninges and Support Memory T Cell Development after Viral Meningitis

Creighton University School of Medicine (Nebraska)

Preceptors: Dr. Dorian McGavern, Dr. Rejane Rua

## AM-270. Miranda Lingenfelter

In vivo Transgenic RNAi Screen for the Impact of Transcription Factors on Dendrite Morphology Bryn Mawr College (Pennsylvania)

Preceptors: Dr. Quan Yuan, Dr. Jun Yin

## AM-271. Mary Maldarelli

Posterior Parietal-Motor Cortex Plasticity in Writer's Cramp University of Maryland School of Medicine (Maryland) Preceptors: Dr. Hyun Joo Cho, Dr. Mark Hallett

#### AM-272. Alexandra Mandel

Influence of the Parietal Cortex on Surround Inhibition George Washington University (District of Columbia)

Preceptors: Dr. Nivethida Thirugnanasambandam, Dr. Mark Hallett

#### AM-273. Alex Martinage, Ryan Thompson

Severe TBI: From Coma to Career

Bethesda Chevy Chase High School (Maryland), St. Mary's College of Maryland (Maryland)

Preceptors: Dr. Rita Volochayev, Dr. Ethan Boch, Dr. Leonardo Cohen

## AM-274. Ester Masati

Developing a proteomic approach to understanding autophagy and its role in Frontotemporal Dementia

University of Virginia (Virginia)

Preceptors: Mr. Rajan Patel, Dr. Michael Ward

# AM-275. Jason Mazique

Overexpression of the Cdk5 inhibitory peptide (CIP) in motor neurons ameliorates neuroinflammation in a mouse model of Amyotrophic lateral sclerosis Sidwell Friends School (District of Columbia)

Preceptors: Dr. Binukumar Balachandran Krishnamma, Dr. Harish Pant

## AM-276. Kira Medish

Can apoptotic vesicles in the cerebrospinal fluid quantify active CNS tissue destruction in neurological diseases?

National Cathedal School (District of Columbia)

Preceptors: Dr. Ruturaj Masvekar, Dr. Bibi Bielekova

# AM-277. Kenny Nguyen

Axonal Transport and Presynaptic Capture of Mitochondria Is Mediated by Actin Cytoskeleton Purdue University (Indiana)

Preceptors: Dr. Sunan Li, Dr. Zu-Hang Sheng

## AM-278. Lanre Oshin, Davetrina Gadson

Influence of neurological function domains on disability measured contemporaneously in the sub-acute phase of stroke in humans

Duke University (North Carolina), University of Georgia (Georgia)

Preceptor: Dr. Larry Latour

## AM-279. Christopher Pacia

Optimizing Touchscreen Buttons for Patients with Movement Disorders University of California, San Diego (California) Preceptors: Dr. Omar Ahmad, Dr. Codrin Lungu

## AM-280. Bhuvana Pandalai

Longitudinal Spinal Cord Measurements in HTLV-1

Poolesville High School (Maryland)

Preceptors: Dr. Shila Azodi, Dr. Govind Bhagavatheeshwaran, Dr. Joan Ohayan, Dr. Steven Jacobson

## AM-281. Claire Marie Perez

Fluorescently labeled microfabricated particles for efficient in vivo MRI cell tracking University of Guam (Non-U.S.)

Preceptors: Dr. Nikorn Pothayee, Dr. Stephen Dodd, Dr. Alan Koretsky

## AM-282. Shaniah Pinkham

Risk Factors Associated with Development of Post-dural Puncture Headache in a Cohort of Patients with Neuroimmunological Disease

Yakama Nation Tribal School (Washington)

Preceptor: Mrs. Joan Ohayon

## AM-283. Robert Pourier

Non-Invasive Assessment of Renal Sympathetic Innervation by Positron Emission Tomography Red Cloud High School (South Dakota)

Preceptors: Dr. David Goldstein, Mrs. Courtney Holmes

## AM-284. Lauren Price

Cross Sectional Analysis of the Cervical Spine at 3T in First Degree Relatives of Patients with Multiple Sclerosis and Healthy Controls

Purdue University (Indiana)

Preceptors: Dr. Daniel Reich, Ms. Sonya Steele

## AM-285. Maidah Raja

Resting state full brain network analysis of focal hand dystonia University of Maryland, College Park (Maryland) Preceptors: Dr. Silvina Horovitz, Dr. Mark Hallett

## AM-286. Vedika Rajasekaran

Impact of Interferon Beta 1a on CCl2/MCP1 levels in isolated astrocytes University of Georgia (Georgia)

Preceptors: Dr. Emily Carifi, Dr. Kenneth Fischbeck

## AM-287. Sibi Rajendran

A Prospective Evaluation of Swallowing and Speech Deficits in Patients with Neurofibromatosis Type 2

University of Kentucky College of Medicine (Kentucky)

Preceptors: Dr. Prashant Chittiboina, Ms. Beth Solomon

## AM-288. Cyrus Rastegar

Mechanisms of Neurotoxicity of HERV-K in ALS

Johns Hopkins University (Maryland)

Preceptors: Dr. Marta Garcia Montojo, Dr. Avindra Nath

## AM-289. James Reede

Optimizing Immunohistochemistry Staining Protocols to Characterize Neural Cell Phenotypes in Developing Rat Brain

Sacramento State University (California)

Preceptors: Dr. Dragan Maric, Mrs. Andrea Sedlock

## AM-290. Hassan Saadi

Role of G-Coupled Protein 37 (Gpr37) During Development of the Gonadotropin-Releasing Hormone (GnRH) System

University of Maryland, College Park (Maryland)

Preceptor: Dr. Susan Wray

# AM-291. Rajath Salegame

Characterizing the effects of oxidative stress on the chemical profile of the microtubule cytoskeleton

Waubonsie Valley High School (Illinois)

Preceptor: Dr. Antonina Roll-Mecak

## AM-292. Sara Samadani

Resting State fMRI Study of Essential Tremor and Dystonic Tremor

Howard Community College (Maryland)

Preceptors: Dr. Oh Panyakaew, Dr. Silvina Horovitz

## AM-293. Devin Scott

Does adult hippocampal neurogenesis affect reward preference?

Suitland High School (Maryland)

Preceptors: Dr. Heather Cameron, Dr. Rose-Marie Karlsson

# AM-294. Misha Sharma

Tau modulated hyperphosphorylation activity in the human brain and the study of its inhibition by truncated p35 (TP5)

Clarksburg High School (Maryland)

Preceptors: Dr. Niranjana Amin, Dr. Manju Bhaskar

## AM-295. Sydney Sharp, James Gao

Development of novel tissue biomaker screening techniques and computational algorithms to characterize neural cells following ischemic brain injury in rats

Montgomery Blair High School (Maryland), Montgomery Blair High School (Maryland)

Preceptors: Dr. Draga Maric, Mrs. Andrea Sedlock

## AM-296. Katherine Sizov

CRISPR/Cas9 Gene Editing of Dominant Ullrich Muscular Dystrophy Mutations University of Pennsylvania (Pennsylvania)

Preceptors: Dr. Veronique Bolduc, Dr. Apurva Sarathy, Dr. Carsten Bonnemann

# AM-297. Kathryn Slacin

Detection of Human Herpesvirus in Multiple Sclerosis Populations by Digital Droplet PCR College of William & Mary (Virginia)

Preceptors: Mr. Major Lin, Ms. Emily Leibovitch, Mrs. Ashley Vellucci, Dr. Steven Jacobson

# AM-298. Christopher Stang

Structure-activity analysis of a novel series of D4 dopamine receptor-selective ligands University of Findlay (Ohio)

Preceptors: Dr. Benjamin Free, Dr. David Sibley

# AM-299. John Stubbs IV

A Comparison of Multiple Sclerosis Lesions with Paramagnetic Rim on Phase and QSM Generated MRI

American University (District of Columbia)

Preceptors: Dr. Martina Absinta, Dr. Pascal Sati, Dr. Daniel Reich

## AM-300. Lawrence Suh

New Insights into Phenotypic Variations in Parkinson's Disease Oberlin College (Ohio)

Preceptors: Dr. Codrin Lungu, Dr. Omar Ahmed, Ms. Sana Zahir, Mrs. Mae Brooks

## AM-301. Alexander Sukharev

Molecular Basis of the Mechanism of Shaker Kv Channel Inactivation University of Maryland, College Park (Maryland) Preceptors: Dr. Miguel Holmgren, Dr. Francisco Palma-Cerda

## AM-302. Katherine Sun

Development of a genotype score for prediction of Multiple Sclerosis severity Saratoga High School (California)

Preceptors: Dr. Peter Kosa, Dr. Bibi Bielekova

## AM-303. Mitchell Sun

Characterizing a HIF-2α Gain-of-Function Mutation Mouse Model Illinois Mathematics and Science Academy (Illinois) Preceptors: Dr. Zhengping Zhuang, Dr. Herui Wang

## AM-304. Tara Suresh

Functional Consequences of trbeta2 Receptor Over-expression in Zebrafish Retina Washington University in St. Louis (Missouri)

Preceptors: Dr. Ralph Nelson, Ms. Annika Balraj, Ms. Sara Patterson

# AM-305. Mohammad Syed

Identifying A to G RNA editing events in the HERV super and sub families

The University of Texas at Austin (Texas)

Preceptors: Dr. Kory Johnson, Dr. Miguel Holmgren

## AM-306. Alan Tang

Viral-induced Changes to Neuroepithelial Structure, Sensory Function, and Barrier Capability Vanderbilt University (Tennessee)

Preceptors: Dr. Dorian McGavern, Dr. Ashley Moseman

# AM-307. Lanson Tang

Organization of Shank at the Post-synaptic Density Swarthmore College (Pennsylvania) Preceptor: Dr. Xiaobing Chen

# AM-308. Joseph Tharayil

Development of a Clinical Trial Simulator for Epilepsy Duke University (North Carolina) Preceptors: Dr. Daniel Goldenholz, Dr. William Theodore

# AM-309. Dana Toy

Proteins That Bridge the Postsynaptic Density and Actin Cytoskeleton Geisel School of Medicine at Dartmouth (New Hampshire) Preceptors: Dr. Ayse Dosemeci, Dr. Jung-Hwa Tao-Cheng

# AM-310. Itzel Trejo

The Phenotypic Spectrum of Parkinson's Disease and Related Conditions at the NIH George C. Marshall High School (Virginia)

Preceptors: Dr. Codrin Lungu, Ms. Beverly McElroy, Ms. Maidah Raja

## AM-311. Kaamya Varagur

Investigating the Role of HERV-K and HERV-W Envelope Proteins in Adhesion and Differentiation of Atypical Teratoid/Rhabdoid Tumors and Medulloblastoma Princeton University (New Jersey)

Preceptors: Dr. Tara Doucet-O'Hare, Dr. Avindra Nath

## AM-312. Kevin White

Visuomotor plasticity of zebrafish prey capture behavior in a closed loop simulation Howard University (District of Columbia)

Preceptors: Dr. Kevin Briggman, Mr. Matthew Schiel

## AM-313. Selina Williams

Developing closed-loop brain stimulation approaches to augment neurorehabilitation University of Maryland, College Park (Maryland)

Preceptors: Dr. Sara Hussain, Dr. Ethan Buch, Dr. Leonardo Cohen

# AM-314. Ashtyn Winchell

The role of the right DLPFC in implicit sequence learning with and without feedback Junipero Serra Catholic High School (California)

Preceptors: Dr. Eric Wassermann, Dr. Leonora Wilkinson, Mr. Phillip Koshy

# **Center for Information Technology (CIT)**

# LCH-001. Bilguunzaya Battogtokh

A Crowd of Machines

Yorktown High School (Virginia)

Preceptors: Dr. James Malley, Dr. Jason Moore, Dr. Randy Olson

# LCH-002. Ron Ulric Domingo

Automated Feature Detection and Annotation for the Curation of Plasmids in the OTTC Plasmid Manager

Stanford University (California)

Preceptors: Mr. Giun Sun, Dr. Christopher Richie, Dr. Brandon Harvey, Dr. Calvin Johnson

# LCH-003. Joshua Lehman, Ryan Rinker, Sarah Anderson, Connor Schultz

Designing a Large Scale Ethology System with Computer Vision

University of Maryland, College Park (Maryland), University of Maryland, College Park (Maryland), University of Maryland, College Park (Maryland), Catholic University of America (Maryland)

Preceptors: Mr. Ghadi Salem, Mr. Alexxai Kravitz (NIDDK), Mr. George Dold (NIMH), Dr. James Mitchell (NCI)

# National Center for Complementary and Integrative Health (NCCIH)

## LCH-004. Simon Arango Baquero

Differential Activation of a Molecular Signal in the Brain in Mouse Models of Short and Long Term Pain

Poolesville High School (Maryland) Preceptor: Dr. Yarimar Carrasquillo

## LCH-005. Marilyn Frank

Digital Analysis of Injury-induced Microgliosis in Cleared Spinal Cords

Red Cloud High School (South Dakota)

Preceptors: Dr. Claire Le Pichon, Mrs. Hanna Silberberg, Dr. Alexander Chesler

#### LCH-006. Sara Hong

Effects of Inhibitory Gi-DREADDs in Pain Processing and Its Relationship with ERK Activation in the Amygdala

Poolesville High School (Maryland) Preceptor: Dr. Yarimar Carrasquillo

#### LCH-007. Carlos Melendez

Measuring the Perception of Pleasant and Unpleasant Taste James Hubert Blake High School (Maryland) Preceptors: Dr. Dominik Mischkowski, Dr. Lauren Atlas

## LCH-008. Mathew Seltzer

Dissecting the Anatomy of Parabrachial Projections Using Cre-dependent Viral Vectors St. Mary's College of Maryland (Maryland)

Preceptors: Dr. Arnab Barik, Dr. Alexander Chesler

## LCH-009. Caitlin Stavish

How Mindful Awareness Affects Pain Perception Boston University (Massachusetts)

Preceptors: Dr. Lauren Atlas, Dr. Dominik Mischkowski, Mr. Troy Dildine

# LCH-010. Daniela Velasquez

Efferent Projections of PKC-delta Expressing Cells in the Central Nucleus of the Amygdala Towson University (Maryland)

Preceptor: Dr. Yarimar Carrasquillo

# **National Eye Institute (NEI)**

## LCH-011. Modupe Adetunji

Axiogenic and Neuroprotective Effects of Mesenchymal Stem Cell-Derived Exosomes in a Rat Optic Nerve Crush Model

Princeton University (New Jersey)

Preceptors: Dr. Ben Mead, Dr. Stanislav Tomarev

## LCH-012. Keyla Bordonada Collazo

Human and murine immune cells can recognize and respond to an ocular commensal Universidad Central del Caribe School of Medicine (Puerto Rico)

Preceptors: Dr. Anthony St Leger, Dr. Rachel Caspi

#### LCH-013. Elaine Bucknam

Automated Behavioral Assessments: Establishment of Species and Sex Baselines St. Mary's College of Maryland (Maryland)

Preceptors: Mr. David Mallon, Dr. Arthur Maclarty, Dr. James Raber

# LCH-014. Bonnie Douglas

Microbiota-derived stimuli promote spontaneous uveitis by activating retina-specific T cells University of Pennsylvania (Pennsylvania)

Preceptors: Dr. Reiko Yamane, Dr. Ryan Salvador, Dr. Rachel Caspi

# LCH-015. Grace Eddy

Longitudinal Follow Up of Patients with X-Linked Retinoschisis Bethesda Chevy-Chase High School (Maryland)

Preceptors: Dr. Elizabeth Murphy, Dr. Catherine Cukras, Dr. Paul Sieving

# LCH-016. Jorge Ferrari Escoto

IDEA: An IPSC Database and Enotebook Application

Northwood High School (Maryland)

Preceptor: Dr. Kapil Bharti

# LCH-017. Aarti Hinduja

Natural History of ABCA4 Retinopathy: Growth of Central Atrophy Measured with Multimodal Imaging

University of Maryland, College Park (Maryland)

Preceptors: Dr. Brett Jeffrey, Dr. Laryssa Huryn, Dr. Brian Brooks

# LCH-018. Ranganath Kathawate

Role of IL-34 in the pathogenesis of autoimmune uveitis

International Academy High School (Michigan)

Preceptor: Dr. Mary Mattapallil

## LCH-019. Hima Konduru

Visual Function Analysis of Transgenic Mouse Lines that Develop Spontaneous Inflammatory Disease in the Eye

Walter Johnson High School (Maryland)

Preceptors: Dr. Yingyos Jittayasothorn, Dr. Reiko Horai

## LCH-020. Annapurna Kuppa

Understanding the mutational effects of MYO7A gene in Usher syndrome type 1b Johns Hopkins University (Maryland)

Preceptor: Dr. Yuri Sergeev

# LCH-021. Adam Lazere

Morphology, Dynamic Behavior and Activation Markers of Repopulated Retinal Microglia Oberlin College (Ohio)

Preceptors: Dr. Wai Wong, Dr. Yikui Zhang

#### LCH-022. Daniel Lulli

Large-scale Purification of Recombinant Pigment Epithelium-derived Factor (PEDF) Forms Bowdoin College (Maine)

Preceptor: Dr. S. Patricia Becerra

# LCH-023. Rebecca McCoy

Advancing Precision Medicine: Development of a Deep Genotype-Phenotype Database for Heritable Eye Disorders

Morehouse School of Medicine (Georgia)

Preceptors: Dr. Robert Hufnagel, Dr. David McGaughey, Dr. Brian Brooks

#### LCH-024. Nattacha Munakata

Analysis of posttranscriptional regulation of RPE65 gene in cultured human ARPE-19 cells using in silico and vitro assay

George Mason University (Virginia)

Preceptors: Dr. Eugenia Poliakov, Dr. Olga Postnikova, Dr. Michael Redmond

## LCH-025. Anesu Nyawata

Analysis of Exosomes in Ophthalmology Research Using Flow Cytometry

Rhodes College (Tennessee)

Preceptors: Mr. Rafael Villasmil, Dr. Rachel Caspi

#### LCH-026. Rachel Owusu-Lewis

Genome-wide linkage analysis in a consanguineous Pakistani family with autosomal recessive congenital cataracts

Philadelphia College of Osteopathic Medicine - Georgia Campus (Georgia)

Preceptors: Dr. Patricia Cabrera, Dr. J. Fielding Hejtmancik

## LCH-027. Nadia Parmhans

Combinatorial Genetics of Neurotrophin Receptor cRet and Brn3 Transcription Factors Defines Isolated Populations of Retinal Ganglion Cells

University of Maryland, Baltimore County (Maryland)

Preceptors: Dr. Szilard Sajgo, Dr. Jingwen Niu, Dr. Tudor Badea, Dr. Wengin Luo

#### LCH-028. Kevin Peralta

Rico Mouse: A Novel Mouse Model for Coloboma E.L. Haynes PCS High School (District of Columbia) Preceptors: Dr. Ramakrishna Alur, Dr. Brian Brooks

## LCH-029. Natalia Santiago

Investigating CGI-58 and G0S2 as regulators of lipase activity for retinal protection Inter American University of Puerto Rico (Puerto Rico)
Preceptors: Dr. S. Patricia Becerra, Ms. Jeanee Bullock

## LCH-030. Jayram Sastry

Ultrastructural Study of the Intracellular Effects of the Anti-Retroviral Treatment Nevirapine St. Albans School (District of Columbia)

Preceptor: Dr. Mones Abu-Asab

# LCH-031. Matt Shumway

Protein Expression in Human Adult Retinal Pigment Epithelial Cells: Four Day versus Four Month

University of Virginia (Virginia)

Preceptors: Dr. Michael Redmond, Dr. Todd Duncan

## LCH-032. Hanna Tso

Engineering Biocomposite Scaffolds to Mimic Biomechanical Microenvironment of Outer Retina Purdue University (Indiana)

Preceptors: Dr. Vasudha Surampudi, Dr. Anand Swaroop

# LCH-033. Tareq Uddin

Morphological Characterizations of Retinal Pigment Epithelium to Assess and Correlate Disease Phenotypes with Cell Shape

University of Maryland, College Park (Maryland)

Preceptors: Dr. Nathan Hotaling, Dr. Kapil Bharti, Dr. Nicholas Schaub, Dr. Aman George

# LCH-034. Gregory Vernon

Employing Optical Coherence Tomography to Measure Retinal Thickness in Mice Treated with Acetazolamide and in Mouse Models of X-linked Congenital Stationary Night Blindness University of Tennessee College of Veterinary Medicine (Tennessee)

Preceptor: Dr. Haohua Qian

## LCH-035. Kathryn Wall

Different inputs to caudate head and tail for different types of reward values Union College (New York)

Preceptors: Mr. Whitney Griggs, Dr. Okihide Hikosaka

## LCH-036. Tianyi Wang

Identification of Proteins Interacting with Olfactamedin 1 in the AMPAR Receptor Complex Princeton University (New Jersey)

Preceptors: Dr. Naoki Nakaya, Dr. Stanislav Tomarev

## LCH-037. Arthur Wu

C-Fos Signals in Mammalian Retina Northwest High School (Maryland)

Preceptors: Dr. Wei Li, Mr. Juan Angueyra-Aristizabal, Mr. Vincent Phillipp Kunze

## LCH-038. Toria Yan

Whole Blood Phospho Flow Cytometry Assay: An Optimization for Clinical Sample Processing Massachusetts Institute of Technology (Massachusetts)

Preceptors: Dr. Lotta Utriainen, Dr. Benjamin Chaigne-Delalande

# LCH-039. Yizhen Zhang

Morphological Characterization of Neurons in the Tree Shrew Retina University of California, Berkeley (California)

Preceptors: Mr. Vincent Kunze, Dr. Wei Li

#### LCH-040. Helen Zhao

Characterization of Defects in the Retinal Pigmented Epithelium Caused By Targeted Deletion of MicroRNA-204

Richard Montgomery HS (Maryland)

Preceptors: Dr. Connie Zhang, Dr. Nathan Hotaling, Dr. Kapil Bharti, Dr. Sheldon Miller

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

# LCH-041. Brittany Ajegba

Leg Ulcers in Sickle Cell Patients: A Qualitative Data Analysis Michigan State University College of Human Medicie (Michigan)

Preceptors: Mr. Vence Bonham, Ms. Nkeiruka Umeh, Ms. Ashley Buscetta

## LCH-042. Diane Akakpo

Genetic Epidemiology of Selected Adipokines in West Africans

University of Maryland, Baltimore County (Maryland)

Preceptor: Dr. Ayo Doumatey

## LCH-043. Myriam Alcantar-Rama

Identifying Transcriptional Responses to MEK Inhibition in Melanoma Cells

Creighton University (Nebraska)

Preceptors: Dr. Temesgen Fufa, Dr. William Pavan

# LCH-044. Nick Balanda

Integration of miRNA binding prediction tools to predict effects of mutations in potential miRNA binding sites

Davidson College (North Carolina)

Preceptors: Dr. Christopher Lau, Dr. David Adams, Dr. William Gahl

# LCH-045. Charles Barry

Severe Hypertension and Kidney Damage in the MH-GRID Study: Investigation Using Machine Learning Techniques

Brown University (Rhode Island)

Preceptor: Dr. Amadou Gaye

## LCH-046. Joseph Brough

Exome Sequencing and Holoprosencephaly

U.S. Naval Academy (Maryland)

Preceptors: Dr. Paul Kruszka, Dr. Maximilian Muenke

## LCH-047. Samantha Calabrese, Jasmine Manalel

Intergenerational exchange of health encouragement: Consideration of family risk and culture

Northeastern University (Massachusetts), University of Michigan (Michigan)

Preceptors: Dr. Chris Marcum, Dr. Laura Koehly

## LCH-048. Brandon Davis

Variation in Sickle Cell Disease: Methods to Calculate and Categorize Disease Severity

Washington University in St. Louis (Missouri)

Preceptors: Dr. Katherine Blizinsky, Ms. Ashley Buscetta, Ms. Khadijah Abdallah, Mr. Vence

Bonham

## LCH-049. Lan Doan

Moving Beyond Precision Medicine to Precision Public Health

Oregon State University (Oregon)

Preceptors: Dr. William Riley (OBSSR), Dr. Erica Spotts (OBSSR), Dr. Laura Koehly

## LCH-050. Gabrielle Dotson

Exploring Patterns of HPV Integration in DOCK8-Deficient Patients Using Genomics Stanford University (California)

Preceptors: Dr. Sean Conlan, Dr. Osnat Tirosh, Dr. Heidi Kong, Dr. Julie Segre

# LCH-051. Nicolas Fishman

The Creation of a Relational Structure for the Storage and Analysis of Structural Variation Woodrow Wilson High School (District of Columbia)

Preceptors: Dr. Elaine Ostrander, Dr. Brian Davis

# LCH-052. Emily Gripp

Exome Sequencing of a Large Kindred with FG Syndrome

Mount Pleasant High School (Delaware)

Preceptors: Dr. Paul Kruszka, Dr. Maximilian Muenke

## LCH-053. Jennifer Guo

Molecular Characterization of a New Coenzyme Q10 Deficiency

Swarthmore College (Pennsylvania)

Preceptors: Dr. May Malicdan, Dr. Thierry Vilboux, Dr. William Gahl

# LCH-054. Kevin Hackbarth

Functional Analysis of Variants in microRNA Recognition Elements via in vitro Detection of RISC-mediated mRNA Degradation

Tufts University (Massachusetts)

Preceptors: Dr. Chris Lau, Dr. David Adams, Dr. William Gahl

# LCH-055. Ermias Hagege

De novo or germline mosaicism mutation in a family with Type 2 Gaucher disease University of Maryland, College Park (Maryland)

Preceptor: Dr. Nahid Tayebi

## LCH-056. Chen Han

Profibrotic Phenotype of Human HPS Fibroblasts Georgetown University (District of Columbia)

Preceptors: Dr. Bernadette Gochuico, Dr. Tadafumi Yokoyama, Mr. Nate Tolman

# LCH-057. Benjamin Heil

Leveraging Linkage Disequilibrium to Determine Identity in Sequence Data Baylor University (Texas)

Preceptors: Dr. Nancy Hansen, Dr. Jim Mullikin

## LCH-058. Charlotte Hepler

Motivations for Participating in a Genome Sequencing Study: Views of African American **Participants** 

Northern Virginia Community College - Alexandria Campus (Virginia)

Preceptors: Dr. Barbara Biesecker, Ms. Alexis Heidlebaugh

## LCH-059. Sun-Bin Hwang

Tumor Necrosis Factor alpha (TNFα) modulates mitochondrial respiratory function in the liver: Exploring the immune basis for metabolic decompensation Walt Whitman High School (Maryland)

Preceptors: Dr. Peter McGuire, Dr. Tatiana Tarasenko, Mr. Maxim Jestin

## LCH-060. Chirag Jain

Rethinking Mapping Technique for Single Molecule Sequences Georgia Institute of Technology (Georgia)

Preceptors: Dr. Adam Phillippy, Dr. Sergey Koren, Dr. Alexander Dilthey

## LCH-061. Manuela Jaramillo

Under Control: Assessing the Influence of Child Health Control Beliefs on Parental Feeding Intentions

Denison University (Ohio) Preceptor: Dr. Susan Persky

## LCH-062. Emily Kaperst

The Anonymization of the Undiagnosed Diseases Program Short Course Walt Whitman High School (Maryland)

Preceptors: Dr. Thomas Markello, Mrs. Kayla Gu

# LCH-063. Karl Keat

BuddySuite: A Python toolkit for working with biological data

Thomas Jefferson High School for Science and Technology (Virginia)

Preceptors: Dr. Steve Bond, Dr. Andy Baxevanis

## LCH-064. Sofia Kruszka

Craniosynostosis in Consangiuneous Union

Thomas Jefferson High School for Science and Technology (Virginia)

Preceptors: Dr. Karin Weiss, Dr. Maximilian Muenke

# LCH-065. Kyle Long

The Effects of Population Stratification on the Quantitative Transmission Disequilibrium Test University of Texas at El Paso (Texas)

Preceptors: Dr. Joan Bailey-Wilson, Dr. Anthony Musolf

# LCH-066. Elsy Lopez

Molecular Cytogenetic Study in Human Cell Lines

Brigham Young University (Idaho)

Preceptors: Dr. Amalia Dutra, Dr. Evgenia Pack

## LCH-067. Amanda Loya

Laromustine treatment induces apoptosis in HL60 human leukemia cells

Colby College (Maine)

Preceptors: Dr. Abdel Elkahloun, Ms. Weiwei Wu, Dr. Dave Bodine, Dr. Kevin Rice

## LCH-068. Luhe Mian

Cardiomyopathy in sialic acid deficient GNE myopathy

Philadelphia College of Osteopathic Medicine (Pennsylvania)

Preceptors: Dr. May Malicdan, Dr. William Gahl

# LCH-069. Miriam Minsk

Effect of Relatedness on Determination of Sample Identity Using Low Coverage Sequence Data

Charles E. Smith Jewish Day School (Maryland)

Preceptors: Dr. Nancy Hansen, Dr. Jim Mullikin

#### LCH-070. Bilal Moiz

Target Sequencing of a Region in Chromosome 6 with High Susceptibility for Familial Lung Cancer

University of Rochester (New York)

Preceptors: Dr. Anthony Musolf, Dr. Joan Bailey-Wilson

#### LCH-071. Katherine Pardo

Agenesis of the Corpus Callosum and Craniofacial Anomalies: ZNF462-Associated Syndrome University of Virginia (Virginia)

Preceptors: Dr. Paul Kruszka, Dr. Maximilian Muenke

## LCH-072. Renee Pelletier

Evaluating medical jargon use in Alzheimer's risk disclosure visits Boston University School of Medicine (Massachusetts)

Preceptor: Dr. Lori Erby

## LCH-073. Comrie Rice

Genotyping a SPTAN1 Mutant Mouse East Tennessee State University (Tennessee) Preceptors: Dr. Paul Lee, Ms. Valerie Gartner

# LCH-074. Benjamin Ruben

Search for Cryptic Second CECR1 Mutations in Families with Deficiency of ADA2 (DADA2) Thomas S. Wootton High School (Maryland)

Preceptors: Ms. Natalie Deuitch, Dr. Qing Zhou, Dr. Ivona Aksentijevich, Dr. Daniel Kastner

#### LCH-075. Mariam Sannoh

Are Sickle Cell Disease Leg Ulcers Associated with Fetal Hemoglobin?

Dr. Henry A. Wise Jr. High School (Maryland)

Preceptors: Ms. Khadijah Abdallah, Ms. Ashely Buscetta, Mr. Vence Bonham

## LCH-076. Anna Sappington

Fast, alignment-free ortholog clustering with Mash Massachusetts Institute of Technology (Massachusetts) Preceptors: Dr. Adam Phillippy, Dr. Steve Bond

## LCH-077. Richard Sawyer

A multi-site study of the cerebellum in Attention Deficit Hyperactivity Disorder Virginia Tech (Virginia)
Preceptor: Dr. Philip Shaw

## LCH-078. Andrew Schroeder

The Effect of Recurrency in r2VIM, a Machine Learning Tool for Variable Selection in Genetic Data

Saint Louis University (Missouri)

Preceptors: Dr. Emily Holzinger, Dr. Joan Bailey-Wilson

## LCH-079. Kevin Sun

Characterizing Clonal Evolution of Leukemia in inv(16) Mice University of California, San Diego (California)

Preceptors: Dr. Tao Zhen, Dr. Paul Liu

## LCH-080. Joey Toker

Genotype and phenotype analysis of transgenic mice with mutations in oxygen sensing and iron metabolism genes

St. Albans School (District of Columbia)

Preceptors: Dr. David Bodine, Ms. Jaya Jagadeesh, Mr. Nathan Krump

# LCH-081. Angela Xu, Carli Needle

Modeling Human Metabolic Diseases in Zebrafish by Targeted Gene Knockout Thomas S. Wootton High School (Maryland), Winston Churchill High School (Maryland) Preceptors: Dr. Shawn Burgess, Dr. Wuhong Pei, Dr. Erin Jimenez, Dr. Gaurav Varshney

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

## LCH-082. Miguel Alcantar

Optimization of Ferumoxytol Concentration for Interventional MRI Applications University of California, San Diego (California)

Preceptors: Dr. Rajiv Ramasawmy, Dr. Adrienne Campbell, Dr. Robert Lederman, Dr. Anthony Faranesh

## LCH-083. Tolulope Awosika

Deciphering Zika Virus Neurotropism to Distinct Neural Progenitor Cells and their Forebrain Progeny

University of Maryland, College Park (Maryland)

Preceptors: Dr. Yakey Yaffe, Dr. Teegan Dellibovi-Ragheb, Dr. Ying-Han Chen, Dr. Nihal Altan-Bonnet

# LCH-084. Kelsey Bullock

Precision Medicine in Non-Cancerous Pulmonary Diseases Western Kentucky University (Kentucky)

Preceptors: Dr. Antonello Punturieri, Dr. Thomas Croxton

# LCH-085. Mehtap Cabus

Investigations into Norovirus Release and Transmission University of Maryland University College (Maryland) Preceptors: Dr. Marianita Santiana, Dr. Nihal Altan-Bonnet

## LCH-086. Jessica Chen

Common Gene Expression Profile of Induced Hematopoietic Cells Derived from Human Induced Pluripotent Stem Cells

Massachusetts Institute of Technology (Massachusetts)

Preceptors: Dr. Yangtengyu Liu, Dr. Guibin Chen, Dr. Manfred Boehm

#### LCH-087. Andrew Davis

Risk Stratification for Early Mortality in Lung Transplantation Using Donor-Derived Cell-free DNA Analysis

Boston College (Massachusetts)

Preceptors: Dr. Sean Agbor-Enoh, Mrs. Sasha Gorham, Dr. Moon Kyoo Jang, Dr. Hannah Valantine

# LCH-088. Dalton Delaney

Sex Differences in Energy Regulation and Whether They Influence Progression of Cardiovascular Disease

Oklahoma State University Center for Health Sciences (Oklahoma)

Preceptor: Dr. Robert Balaban

# LCH-089. John Deng

How many bonds can be formed in one step?: Tandem Aza-Claisen-Michael Reaction Duke University (North Carolina)

Preceptors: Dr. Chandra Mushti, Dr. Rolf Swenson

# LCH-090. Rajiv Deshpande

Using Bayes' Theorem and Machine Learning to Integrate Multiple Proteomic and Transcriptomic Datasets

Johns Hopkins University (Maryland)

Preceptor: Dr. Mark Knepper

## LCH-091. Gishan Dissanayake Bogoda

Analyzing the Functional Role of MYB Protein Domains Using CRISPR Mediated Genome-editing

University of California, Irvine (California)

Preceptors: Dr. Xunde Wang, Mr. Nikos Angelis, Dr. Swee Lay Thein

# LCH-092. Michael Drakopoulos

Development of Cellular Therapies for Inherited Blood Disorders

Purdue University (Indiana)

Preceptors: Dr. Andre Larochelle, Dr. Luigi Alvarado, Mr. Ishan Asokan

## LCH-093. Adelmut Xiadani Duffing Romero

Gaps and Opportunities in Native American Health Research Surrounding Blood, Lung, Heart and Sleep Disorders

University of Colorado at Boulder (Colorado)

Preceptors: Mrs. Mona Puggal, Dr. Mollie Minear

# LCH-094. Ryan Dunlow

Metal Catalyzed Nucleophilic Fluorination of Electron Rich Arenes

Wake Forest University (North Carolina)

Preceptors: Dr. Haitao Wu, Dr. Rolf Swenson

# LCH-095. Adilene Esquinca

Analyzing the Role of MYB Protein Domains on Fetal Hemoglobin Expression using CRISPR Mediated Genome-Editing

Massachusetts Institute of Technology (Massachusetts)

Preceptors: Dr. Swee Lay Thein, Dr. Xunde Wang, Mr. Nikos Angelis

## LCH-096. Anabela Esteves

Characterizing the Effects of CRISPER-Mediated EMRE Deletion on Mitochondrial Calcium Uptake

George Washington University (District of Columbia)

Preceptors: Dr. Julia Liu, Dr. Chengyu Liu, Dr. Toren Finkel

#### LCH-097. Katherine Estrada

Investigating the beneficial effects of Nicotinamide Riboside on energy metabolism and neuroprotection through Lysine succinylation.

Benjamin Banneker Academic High School (District of Columbia)

Preceptors: Dr. Jing Wu, Dr. Michael Sack

## LCH-098. Cameron Flower

Discovery of IncRNA-Encoded Peptidome in Mouse Kidney Inner Medulla

University of Connecticut (Connecticut)

Preceptors: Dr. Mark Knepper, Dr. Chin-Rang Yang

## LCH-099. Lauren Fowler

Digital Food Records: A Mixed-Methods Study to Evaluate Feasibility and Acceptability for Use

in Community-Based Interventions

George Washington University (District of Columbia)

Preceptor: Dr. Tiffany Powell-Wiley

# LCH-100. Sheila Gaur

The Effect of the \$100 Protein Family on Endothelial Cell Gene Expression

Winston Churchill High School (Maryland)

Preceptors: Dr. Martin Playford, Dr. Nehal Mehta

## LCH-101. Ayelet Goodman

The effects and underuse of cardiac rehabilitation

Bnos Israel of Baltimore (Maryland)

Preceptors: Dr. Lawton Cooper, Dr. Daniel Edelman

# LCH-102. Adina Heyman

Atrial Fibrillation in The Elderly (>65)

Meohr Bais Yaakov (Non-U.S.)

Preceptors: Dr. Lawton Cooper, Dr. Patrice Desvign-Nickens, Dr. Daniel Edelman

# LCH-103. Emily Hillman

The Study of the Mechanisms of Kidney Dysfunction in Mice with Elevated Levels of LpX in Plasma

University of Maryland, Baltimore County (Maryland)

Preceptors: Dr. Boris Vaisman, Dr. Alan Remaley

# LCH-104. Van Hoang, Mona Mirzaeimoghri, Peter Chen

Performance of Nickel Electroplating on Silicon Wafers

University of Maryland, College Park (Maryland), University of Maryland, College Park

(Maryland), University of Maryland, College Park (Maryland)

Preceptor: Dr. Han Wen

## LCH-105. Brittany Hodges

Recombinant Endothelial Nitric Oxide Synthase (eNOS) Protein Expression to Study Alpha Globin Function

Brown University (Rhode Island)

Preceptors: Dr. Hans Ackerman, Dr. Dongving Ma

# LCH-106. Trey Huff, Amit Singh

Implantable Device for Monitoring Oxygen Concentration in the Body

University of Maryland, College Park (Maryland), Winston Churchill High School (Maryland)

Preceptors: Dr. Burchelle Blackman, Dr. Rolf Swenson, Dr. Murali Cherukuri

# LCH-107. Austin Ikechi

Post Pain Symptoms In Transplant Patients With Sickle Cell Disease

Ohio State College of Medicine (Ohio)

Preceptors: Dr. Thein Swee Lay, Dr. Deepika Darbari

# LCH-108. Rafique Islam

Studies of Lipid Binding Properties of Apolipoprotein Mimetic Peptides Designed to Increase High Density Cholesterol

George Mason University (Virginia)

Preceptor: Dr. Alan Remaley

# LCH-109. Seung Jin Jang

Optimization of NETosis in Sickle Cell Disease by Using Multispectral Flow Cytometry

University of South Florida Morsani College of Medicine (Florida)

Preceptors: Dr. Emilia A Barbu, Ms. Laurel Mendelsohn, Dr. Swee Lay Thein

#### LCH-110. Mitchell Johnson

Neuron Response to Variable Stiffness Gradient University of Michigan (Michigan) Preceptors: Dr. Herbert Geller, Ms. Eleni Degaga

#### LCH-111. Sebastian Jusuf

Characterization of Fluorescent Nanodiamonds through Flow Cytometry Cornell University (New York)
Preceptor: Dr. Kier Neuman

## LCH-112. Katrina Kao

Characterization of reticulocytes in rhesus macaques Wellesley College (Massachusetts) Preceptor: Dr. Robert Donahue

# LCH-113. Evan Koretsky

An Algorithm for Correction of Photon Pileup During Time-Correlated Single Photon Fluorescence Lifetime Imaging University of California, Berkeley (California) Preceptors: Dr. Christian Combs, Dr. Jay Knutson

## LCH-114. Noah Laird

Searching for novel genes involved in HSC self-renewal through expansion in vivo Grinnell College (Iowa)

Preceptors: Dr. Andre Larochelle, Dr. Heather Huntsman

#### LCH-115. Jessica Lee

Cardiometabolic Analysis of Li-Fraumeni Syndrome Cornell University (New York) Preceptors: Dr. Ju-Gyeong Kang, Dr. Paul Hwang, Dr. Pingyuan Wang

## LCH-116. Oscar Levine

Predictive Performance of Pre-test Probability Assessment for the Diagnosis of Coronary Atherosclerosis by Coronary CT Angiography Walt Whitman High School (Maryland)

Preceptors: Dr. Marcus Chen, Dr. Sujata Shanbhag

#### LCH-117. Jessica Li

Investigating novel mechanisms of T-cell differentiation Princeton University (New Jersey) Preceptors: Dr. Mindy Ren, Dr. Warren Leonard

## LCH-118. Michael Lugo

Autistic features and head size predict deletion size in Williams syndrome Medical University of South Carolina (South Carolina)

Preceptor: Dr. Beth Kozel

## LCH-119. Sangavi Manickavel

Host Cell Pathways Hijacked for Coronavirus Transmission

Poolesville High School (Maryland)

Preceptors: Dr. Teegan Dellibovi-Ragheb, Dr. Nihal Altan-Bonnet

# LCH-120. Veronica Martinez Vargas

Characterizing the α-Synuclein Corona on Gold Nanoparticles

Salisbury University (Maryland)

Preceptors: Dr. Jessica D. Flynn, Dr. Jennifer C. Lee

# LCH-121. Grace Padgett

Identifying and Confirming Genetic Variants from Whole Exome Sequencing of Patients with Pentalogy of Cantrell

Paint Branch High School (Maryland)

Preceptors: Ms. Brittany Mactaggart, Dr. Xuefei Ma, Dr. Michael Bamshad, Dr. Robert Adelstein

## LCH-122. Tara Price

Regulatory Proteins in Clathrin Independent Endocytosis

Portland Community College (Oregon)

Preceptors: Dr. Dipanitta Dutta, Dr. Jessica Wayt, Dr. Julie Donaldson

## LCH-123. Aasheen Qadri

Impact of Pre-Analytical Variables on Leukemia Biomarker Performance

University of Maryland, College Park (Maryland)

Preceptors: Dr. Christopher Hourigan, Dr. Hong Yuen Wong, Ms. Meg Goswami, Dr. Sheenu

Sheela

## LCH-124. Shawn Reginauld

Elucidation of Conformational Variability between Actin Nucleotide States using Cryo-EM and Helical Reconstruction

Georgia Institute of Technology (Georgia)

Preceptors: Dr. Greg Alushin, Dr. Pinar Gurel

#### LCH-125. Lauren Smith

Domain analysis of the microcephaly associated protein Abnormal Spindle in Drosophila melanogaster

Thomas Stone High School (Maryland)

Preceptors: Dr. Todd Schoborg, Dr. Nasser Rusan

# LCH-126. Kiran Vaidya

Alternative Splicing of Nonmuscle Myosin Heavy Chain II-B pre-mRNA by Rbfox Protein Family Cornell University (New York)

Preceptor: Dr. Sachiyo Kawamoto

# LCH-127. Catherine Wang

Improving safe-harbor reporter knock-in in monkey iPSCs without drug selection Princeton University (New Jersey)

Preceptors: Dr. Jizhong Zou, Dr. Yongshun Lin

## LCH-128. Jenelle Weaver

Assessing Mutations Conferring Resistance to Ibrutinib in Chronic Lymphocytic Leukemia Patients

Colorado College (Colorado)

Preceptors: Dr. Adrian Wiestner, Dr. Chingiz Underbayev

## LCH-129. Katherine Wu

Variation in Sleep Across Days in Drosophila melanogaster Montgomery Blair High School (Maryland)

Preceptors: Dr. Susan Harbison, Dr. Yanzhu Lin

## LCH-130. Kevin Wu

The Role of Tissue Macrophages in the Development of the Immunoprivileged Gonad Johns Hopkins University (Maryland)

Preceptors: Dr. Chang Liu, Dr. Yosuke Mukoyama

## LCH-131. Daisy Xu`

The Characterization of RF-Induced Heating in Commercial Guidewires during Real-Time Magnetic Resonance Imaging

Dartmouth College (New Hampshire)

Preceptors: Dr. Adrienne Campbell, Dr. Rajiv Ramasawmy, Dr. Robert Lederman

# LCH-132. Ho-Jung Yang

Expression, Purification, and Characterization of a Red Fluorescent Protein Nanobody Walter Johnson High School (Maryland)

Preceptors: Dr. Justin Taraska, Dr. Marie-Paule Strub

## LCH-133. Cindy Zhou

Is 4-sulfation on proteoglycan important in regulating neuronal growth? Clayton High School (Missouri)

Clayton riigh School (Missouri)

Preceptors: Dr. Caitlin Mencio, Dr. Herbert Geller

# LCH-134. Timothy Zhou

The Power of an Epigenome Browser
Thomas S. Wootton High School (Maryland)
Preceptors: Dr. Keji Zhao, Dr. Gangqing Hu

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

## LCH-135. Ashley Castillo

Is living in rural vs urban environment associated with cognitive impairment in late-life? The AGES-Reykjavik Study

City University of New York Lehman College (New York)

Preceptors: Dr. Elisa Marques, Dr. Eric Shiroma

# LCH-136. Snigdha Chigurupati

Anti-inflammatories based on Pomalidomide backbone University of Maryland Baltimore County (Maryland) Preceptors: Dr. Nigel Greig, Dr. David Tweedie

## LCH-137. Riley Driscoll

AUF1 Regulates Circular RNAs Brigham Young University (Utah)

Preceptors: Dr. Ioannis Grammatikakis, Dr. Kotb Abdelmohsen, Dr. Myriam Gorospe

## LCH-138. Bethany Dubick

The Genomics of Amyotrophic Lateral Sclerosis, a Laboratory Based Study University of Pittsburgh (Pennsylvania)

Preceptor: Dr. Bryan Traynor

# LCH-139. Noah Fu

The Effect of Voluntary Wheel Running on Metabolic Function and Behavior in Mice Saint Louis University (Missouri)

Preceptors: Dr. Hyo Youl Moon, Dr. Henriette van Praag

## LCH-140. Christina Galiano, Stephanie Roth

Characterization of Neurochemically Identified Basal Forebrain Neurons in Young and Aged Behaviorally Characterized Rhesus Monkeys

University of Virginia (Virginia), Towson University (Maryland)

Preceptors: Dr. Peter Rapp, Dr. Cristina Banuelos

## LCH-141. Ellen Harris

Lap time variation, a mobility marker of Mild Cognitive Impairment and Alzheimer's Disease? University of Chicago (Illinois)

Preceptors: Dr. Qu Tian, Dr. Stephanie Studenski

# LCH-142. William Herrera Delcid

Nuclear and cytoplasmic localization of circular RNAs in myoblasts

New York University (New York)

Preceptors: Dr. Amaresh Panda, Dr. Myriam Gorospe

## LCH-143. Natalie Ivanina

Age-Dependent Lysosomal Protease Accumulation and Cytoskeletal Alteration in LRRK2 Knockout Kidneys

University of Maryland, College Park (Maryland)

Preceptors: Dr. Mark Cookson, Ms. Laura Pellegrini

# LCH-144. Justin Kung

Mapping the Direct Inputs of ALDH1A1+ Midbrain Dopamine Neurons in Mice

Columbia University (New York)

Preceptors: Dr. Huaibin Cai, Dr. Junbing Wu

# LCH-145. Jonathan Legier

Functional Characterization of FANCJ and RECQ1 Helicases by DNA Damage Sensitivity Assays and RNAi Screens Using CRISPR Knock-Out Cell Lines

Howard University (District of Columbia)

Preceptors: Dr. Robert Brosh, Dr. Sanket Awate

# LCH-146. Waverly McClusky

RNA methyltransferases (NSUN2 and METTL3/METTL14) cooperate in methylating RNAs College of William and Mary (Virginia)

Preceptor: Dr. M. Laura Idda

## LCH-147. Leah Orozco

High-content screen reveals Rab7A modulates trafficking of LRRK2-Rab29 complexes to the Trans-Golgi Network in Parkinson's disease

College of the Holy Cross (Massachusetts)

Preceptor: Dr. Ravindran Kumaran

## LCH-148. Kellybeth Ramirez

Effect of all-trans retinoic acid (Vitamin A) on production of steroidal Na-pump ligand marinobufagenin in mice

University of Central Florida (Florida)

Preceptors: Dr. Olga Fedorova, Ms. Yulia Grigorova

## LCH-149. Jacob Rosales

Verification of WGS variants in Greek families with PD

Red Cloud High School (South Dakota)

Preceptors: Dr. Monia Hammer, Dr. Andrew Singleton

# LCH-150. Gregory Vass

Pro-Fibrotic Pathways Activated by an Endogenous Na-pump Inhibitor Marinobufagenin in Preeclamspia

University of Maryland, Baltimore County (Maryland)

Preceptors: Dr. Olga Fedorova, Dr. Valentina Zernetkina

# LCH-151. Beverly Wu

Transcriptional Factor PITX3 in Neuronal Metabolism and Parkinson's disease University of Maryland, Baltimore County (Maryland)

Preceptors: Dr. Sara Saez, Dr. Huaibin Cai

# National Institute of Biomedical Imaging and Bioengineering (NIBIB)

# LCH-152. Rajit Banerjee

Trunk motions and loads during upslope walking in persons with unilateral transfemoral amputation

University of Toledo (Ohio)

Preceptor: Dr. Brad Hendershot

## LCH-153. Maurice Bukenya

Droplet Merging and Sorting to Improve Drop-seq Efficiency

Tufts University (Massachusetts)

Preceptors: Dr. Nicole Y Morgan, Ms. Shruti Srinivas

## LCH-154. Tyler Burden

Preparation and Evaluation of Fab' Antibody Fragments by Capillary Electrophoresis and MALDI

Towson University (Maryland)

Preceptors: Dr. Terry Phillips, Dr. Heather Kalish

## LCH-155. Citlally Garcia Leiva

AFM Probing of Nanoscale Properties of Microtubules Stabilized with Taxol or Peloruside Fairleigh Dickinson University (New Jersey)

Preceptors: Dr. Dan Sackett, Dr. Albert Jin

# LCH-156. Audrey Huang, Andrew Liu

Combining QCM-D and AFM for Biomolecular Assembly

Thomas Jefferson High School for Science & Technology (Virginia), Oakton High School (Virginia)

Preceptor: Dr. Albert Jin

# LCH-157. John Joseph

Deep lineaging in the Caenorhabditis elegans embryo University of Maryland, College Park (Maryland) Preceptors: Dr. Hari Shroff, Dr. Ryan Christensen

## LCH-158. Caroline Kim

3D Printing Applications for Analytical Ultracentrifugation
National Cathedral School (District of Columbia)
Preceptors: Dr. Peter Schuck, Dr. Huaying Zhao, Dr. Sumit Chaturvedi

# LCH-159. Alison Long

Atomic Force Microscopy of Plasmodium falciparum Lipid Rafts and GPI Anchored Proteins University of California, Berkeley (California)
Preceptors: Dr. David Narum, Dr. Albert Jin

# LCH-160. Joseph Marbach

Calcium imaging in the C. elegans embryo George Washington University (District of Columbia) Preceptors: Dr. Hari Shroff, Dr. Evan Ardiel

#### LCH-161. Alden Moss

Development of a PNA-Based Microfluidic Assay for the Detection and Quantification of HIV Oregon State University (Oregon)

Preceptors: Dr. Daniel Appella, Dr. Kaylyn Oshaben, Dr. Nicole Morgan, Mr. Tom Pohida

## LCH-162. Michelle A. Rose

3D Cancer Cell Culture with Controlled Oxygenation Using Bioreactor and Microfabricated Pillars

Boston University (Massachusetts)

Preceptors: Dr. Nicole Y. Morgan, Dr. Robert Robey, Dr. Thomas J. Pohida, Dr. Michael M. Gottesman

# LCH-163. Taylor Sullivan

Microfabricated structures for improving cell culture Thomas S. Wootton High School (Maryland) Preceptors: Dr. Nicole Morgan, Ms. Michelle Rose

## LCH-164. Angela Yang

Janus Mesoporous Silica Gold Nanoparticles for Theranostics Montgomery Blair High School (Maryland) Preceptor: Dr. Jibin Song

## LCH-165. Michael Zhou

Quantitative analysis of pancreatic islet architecture by serial block-face scanning electron microscopy

Niskayuna High School (New York)

Preceptors: Dr. Richard Leapman, Dr. Tao Cai, Dr. Maria Aronova

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

# LCH-166. Alara Akyatan

Neuropsychological and Medical Outcomes of Microcephaly Skidmore College (New York)

Preceptors: Dr. Margarita Raygada, Dr. Audrey Thurm

# LCH-167. Ngozi Alia

Circadian Regulation of Humanized MC3R Knock-in Obese Mouse Models Charles Herbert Flowers High School (Maryland) Preceptors: Mr. Daniel Gehle, Dr. Joo Yun Jun, Dr. Jack Yanovski

## LCH-168. Jelard Aquino

Exploring gene expression in zebrafish vasculature using whole-mount in situ hybridization Laramie County Community College (Wyoming)

Preceptors: Dr. Hyun Min Jung, Dr. Brant Weinstein

## LCH-169. Kurt Auville

Characterization of Persistent Firing in Hippocampal Neurogliaform Cells University of Maryland, College Park (Maryland)
Preceptors: Dr. Ramesh Chittajallu, Dr. Chris McBain

## LCH-170. Christina Bear

Analysis of the SOS Response in E.coli After Exposure to Antibiotics Colorado Academy (Colorado)
Preceptor: Dr. Roger Woodgate

# LCH-171. Jillian Belgrad

Effects of Cholinergic Signalling on Intracellular Calcium Levels in Oligodendrocyte Precursor Cells

Colgate University (New York) Preceptor: Dr. Dong Ho Woo

## LCH-172. Hailey Blain

Carotid MRI in Children with Cushing Syndrome: A window into a marker of early cardiovascular disease

Bowdoin College (Maine) Preceptor: Dr. Maya Lodish

#### LCH-173. Rebecca Boden

Flow Cytometry in Pediatric Cushing's Syndrome: A window into the mechanism of immunosuppression in chronic glucocorticoid exposure
Bethesda-Chevy Chase High School (Maryland)
Preceptors: Dr. Maya Lodish, Dr. Sergio Rosenzweig

#### LCH-174. Isabelle Breier

Trunk Fat Mass and Cortisol in Normal-Weight and Overweight Children Hopkins School (Connecticut)
Preceptors: Dr. Miranda Broadney, Dr. Jack Yanovski

#### LCH-175. Jennifer Caldwell

Role Play: The Role of Rare Variants in IGD- Associated Genes in HA Howard University (District of Columbia)

Preceptor: Dr. Angela Delaney

## LCH-176. Ari Chadda

Dysfunctional NRG-ErbB4 Signaling on Attention and Impulsivity Behaviors in Mice Landon School (Maryland)

Preceptors: Dr. Miguel Skirzewski, Dr. Andres Buonanno

# LCH-177. Simon Chen

Using CRISPR/Cas to study cyclic diguanylate signaling proteins in Legionella pneumophila Parkland High School (Pennsylvania)

Preceptors: Dr. Matthias Machner, Dr. Nicole Ellis

## LCH-178. Stephanie Chill

Autophagy-Mediated Degradation of Type I Collagen University of Maryland, College Park (Maryland) Preceptors: Dr. Elena Makareeva, Dr. Shakib Omari, Dr. Sergey Leikin

## LCH-179. Stephanie Chistoserdov

Functional Studies of a KRAB Zinc Finger Protein linked with CTCF University of Maryland, College Park (Maryland) Preceptor: Dr. Todd Macfarlan

## LCH-180. Emma Condy

Frontal activation in toddlers during gesture and speech comprehension: A fNIRS study Virginia Polytechnic Institute and State University (Virginia)

Preceptor: Dr. Amir Gandjbakhche

## LCH-181. Lauren Correia

Let-7 miRNA as a Mediator of H19 IncRNA in Muscle Function

Haverford College (Pennsylvania)

Preceptors: Dr. Beenish Rahat, Dr. Claudia Gebert, Dr. Karl Pfeifer

## LCH-182. Catherine Cunningham

Neural responses to odor plumes: A physiological and computational analysis across multiple neuronal layers

King's College London (Non-U.S.)

Preceptors: Dr. Zane Aldworth, Dr. Mark Stopfer

## LCH-183. Christine Dedoulis

Phenotyping of Adrenal Cortex Function of ARMC5 Heterozygote Mice

Catholic University of America (District of Columbia)

Preceptors: Dr. Constantine Stratakis, Dr. Annabel Berthon

# LCH-184. Benjamin Duncan

Direct Generation of foxp2 Haploinsufficient Zebrafish Using CRISPR/Cas9

Bluefield State College (West Virginia)

Preceptor: Dr. Harold Burgess

## LCH-185. Maria Faidas

Understanding the Role of Brown Adipose Tissue in the Obesity-resistant Phenotype of PKA Cheta Knockout Mice

University of Virginia (Virginia)

Preceptors: Dr. Constantine Stratakis, Dr. Edra London, Dr. Fabio Faucz, Dr. Ludivine Drougat

## LCH-186. Noam Gannot, Manahel Zahid

Use of the Cambridge Face Memory Test to assess impairment of visual working memory by Functional Near-Infrared Spectroscopy

University of Maryland, College Park (Maryland), Wootton High School (Maryland)

Preceptors: Dr. Fatima Chowdhry, Dr. Afrouz Anderson, Dr. Amir Gandjbakhche

## LCH-187. Sydney Geiger

Prefrontal Cortex Activation during Working Memory Task with Application in Developmental

Disorders: Pilot Study Using Functional Near Infrared Spectroscopy

St. Olaf College (Minnesota)

Preceptors: Dr. Afrouz Anderson, Dr. Fatima Chowdhry, Dr. Amir Gandjbakhche

## LCH-188. Alexandra Geoca

Mapping the larval zebrafish brain in virtual reality George Washington University (District of Columbia) Preceptors: Dr. Harold Burgess, Dr. Damian Dalle Nogare, Mr. Gregory Marguart

# LCH-189. Roy Ghosh

How does Low-Dose Colchicine Affect the Genetic Expression and Cellular Mechanisms of Human Neutrophils?

Parkland High School (Pennsylvania)

Preceptor: Dr. Dan Sackett

# LCH-190. Jordy Gomez

Mutations to understand the structure and function of the RyfD RNA E.L Haynes (District of Columbia)

Preceptors: Dr. Gisela Storz, Ms. Hira Shabbir, Ms. Aracely Romero

# LCH-191. Nadine Humphrey

Pro-inflammatory macrophage positively correlate with insulin resistance in adipose tissue Academy of Health Sciences at Prince George's Community College (Maryland) Preceptors: Dr. Chad McCormick, Dr. Joshua Zimmerberg

# LCH-192. Angelina Jones

Optimization of a purification protocol for a GST-tagged Integrase protein from the Schizosaccharomyces pombe transposon Tf1 Eleanor Roosevelt High School (Maryland) Preceptors: Mrs. Angela Atwood- Moore, Dr. Henry Levin

# LCH-193. Sun Jung

Characterizing the Unique Obese Phenotypes of MC3R-Associated Obese Mouse Models University of Maryland, College Park (Maryland)

Preceptors: Dr. Joo Yun Jun, Dr. Jack Yanovski, Mr. Daniel Gehle

## LCH-194. Bijal Kikani, Jacob Wagner, Aaron Gu

Investigating the Effects of CCDC53 Mutation on Receptor Recycling
University of Maryland, College Park (Maryland), Winston Churchill High School (Maryland),
Thomas Jefferson High School for Science and Technology (Virginia)
Preceptors: Dr. Jeffrey Baron, Dr. Julian Lui, Dr. Youn Hee Jee

## LCH-195. Eleanor Kimmelman

Study of C alpha overexpression effects in transgenic mice Maret School (District of Columbia) Preceptors: Dr. Ludivine Drougat, Dr. Constantine Stratakis

## LCH-196. Emma King

Genes CXCL12 and PDGFB Cooperate to Attract Smooth Muscle Cells for Structural Support of the Arteries

Benjamin Banneker Academic High School (District of Columbia)

Preceptors: Dr. Amber Stratman, Dr. Brant Weinstein

## LCH-197. Cedirc Kouam

Force Distribution across Neutrophil Microvilli Resists Bond Detachment

Montgomery College (Maryland)

Preceptor: Dr. Alex Szatmary

## LCH-198. Jenny Lee

Assessing Mixtures of Environmental Pollutants on Birth Outcomes Using Shrinkage Based Method: Application to LIFE Study

Yale School of Public Health (Connecticut)

Preceptor: Dr. Rajeshwari Sundaram

#### LCH-199. Christin Li

An Intronic TRE Mediates Thyroid Hormone Regulation on MBD3 Expression in the Intestine during Frog Metamorphosis

National Cathedral School (District of Columbia)

Preceptors: Dr. Yunbo Shi, Dr. Liezhen Fu

## LCH-200. Julian Li

Histone modification enzymes P300 function during postembryonic development in Xenopus tropicalis

Richard Montgomery High School (Maryland)

Preceptors: Dr. Morihiro Okada, Dr. Yun Bo Shi

## LCH-201. Tianming Li

Morphological and Computational Analysis of a Giant Inhibitory Interneuron that Regulates Olfactory Function

Thomas Sprigg Wootton High School (Maryland)

Preceptors: Dr. Mark Stopfer, Dr. Kui Sun, Dr. Subhasis Ray

## LCH-202. Jana Lu

Identifying key phosphorylated residues on the host target of a kinase effector in the bacterial pathogen Legionella pneumophila

Duke University (North Carolina)

Preceptors: Dr. Matthias Machner, Dr. Pei-Chung Lee

## LCH-203. Jashanjeet Matharoo, Amir Chegeni

Multi-Spectral Imaging of Blood and Water Content to Assess Treatment Outcome of Cushing's Syndrome

Thomas Jefferson High School for Science and Technology (Virginia), University of Virginia (Virginia)

Preceptors: Dr. Ali Afshari, Dr. Amir Gandjbakhche

# LCH-204. Kelly Nguyen

Racial Differences in Response to Ambient Temperature: A Case-Crossover Study of

Cardiovascular Events at Labor and Delivery

San Diego State University (California)

Preceptors: Dr. Pauline Mendola, Dr. Sandie Ha

# LCH-205. Heley Ong

Structural Analysis of Lysosome Positioning Machinery

Cornell University (New York)

Preceptors: Dr. Juan Bonifacino, Dr. Tal Keren-Kaplan

# LCH-206. Nancy Ortega

Expression of Muscarinic Receptors in Oligodendrocytes

University of San Francisco (California)

Preceptors: Dr. R. Douglas Fields, Mr. William Huffman

## LCH-207. Gregory Papaioannou, Marianna Athanassiou

A new cause of primary hyperaldosteronism

University of Pennsylvania (Pennsylvania), Tufts University (Massachusetts)

Preceptors: Mr. Nikolaos Settas, Dr. Constantine Stratakis

## LCH-208. Paulina Pedas, Mia Faulkner

U2SURP germline mutations as a potential cause of familial acromegaly and gigantism

Maret School (District of Columbia), Walt Whitman (Maryland)

Preceptors: Dr. Laura Hernandez-Ramirez, Dr. Giampaolo Trivellin, Dr. Constantine Stratakis

## LCH-209. Julia Rakas

Molecular Simulation of the Lipid Deformation Around Rhodopsin Clusters

Woodrow Wilson High School (District of Columbia)

Preceptor: Dr. Alexander Sodt

# LCH-210. Kushi Ranganath

Adipose Tissue Inflammation and Insulin Resistance: An iln silico Model of Cross-Talk between

TNFalpha and Insulin Signaling

Johns Hopkins University (Maryland)

Preceptors: Dr. Jack Yanovski, Dr. Andrew Demidowich

## LCH-211. Maya Robnett

The Role of Glia in the Pathophysiology of Gulf War Illness

Sidwell Friends School (District of Columbia)

Preceptors: Dr. Dipankar Dutta, Dr. Douglas Fields

#### LCH-212. Gabriel Schneider

Landscape of Germline Mutations in Sporadic PHEO/PGL St. Albans School (District of Columbia)

Preceptors: Dr. Ying Pang, Dr. Karel Pacak

#### LCH-213. Victor Settles

Exploring the in vivo endothelial translatome in search of novel vascular genes University of Maryland, College Park (Maryland)

Preceptors: Dr. Mayumi Miller, Dr. Brant Weinstein

# LCH-214. Roxana Taginya

Does the Ex Vivo State of Human Subcutaneous Adipose Tissue Correlate with Systemic Insulin Resistence?

University of Michigan (Michigan)

Preceptors: Dr. Joshua Zimmerberg, Dr. Chad McCormick, Dr. Paul Blank, Dr. Andrew W

## LCH-215. Jennifer Ten Hagen

Neto-alpha modulates the organization of neuromuscular junction in Drosophila melanogaster Northwest High School (Maryland)

Preceptor: Dr. Mihaela Serpe

# LCH-216. Aalekhya Tenali

Investigating the Role of Translation Elongation Pausing in Response to Inositol on Initiation of Upstream Optimal and Suboptimal Codons

Washington and Lee University (Virginia)

Preceptors: Dr. Thomas Dever, Dr. Ivaylo Ivanov, Ms. Chune Cao

# LCH-217. Elizabeth Tikoyan

Impairment in Sexual Function Persists in Clinically-Stable Female Survivors of Stem Cell Transplantation

Northern Virginia Community College (Virginia)

Preceptors: Dr. Pamela Stratton, Ms. Claire Scrivani, Dr. Dana Shanis, Dr. Margaret Bevans

# LCH-218. Neha Trivedi

Cell Phone Distraction: Peer Influence on Adolescents' Risky Driving Behaviors

University of Maryland School of Public Health (Maryland)

Preceptors: Dr. Denise Haynie, Dr. Bruce Simons-Morton

## LCH-219. Kaitlin Vollet

Prenatal Fish Oil Supplementation and Early Childhood Development in the Upstate KIDS Study University of Cincinnati (Ohio)

Preceptor: Dr. Edwina Yeung

# LCH-220. Enya Wang

Molecular Function Analysis of Steroid Receptor Coactivator (SRC) Using CRISPR/Cas9 System during Postembryonic Development in Xenopus tropicalis Montgomery Blair High School (Maryland)

Preceptors: Dr. Yuki Shibata, Dr. Yun Bo Shi

# LCH-221. Harrison Westgarth

Characterization of the NPC1 IRF8 Mouse Model Washington and Lee University (Virginia) Preceptor: Dr. Forbes Porter

# LCH-222. Maya Wilson

Molecular Modeling of the Hofmeister Effect on Lipid Bilayers Gaithersburg High School (Maryland) Preceptor: Dr. Alexander Sodt

## LCH-223. Julie Zemskova

MicroRNAs expression profiling in pheochromocytoma and paraganglioma University of Toledo College of Medicine (Ohio) Preceptors: Dr. Ivana Jochmanova, Dr. Karel Pacak

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

## LCH-224. Joseph Acqui, III

The Effect of Food Self-Administration on the mRNA Expression of Activator Protein 1 Genes in the Rat Hypothalamus

Stevenson University (Maryland)

Preceptors: Dr. Jean Lud Cadet, Mr. Michael McCoy

## LCH-225. Weilin Chan

Adolescent THC Exposure and Subsequent Heroin Self-Administration: A 1H-MRS Study Johns Hopkins University (Maryland)
Preceptor: Dr. Michael Michaelides

## LCH-226. Sujata Chapagain

Role of central lateral thalamus in methamphetamine (Meth) relapse The Community College of Baltimore County (Maryland) Preceptors: Dr. Anna (Xuan) Li, Dr. Yavin Shaham

## LCH-227. Briana Davis

The effect of methylone self-administration on selected neuropeptide mRNA and protein levels in the dorsal striatum

University of Pittsburgh (Pennsylvania), University of Texas (Texas), Columbia University (New York)

Preceptors: Dr. Martin Job, Dr. Jean Lud Cadet

# LCH-228. Aishwarrya Jayapal

Optogenetic Investigation of Septum Reward Circuitry University of Maryland, College Park (Maryland) Preceptors: Dr. Satoshi Ikemoto, Mr. Andrew Kesner

## LCH-229. Suzhe Ji

Oxycodone Addiction Treatment of Antagonist on Dopamine D3 Receptor in Rats Model University of Nevada, Reno (Nevada)

Preceptors: Dr. Zhi-Bing You, Dr. Zheng-Xiong Xi, Dr. Guohua Bi

# LCH-230. Gloria Kim

Functions of Glutamate Neurons in the Ventral Tegmental Area University of Maryland, College Park (Maryland)

Preceptor: Mrs. Marisela Morales

## LCH-231. Michelle Lee

CAMPARI - a light-controlled irreversible marker of calcium-based in vivo neural activity Johns Hopkins University (Maryland)

Preceptors: Dr. Rajtarun Madangopal, Dr. Bruce Hope

# LCH-232. Jennifer Martin

Neural activity during rewarding behavior in face of adverse consequences The State University of New York at Buffalo (New York)

Preceptors: Dr. Yavin Shaham, Dr. Yann Pelloux, Dr. Jennifer Bossert, Dr. Brian Sadacca

## LCH-233. Ankit Mishra

Methamphetamine Self-Administration Regulates Specific Neuropeptide mRNA levels in the Hippocampus of the Rat.

University of Maryland, College Park (Maryland)

Preceptors: Dr. Jean Lud Cadet, Dr. Irina Krasnova, Mr. Bruce Ladenheim

## LCH-234. Lauren Mueller

Pavlovian two-step Daw task: a paradigm to differentiate decision-making strategies in rats The State University of New York at Buffalo (New York)

Preceptors: Dr. Andrew Wikenheiser, Dr. Matthew Gardner, Dr. Melissa Sharpe, Dr. Geoffrey Schoenbaum

# LCH-235. Adedoyin Olateru-Olagbegi

Incubation of methamphetamine craving after social-based voluntary abstinence

Massachusetts Institute of Technology (Massachusetts)

Preceptors: Dr. Marco Venniro, Ms. Michelle Zhang, Dr. Daniele Caprioli, Dr. Yavin Shaham

## LCH-236. Chelsea Osuji

Differential Immediate Early Gene Expression in the Rat Dorsal Striatum after Methylone Self-Administration

Montclair State University (New Jersey)

Preceptors: Ms. Ndeah Terry, Dr. Jean Lud Cadet, Dr. Irina Krasnova

## LCH-237. Raisa Rauf

Effect of METH self-administration on the expression of Fos and Jun transcription factors in the rat hippocampus

University of Pennsylvania (Pennsylvania)

Preceptors: Dr. Irina Krasnova, Dr. Bruce Ladenheim, Dr. Jean Lud Cadet

# LCH-238. Trinity Russell

Optogenetic investigation of the basal ganglia-thalamic reward circuit Wesleyan University (Connecticut)

Preceptors: Dr. Satoshi Ikemoto, Ms. Anne Pierce

# LCH-239. Jill Taylor

Lateral Preoptic Projections to the Lateral Habenula

Towson University (Maryland)

Preceptors: Dr. David Barker, Dr. Marisela Morales

## LCH-240. Shirley-Ann Tomdio

Effects of Cocaine Intake on the Response to Stressful Events during Withdrawal

George Washington University (District of Columbia)

Preceptors: Dr. Satoshi Ikemoto, Dr. Céline Nicolas

## LCH-241. Yasmeen Walker

Expression of voltage-gated potassium channels in the nucleus accumbens of METH self-administering rats.

Institute of Notre Dame High School (Maryland)

Preceptor: Dr. Subramaniam Jayanthi

## LCH-242. Catherine Xue

Exploring ligand-binding kinetics in the S2 site of MhsT by atomistic simulations and Markov models

Yale University (Connecticut)

Preceptors: Dr. Ara Abramyan, Dr. Lei Shi

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

### LCH-243. Jessica Afable

Evaluation of a Candidate Gene for Stuttering

Connelly School of the Holy Child (Maryland)

Preceptors: Ms. Jessica Root, Dr. Carlos Eduardo Frigerio Domingues, Dr. Dennis Drayna

#### LCH-244. Ashi Arora

Use of Inhibitors to Study Exosomes as a Mechanism of Protection Against Inner Ear Hair Cell Death

Wayne State University (Michigan)

Preceptors: Mrs. Lindsey May, Dr. Lisa Cunningham

## LCH-245. Taimur Chaudhry, Christina Takla

Novel mutations in known deafness genes leading to varying degrees of hearing loss in Pakistani families

University Of Maryland, College Park (Maryland), Clarksburg High School (Maryland)

Preceptors: Dr. Thomas Friedman, Ms. Rabia Faridi

## LCH-246. Rachel Hodge

Effects of tumor cell directed ionizing radiation on dendritic cell cellular antigen processing and cross presentation

Clemson University (South Carolina)

Preceptor: Dr. Clint Allen

#### LCH-247. Abigail Lemons

Lineage Tracing in the Developing Mammalian Cochlea

Colgate University (New York)

Preceptors: Dr. Kathryn Ellis, Dr. Michael Kelly, Mr. Joey Mays, Dr. Matthew Kelley

## LCH-248. Galya Levinson

Factors Affecting the Ototoxicity of Amikacin

Towson University (Maryland)

Preceptors: Dr. Carmen Brewer, Dr. H. Jeff Kim, Dr. Chris Zalewski, Dr. Kelly King

### LCH-249. Merete Lund, Cameron Williams

Deafness-causing gene encodes a protein that colocalizes with tubulin

College of William & Mary (Virginia), Fairmont Heights High School (Maryland)

Preceptors: Dr. Thomas Friedman, Ms. Ayesha Imtiaz

### LCH-250. Steven Meisler

Examining Neural Audiovisual Object Processing through Large-Scale Neural Modeling University of Pennsylvania (Pennsylvania)

Preceptors: Mr. Qin Liu, Dr. Barry Horwitz

#### LCH-251. Omolola Sanusi

Association of Parent's and Children's Weight Status with Children's Perception of Their Own Health.

Seneca Valley High School (Maryland)

Preceptors: Dr. Jack Yanovski, Ms. Shannon Marwitz

#### LCH-252. Lillian Sun

Modulation of Classical and Alternative NF-кВ Pathways in HPV Positive Head and Neck Squamous Cell Carcinoma

University of Maryland, College Park (Maryland) Preceptors: Dr. Zhong Chen, Dr. Carter Van Waes

#### LCH-253. Charis Williams

Ototoxic Drug Induced Death of Inner Ear Hair Cells

George School (Pennsylvania)

Preceptors: Mr. Shimon Francis, Dr. Lisa Cunnigham

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

#### LCH-254. Gabriela Asturias

Effect of Repetitive Transcranial Magnetic Stimulation on the Structural Connectome in Patients with Major Depression

Duke University (North Carolina)

Preceptor: Dr. Zhi-De Deng

#### LCH-255. David Behrend

Impact of Reduced Sanitation Frequency on Mouse Cage Ventilation, Microbial Burden, and Animal Well-Being

Virginia-Maryland College of Veterinary Medicine (Virginia)

Preceptors: Dr. James Raber, Ms. Julia Drake, Mr. David Mallon, Ms. Johnetta Gray

#### LCH-256. Saronawit Belay

Database Application for Post-Mortem Toxicology Reports

Washington University in St. Louis (Missouri)

Preceptor: Mr. Robin Kramer

#### LCH-257. Nicholas Biniaz-Harris

Cognitive subgroups in schizophrenia: Differences in polygenic risk?

Yale University (Connecticut)

Preceptors: Dr. Dwight Dickinson, Ms. Sofia Zaidman, Dr. Karen Berman

#### LCH-258. Prableen Chowdhary

Cellular Phenotypes in Sex Chromosome Aneuploidies

University of Maryland, College Park (Maryland)

Preceptors: Dr. Armin Raznahan, Ms. Jill Russ, Mr. Jonathan Blumenthal, Ms. Erin Torres

## LCH-259. Eunice Chung

Neural processing of emotion and antidepressant response to ketamine in depressed patients University of Maryland, College Park (Maryland)

Preceptors: Dr. Joanna Szczepanik, Dr. Jessica Ihne, Dr. Allison Nugent, Dr. Carlos Zarate

### LCH-260. Donna Dadkhoo

An Analysis of Family Pathology Comparing Multi Dimensionally Impaired and Childhood Onset Schizophrenia Patients Screened in the Childhood Onset Schizophrenia Trial Winston Churchill High School (Maryland)

Preceptors: Mrs. Diane Broadnax, Mr. Peter Gochman, Ms. Jessica Loving

## LCH-261. Riley Davies

Synthesis of MC1 Analog, a Potential COX-2 Ligand Used for PET Imaging of Neuroinflammation
Oberlin College (Ohio)

Preceptors: Dr. Michelle Cortes, Dr. Robert Innis, Dr. Victor Pike

#### LCH-262. Zoe DeGrazia

Exercise on Anxiety and Cognition Clark University (Massachusetts)

Preceptors: Ms. Abigail Hsiung, Ms. Tiffany Lago, Dr. Monique Ernst

### LCH-263. Iris Denmark

Effects of Chronic Sleep Restriction on Hippocampal Dendritic Morphology Jackson State University (Mississippi)

Preceptors: Dr. Michelle Sare, Dr. Carolyn Beebe-Smith

## LCH-264. Thomas Donoghue

Can we use public control genotype data to boost power in genome-wide association studies? University of Maryland, College Park (Maryland)

Preceptors: Dr. Nirmala Akula, Dr. Liping Hou, Dr. Francis McMahon

### LCH-265. Lindsay Ejoh

Optogenetic Control of Glutamatergic Neurons of the Medial Amygdala Regulates Aggression University of Pittsburgh (Pennsylvania)

Preceptors: Dr. Jacob Nordman, Dr. Zheng Li

## LCH-266. Victoria Flagg

Migraine and Neuropsychological Factors in the NIMH Family Study

Brown University (Rhode Island)

Preceptors: Dr. Kathleen Merikangas, Mrs. Lihong Cui, Dr. Tara Lateef

#### LCH-267. Alisa Gao

Physiological Associations Between 7.5% CO2-Evoked Panic and Anticipatory Anxiety in Healthy Individuals

Richard Montgomery High School (Maryland)

Preceptors: Dr. Nicholas Balderston, Mr. Jeffrey Liu, Dr. Monique Ernst, Dr. Christian Grillon

### LCH-268. Merage Ghane

Whole-Brain Functional Connectivity as a Task-Independent Marker of Sustained Attention Virginia Polytechnic Institute and State University (Virginia)

Preceptors: Dr. David Jangraw, Dr. Peter Bandettini

#### LCH-269. Genevieve Gilson

The Inflamed Brain: Predictive Biomarkers of Depression

University of Virginia (Virginia)

Preceptors: Dr. Maryland Pao, Dr. Erica Richards

#### LCH-270. Anna Goodwin

High Field Imaging of the Hippocampus in Major Depressive Disorder

Hillsdale College (Michigan)

Preceptors: Dr. Carlos Zarate, Dr. Allison Nugent, Dr. Adam Thomas, Dr. John Lee

### LCH-271. Binghan Guo

Labeling fighting experience dependent neural circuits in c-fos-tTA transgenic mice George Washington University (District of Columbia)

Preceptors: Dr. Zheng Li, Dr. Kaizheng Duan

#### LCH-272. Marie Hatch

The Use of Melatonin in Special Pediatric Groups: An Updated Review

Walt Whitman High School (Maryland)

Preceptor: Dr. Ashura Buckley

#### LCH-273. Yidong Hu

Imaging Transient Electrical Currents with MRI

Johns Hopkins University (Maryland)

Preceptors: Dr. John Andrew Derbyshire, Dr. Peter Bandettini

### LCH-274. Cherella Hughes

Follow-back Interview: A New Approach for Understanding the Time before Suicide Attempt

Fort Lewis College (Colorado)

Preceptors: Dr. Elizabeth Ballard, Dr. Carlos Zarate, Jr.

### LCH-275. Hannah Jacobs

Effects of Adult Hippocampal Neurogenesis in Social Behavior of Male Mice Wellesley College (Massachusetts)

Preceptors: Dr. Mumeko Tsuda, Dr. Heather Cameron

#### LCH-276. Tarun Kamath

The Interaction of Polymorphisms of the Catechol-O-Methyltransferase gene with Childhood Urbanicity on the fMRI response of the Dorsolateral Prefrontal Cortex in Siblings of Schizophrenic Patients

Thomas Jefferson High School for Science and Technology (Virginia)

Preceptors: Dr. Joseph Callicott, Ms. Daniela de Albuquerque, Ms. Teresa Vargas, Ms. Mei Lin Grunnagle

## LCH-277. Prerana Katiyar

Using Neuroanatomical Techniques to Elucidate Roles of the Striatum, Basal Ganglia, and Thalamus in a Quantative Manner.

Thomas Jefferson High School for Science and Technology (Virginia)

Preceptors: Dr. Ron Paletzki, Dr. Charles Gerfen

#### LCH-278. Robert Kraff

The relationship between anxiety and the interpretation of facial kinesics Walt Whitman High School (Maryland)

Preceptors: Mr. Brent Rappaport, Dr. Ashley Smith, Dr. Daniel Pine

## LCH-279. Jessica Loving

Continuous Familial Symptom Rating: Application within Childhood-Onset Schizophrenia Cohort Elizabethtown College (Pennsylvania)

Preceptors: Mr. Peter Gochman, Ms. Xueping Zhou, Dr. Judith Rapoport

#### LCH-280. Isabella Maita

Effects of chronic rapamycin on behavior in Fmr1 knockout mice

Lafayette College (Pennsylvania)

Preceptors: Dr. Carolyn Beebe-Smith, Dr. Michelle Sare

#### LCH-281. Miriam Menken

Using real time fMRI neurofeedback to modulate behaviorally relevant social networks in subjects with Autism Spectrum Disorder

Women's Institute of Torah Seminary (Maryland)

Preceptors: Dr. Michal Ramot, Ms. Sara Kimmich, Dr. Javier Gonzalez-Castillo, Dr. Alex Martin

### LCH-282. Jamie Mondello

Characterization of Immune Cell Interactions with the Brain following Chronic Social Defeat

State University of New York (SUNY) at Binghamton (New York)

Preceptors: Dr. Miles Herkenham, Dr. Stacey Kigar

### LCH-283. Aparna Nathan

Identification of differentially-expressed genes in mood disorders by RNA-seq analysis of postmortem brain tissue

Yale University (Connecticut)

Preceptors: Dr. Nirmala Akula, Dr. Francis McMahon

## LCH-284. Tara Nibhanupudy

The Impact of Long Term Refrigeration on the Stability of Genomic DNA Seminole High School (Florida)

Preceptors: Dr. Barbara Lipska, Dr. Bhaskar Kolachana

#### LCH-285. Michelle Noh

Neuronal Biophysics of Electroconvulsive Therapy Massachusetts Institute of Technology (Massachusetts) Preceptors: Dr. Sarah Lisanby, Dr. Thomas Radman

# LCH-286. Alexandra Payne

Chronic In vivo calcium imaging of CA2 pyramidal neurons in social memory paradigms Washington University in St. Louis (Missouri)

Preceptors: Dr. Scott Young, Dr. Adi Cymerblit-Sabba

### LCH-287. Vindhya Rao

Histone Cluster 1 Implicated in Schizophrenia Pathogenesis in Han Chinese Using Protein Interaction Analysis

Cornell University (New York)

Preceptor: Dr. Yin Yao

### LCH-288. Esme Roddy

Manipulating V1b CA2 Neurons: Effects on Maternal Aggression and Behavior in Mice

Pomona College (California)

Preceptors: Dr. Sarah Williams Avram, Dr. Scott Young

#### LCH-289. Victoria Rooke

Immunohistochemical Characterization of the Stress Circuits of the PVT Walter Johnson High School (Maryland)

Preceptor: Dr. Mario Penzo

#### LCH-290. John Schwartz

Improving the Methodology to Detect Directional Connectivity in Ultra High Resolution Layer-Dependent fMRI at 7T University of Southern California (California)

Preceptors: Dr. Laurentius Huber, Dr. Peter Bandettini

## LCH-291. Emily Steffke

Neural Forensics: Deducing Surgical Success in Rodents via Nissl Staining and

*Immunohistochemistry* 

Michigan State University (Michigan)

Preceptor: Dr. Dietmar Plenz

#### LCH-292. Yeabsera Tadesse

Mapping the Anatomical Systems of Memory in the Primate Brain Montgomery College (Maryland)

Preceptor: Dr. Richard Saunders

## LCH-293. Miranda Tompkins

Axonal Trafficking of Mitochondrial ATP Synthase mRNA in Microfluidic Chambers Walt Whitman High School (Maryland)

Preceptors: Dr. Barry Kaplan, Dr. Anthony Gioio, Ms. Jenna Gale

### LCH-294. Evelien van Gelderen

Clinical Profiles of Patients with Functional Movement Disorder Walter Johnson High School (Maryland)

waller Johnson Figh School (Maryland)

Preceptors: Dr. Sarah Lisanby, Mrs. Valeria Martinez-Kaigi, Dr. Carlos Zarate

## LCH-295. Aadith Vittala

A Network-Based Approach to Identifying Causal Genetic Pathways in Bipolar Disorder Thomas Jefferson High School for Science and Technology (Virginia)

Preceptor: Dr. Yin Yao

## LCH-296. Ali Waseem

Pharmacological Characterization of DAT and SERT and G beta gamma Induced Efflux University of Maryland, College Park (Maryland)

Preceptors: Mrs. Jennie Garcia-Olivares, Mrs. Susan Amara

#### LCH-297. Marquitta Winston

Using 3D Printing Technology to Improve Brain Imaging

Prince George's Community College (Maryland)

Preceptor: Dr. Michael Gregory

#### LCH-298. Daniel Yasoshima

Automation of Behavioral Analysis via Object Tracking University of Connecticut (Connecticut)

Preceptors: Dr. Benjamin White, Dr. Amicia Elliott, Dr. Feici Diao

### LCH-299. Gabriela M. Zabala-Alemán

Evidence of Blood Brain Barrier Disruption in Mice Exposed to Chronic Social Stress Universidad Central del Caribe (Puerto Rico)

Preceptors: Dr. Michael Lehmann, Dr. Miles Herkenham

## LCH-300. Emily Zou

Using Protein Networks to Identify Genetic Overlaps between Schizophrenia and Bipolar Disorder

Thomas Jefferson High School for Science and Technology (Virginia)

Preceptor: Dr. Yin Yao

# **National Institute on Minority Health and Health Disparities (NIMHD)**

### LCH-301. Sarah Krosnick, Jonna Rautsola

What fuels the flames? An analysis of persuasive techniques in anti-tobacco advertisements Barnard College, Columbia University (New York), Wake Forest University (North Carolina) Preceptors: Dr. Sherine El-Toukhy, Dr. Kelvin Choi

### LCH-302. Jonna Rautsola, Sarah Krosnick

Kicking the habit: Behavior change techniques in anti-smoking advertisements Wake Forest University (North Carolina), Barnard College, Columbia University (New York) Preceptors: Dr. Sherine El-Toukhy, Dr. Kelvin Choi

# **National Institute of Nursing Research (NINR)**

### LCH-303. Michaela Cortes

Magnetic Resonance Imaging as an Exploratory Outcome Measure in Clinical Trials for RYR-1 Related Myopathies

Texas Woman's University (Texas)

Preceptors: Ms. Sonia Razagyar, Dr. Katherine Meilleur

#### LCH-304. Hannah Davidson

Eating Behavior in Chronically Stressed Individuals: Implications of the Brain-Gut Axis Greenfield Community College (Massachusetts)

Preceptors: Dr. Paule Joseph, Dr. Nicolaas Fourie, Dr. Sarah Abey, Dr. Wendy Henderson

#### LCH-305. Ron Jako Domingo, Berwin Yuan

The Effect of Supplemental Intensity Modulated Radiation Therapy for Prostate Cancer on Late Urinary Flare

Seneca Valley High School (Maryland), University of Maryland, College Park (Maryland) Preceptors: Dr. Rebekah Feng, Dr. Leorey Saligan

## LCH-306. Timothy Fuss

Exploring the Relationship of Subjective and Objective Measures of Physical Activity in a Cancer Fatigue Study

University of North Dakota (North Dakota)

Preceptors: Dr. Brian Wolff, Dr. Leorey Saligan

#### LCH-307. Nicholas Giordano

Understanding the Biological Mechanisms Related to the Onset and Maintenance of Depressive Symptoms Following Military Deployment Trauma

University of Pennsylvania (Pennsylvania)

Preceptor: Dr. Jessica Gill

### LCH-308. Samantha Grimes

Metabotropic Glutamate Receptors in T-cells

University of Pittsburgh (Pennsylvania)

Preceptors: Dr. Leorey Saligan, Dr. Rebekah Feng, Ms. Sumiyya Raheem

# LCH-309. Courtney John

Individual Differences in Intestinal Permeability Yakama Nation Tribal School (Washington)

Preceptor: Dr. Wendy A. Henderson

### LCH-310. Joseph Johnson

Longitudinal Study of the Relationship between Cognitive Deficits and Cancer Related Fatigue Northwest High School (Maryland)

Preceptors: Dr. Leorey Saligan, Dr. Rebekah Feng

#### LCH-311. Joy Modozie

Chronic Inflammation in Traumatic Brain Injury Relates to Behavioral Symptoms

Eleanor Roosevelt High School (Maryland)

Preceptors: Dr. Jessica Gill, Dr. Lindsay Arcurio

### LCH-312. Belviane Songong

The Novel Application of a Sorting Algorithm to Clinical Patient Data

Rice University (Texas)

Preceptors: Dr. Nicolaas Fourie, Dr. Wendy Henderson, Dr. Paule Joseph

### LCH-313. Berwin Yuan

TRAIL Toxicity in Neuronal Cell Line

University of Maryland, College Park (Maryland)

Preceptors: Dr. Rebekah Feng, Dr. Leorey Saligan

# **National Cancer Institute (NCI)**

#### PM-001. Nina Afsar

TTF-1 expression in gliomas: An evaluation of 285 cases and its clinical significance

Oberlin College (Ohio)

Preceptors: Dr. Drew Pratt, Dr. Martha Quezado

#### PM-002. Alia Alhomsi

Characterization of BRAF-driven melanoma development in an UV-induced mouse model Northern Virginia Community College (Virginia)

Preceptors: Dr. Glenn Merlino, Dr. Helen Michael, Dr. Chiping Day

### PM-003. Abel Amare

The Role of the BRAFV600E Inhibitor (PLX4720) in Thyroid Cancer Cells George Washington University (District of Columbia)
Preceptors: Dr. Myriem Boufragech, Dr. Electron Kebebew

#### PM-004. Shruti Anant

Identification of a Small Molecule Inhibitor of the T cell p38 Alternative Pathway Thomas Jefferson High School for Science and Technology (Virginia) Preceptors: Dr. Muhammad Alam, Dr. Jonathan Ashwell

#### PM-005. Danielle Arons

Using CRISPR-Cas9 Gene Editing to Delete Mesothelin from Pancreatic Cancer Cells University of Maryland, College Park (Maryland)
Preceptors: Dr. Christine Alewine, Mr. Michael Rudloff

## PM-006. Rayann Atway

Over and Underscreening for Breast, Cervical, and Colorectal Cancers in Minority Older Adults (MOA) 75 Years and Older

Youngstown State University (Ohio)

Preceptors: Dr. Erica Breslau, Dr. Antoinette Percy-Laurry

## PM-007. Melanie Baker

Creating and Analyzing Funding Opportunity Announcements Charles R. Drew University of Medicine and Science (California) Preceptors: Dr. Stephen Taplin, Mrs. Veronica Chollette

# PM-008. Tamia Baker-Johnson

Role of FDG PET-CT in Urothelial Carcinoma Patients Treated with Cabozantinib Springbrook High School (Maryland)

Preceptors: Dr. Andrea Apolo, Dr. Nicole Davarpanah

#### PM-009. Trevor Barlowe

TCR-beta Clonality in Thymic Progenitor Cells from NUP98-PHF23/NUP98-HOXD13 Double Transgenic Mice

Dartmouth Geisel School of Medicine (New Hampshire)

Preceptors: Dr. Subhadip Kundu, Dr. Eunsil Park, Dr. Yang-Jo Chung, Dr. Peter Aplan

#### PM-010. Caitlin Barrett

Heart Rate Variability across Adolescents and Young Adults with Neurofibromatosis Type 1 and Chronic Pain

American University (District of Columbia) Preceptors: Dr. Staci Martin, Dr. Taryn Allen

## PM-011. Rebecca Beasley

Investigating the Role of Lysyl Oxidase in Cells Infected with Kaposi Sarcoma Associated Virus University of Alabama (Alabama)

Preceptors: Dr. Robert Yarchoan, Dr. David Davis, Dr. Prabha Shrestha

#### PM-012. Charlotte Beckford

DNA Methyltransferase Inhibitors Inactivate YAP ad YES in RASSF1A Methylated Rhabdomyosarcoma Cell Lines
Richard Montgomery High School (Maryland)

Preceptors: Dr. Lee Helman, Mr. Choh Yeung

### PM-013. Raina Bembry, Paul Hanona

Deep Phenotyping of Patients with Xeroderma Pigmentosum Howard University College of Medicine (District of Columbia), Michigan State University (Michigan)

Preceptors: Dr. Kenneth Kraemer, Dr. John DiGiovanna

## PM-014. Tzipporah Bergman

Novel Therapeutic Strategy for Glioma Patients Using a Mutant IDH1 Vaccine Bnos Yisroel (Maryland)

Preceptors: Dr. Liat Goldberg, Dr. Daniel Edelman

### PM-015. Eliana Berman

Improving Workflow for Medical Oncology in Tumor Response Calculation Women's Institute of Torah Seminary/Gratz College (Maryland) Preceptor: Dr. Andrea Apolo

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## PM-016. Gabriela Beug

Investigating the effect of Isoform-Specific Inhibitors on Heat Shock Protein 90 function in Cancer cells

German School Washington D.C. (Washington)

Preceptors: Dr. Leonard Neckers, Dr. Kristin Beebe

## PM-017. Binayak Bhattarai

TIMP-2 Reduces the Invasion of LL/2 Cells via Diminishing the Activity of p38 Signaling Pathway

Montgomery College (Maryland) Preceptor: Dr. Sarvesh Kumar

### PM-018. Nechama Biberfeld

Ongoing ALCHEMIST Clinical Trial: Testing Targeted Agents in Early Stage Non-Small Cell Lung Cancer Patients

Yeshiva of Greater Washington (Maryland)

Preceptors: Dr. Daniel Edelman, Dr. Courtney Kurtyka

### PM-019. Nechama Biberfeld, Elisheva Greenberg, Leah Wolfish

The Bnos Yisroel Bridge Program: A Novel Acience Internship program at NIH Me'Ohr Seminary (Non-U.S.), Bais Yaakov Machon Raaya Seminary (Non-U.S.), Bnos Yisroel High School (Maryland)

Preceptor: Dr. Daniel Edelman

# PM-020. Nathan Birus, Bryce Renzi, John Thompson

A Genomics Data Analytics Platform to Support the NCI-MATCH Clinical Trials
Harding University (Arkansas), Duke University (North Carolina), Harding University (Arkansas)
Preceptors: Mr. David Patton, Mr. Brent Coffey

### PM-021. Mary Boulanger

The Influence of Mitochondrial Inhibition on Cytotoxic Responses in Cisplatin Treated Esophageal Cancer Cells

University of Kentucky College of Medicine (Kentucky)

Preceptors: Dr. Taylor Ripley, Mrs. Deborah Depew, Dr. Paul Feingold, Dr. Yuan Xu, Dr. Kate Brown

### PM-022. Zachary Braig

Developing a PDL1+ Extracellular Vesicle Liquid Biopsy for Personalized Immunotherapy Eastern Virginia Medical School (Virginia)

Preceptors: Dr. Aizea Morales-Kastresana, Dr. Jennifer Jones

#### PM-023. Elizabeth Brauneis

Multiplex FISH Analysis of Chromosomal Instability in Nonalcoholic Steatohepatitis (NASH) Induced Hepatocellular Carcinoma and its Precursor Fatty Liver Disease Lesions Oberlin College (Ohio)

Preceptors: Ms. Irianna Torres, Dr. Kerstin Heselmeyer-Haddad, Dr. Thomas Ried

### PM-024. Luke Cai

Single nucleotide polymorphisms in several crucial transcription factor binding sites impact HLA-C promoter activity

Williams College (Massachusetts)

Preceptors: Ms. Bahara Saleh, Dr. Hongchuan Li, Dr. Stephen Anderson

#### PM-025. Withdrawn

## PM-026. Aviva Caplan

Recent Advances in Fetal Hemoglobin Regulation for the Treatment of Sickle Cell Disease Bais Yaakov of Baltimore (Maryland)

Preceptors: Dr. Jaira Vasconcellos, Dr. Daniel Edelman

## PM-027. Tzipora Caplan

The mechanism of decreased fertility in women with Fragile X-Associated Primary Ovarian Insufficiency (FXPOI)

Temima High School (Georgia)

Preceptors: Dr. Xiaonan Zhao, Dr. Daniel Edelman

### PM-028. Jennifer Cascino

Mapping Phage Lambda Functions that Inhibit E. Coli cAMP Levels

Wesleyan University (Connecticut)

Preceptors: Ms. Katherine Cascino, Ms. Nina Costantino, Dr. Lynn Thomason, Dr. Donald Court

### PM-029. Alexis Catalano

Regulation of EGF Receptor Degradation by Flotillin Family of Proteins

Stone Ridge School of the Sacred Heart (Maryland)

Preceptor: Dr. Stanley Lipkowitz

### PM-030. Duyania Cephas

Identifying Regions on Bacterial Hsp70 Involved in Species Specific Collaboration with Chaperones and Co-chaperones

Trinity Washington University (District of Columbia)

Preceptors: Dr. Sue Wickner, Dr. Shannon Doyle, Ms. Erin Doody

#### PM-031. Meredith Cervi

Unhealthy food advertisements may differentially influence sugar-sweetened beverage intake among racially and ethnically diverse adolescents

Purdue University (Indiana)

Preceptors: Dr. Tanya Agurs-Collins, Dr. Laura Dwyer, Dr. Chan Thai, Dr. Linda Nebeling

## PM-032. Michael Chang

Tracking and Modeling the Clinical Translation of Nanotechnologies

Winston Churchill High School (Maryland)

Preceptor: Dr. Natalie Abrams

## PM-033. Trinish Chatterjee

Stochastic Modeling of FUSE/FIR/FBP Dynamics on Myc Expression University of Maryland, College Park (Maryland)

Preceptors: Dr. Eric Batchelor, Dr. Joshua Porter

### PM-034. Jennifer Chen

CRISPR-Mediated Tagging of Proteins to Understand Breast Cancer Metastasis Winston Churchill High School (Maryland)

Preceptors: Dr. Kent Hunter, Dr. Ngoc-Han Ha

## PM-035. Megan Chen

Regulation of STAT3 and NFkB Signaling Pathways by DNMT3b in Breast Cancer Metastasis Rutgers University (New Jersey)

Preceptors: Dr. Jae Young So, Dr. Li Yang

## PM-036. Kevin Ching

Elucidating the Relationship between Matriptase and EpCAM

Washington University in St. Louis (Missouri)

Preceptors: Dr. Chuanjin Wu, Dr. Mark Udey

# PM-037. Amul Choudhary

Quality of Life Assessment using MDASI in patients with Desmoid tumors treated with PF03084014

University of Maryland, Baltimore College (Maryland)

Preceptors: Dr. Geraldine O'Sullivan Coyne, Dr. Alice Chen, Dr. Robert Meehan

#### PM-038. Anna Christou

Studying Mutated Proteins in the Development of Breast Cancer

National Cathedral School (District of Columbia)

Preceptor: Dr. Jing Huang

#### PM-039. Hyunsoo Chung

Tissue residency and function of CD4+FoxP3+ regulatory T cells in the murine oral mucosa Columbia University in the City of New York (New York)

Preceptor: Dr. J. Hyun Park

#### PM-040. Cameron Clarke

Effect of Single-Dose and Fractionated Radiation on Fatty Acid Synthesis Howard University (District of Columbia) Preceptors: Dr. Adeola Makinde, Dr. Norman Coleman

### PM-041. Shalva Cohen

The Effects of the Neurotransmitter Norepinephrine on Cancer Progression

Bnos Yisroel of Baltimore (Maryland)

Preceptors: Dr. Daniel Edelman, Ms. Sarah Deasy

#### PM-042. Katherine Curt

Combined Bromodomain and AKT Inhibitor Treatment Sensitizes KRAS Mutant Cancers to Histone Deacetylase Inhibitor Romidepsin

Boston College (Massachusetts)

Preceptors: Dr. Michael Gottesman, Dr. Robert Robey

# PM-043. Alyssa Damon

Polycyclic aromatic hydrocarbon (PAH)-DNA Adduct Formation in Cancer Susceptible Beluga Whales

University of Maine (Maine)

Preceptors: Dr. Miriam Poirier, Dr. Daniel Martineau, Mrs. Kathy Divi

### PM-044. Anna Danilenko

Analysis of polymorphism in the IGHG1, IGHG2, and IGHG3 genes encoding constant heavy chains of immunoglobulin G subclasses.

Walter Johnson High School (Maryland)

Preceptors: Dr. Mary Carrington, Dr. Arman Bashirova

### PM-045. Benjamin Davies

Investigating TACE Resistance Mechanisms in Hepatocellular Carcinoma

University of Cincinnati (Ohio)

Preceptors: Dr. Valerie Miller, Dr. Xin Wang

## PM-046. Miranda Dawson

Gut microbiota regulates cisplatin induced system toxicity University of Illinois at Urbana-Champaign (Illinois)

Preceptors: Dr. Soumen Roy, Dr. Giorgio Trinchieri

#### PM-047. Sophie Dean

Analysis of Non-B Subtypes of HIV in Washington D.C.: Diversity and Transmitted Drug Resistance

r Coloidirec

University of Maryland, College Park (Maryland)

Preceptor: Dr. Frank Maldarelli

## PM-048. Emily DeBoy

Novel isoforms of lamin A/C

University of Maryland, College Park (Maryland) Preceptors: Dr. Tom Misteli, Dr. Madaiah Puttaraju

## PM-049. Yealshaday Demises

Novel RNA-based Therapeutic Agents for Cancers and Diseases Montgomery College (Maryland)

Preceptors: Dr. Lorena Parlea, Ms. Cara Brainerd

## PM-050. Korrina Duffy

The Association between Hormonal Therapies and Quality of Life in Breast Cancer Survivors Duke University (North Carolina)

Preceptor: Dr. Paige Green

## PM-051. Kiley Duncan, Brandon Shim

A Spitting Image in 3D: Visualization of Salivary Granule Fusion in Acinar Cells Bridgewater College (Virginia), Cornell University (New York) Preceptors: Dr. Kedar Narayan, Dr. Sriram Subramaniam

#### PM-052. Matthew Eason

All-trans Retinoic Acid Inhibits Perivascular Phenotypic Switching in the Pre-metastatic Microenvironment

University of Maryland, College Park (Maryland) Preceptors: Dr. Meera Murgai, Dr. Rosandra Kaplan

### PM-053. Josh Engel

The Effect of eIF4A Inhibition by SDS-1-021-(-) on Radiosensitivity Landon School (Maryland)

Preceptors: Dr. Amy Wahba, Dr. Philip Tofilon

### PM-054. Joshua Engels

Association Between Allergies and Other Immune-Related Conditions and Glioma Risk in a US Military Study

Walt Whitman High School (Maryland)

Preceptors: Dr. Ruth Pfeiffer, Dr. Alina Brenner

#### PM-055. Leila Ettehadieh

The development of a biomimetic platform for ex vivo culture of primary multiple myeloma University of Maryland, College Park (Maryland)

Preceptors: Dr. Claire Meaney, Dr. Beverly Mock

#### PM-056. Hannah Feinman

Genetic Determinants of Docetaxel Sensitivity Colgate University (New York) Preceptors: Dr. Tristan Sissung, Dr. William D. Figg

### PM-057. Kidus Feleke

Cell Cycle Dependent Regulation of Protein Expression in Endothelial Cells Jackson State University (Mississippi)

Preceptors: Dr. Lisa Ritchey, Dr. Giovanna Tosato

### PM-058. Yaeli Fink

Mutations in the Methylenetetrahydrofolate Reductase (MTHFR) Gene and Possible Adverse Effects on Pregnancy

Bnos Yisroel of Baltimore (Maryland)

Preceptors: Dr. Alida Palmisano, Dr. Daniel Edelman

### PM-059. Ann Foo

Impact of PI-RADSv2 in the Clinical Decision Making of Prostate Cancer University of Maryland, College Park (Maryland)

Preceptors: Dr. Ismail Baris Turkbey, Dr. Peter Choyke, Ms. Francesca Mertan

#### PM-060. Pete Foster

Using Human Squamous Cell Carcinoma to Investigate IKK-alpha's Response to Stress Lake Erie College of Osteopathic Medicine (Pennsylvania)
Preceptors: Ms. Jami Willette Brown, Dr. Yinling Hu

### PM-061. Sonia Francone

Modeling transporter cooperativity in cells transfected with the ATP-binding cassette transporters ABCB1 and ABCG2

Sewanee: The University of the South (Tennessee) Preceptors: Dr. Michael Gottesman, Dr. Robert Robey

#### PM-062. Dorian Frazier

The Structural Consequences of Allelic Variant in the Tor2 Heat Domains University of Maryland, Baltimore County (Maryland) Preceptors: Dr. Patricia Wiley, Dr. Beverly Mock

#### PM-063. Esther Freedman

Optimization of Immunohistochemistry in a Rare Pancreatic Tumor and in Mice with Metastatic Thyroid Cancer

Bnos Yisroel of Baltimore (Maryland)

Preceptors: Dr. Naris Nilubol, Dr. Electron Kebebew, Dr. Daniel Edelman

#### PM-064. Matthew Fuchs

Identifying Unique Sequence Variants in Families with MonoMAC Syndrome University of Pennsylvania (Pennsylvania)

Preceptors: Dr. Robert West, Dr. Dennis Hickstein

### PM-065. Aliyah Gaines

Fate of tissue resident macrophages in peritonitis models

Hampton University (Virginia)

Preceptors: Dr. Romina Goldszmid, Dr. Shafiuddin Siddiqui, Ms. Sayeh Gorjifard

### PM-066. Anurudh Ganesan

RNA Polymerase II Promoter: The Canonical "Winner" for Generating microRNA

Clarksburg High School (Maryland)

Preceptors: Ms. Angela DiNardo, Dr. Shou Gu

#### PM-067. Eric Joshua Garcia

Thrombospondin-1 modulate post-translational modification of Histone via CD47 Academy of Health Sciences at Prince George's Community College (Maryland)

Preceptor: Dr. Sukhbir Kaur

## PM-068. Samson gebretnsae

Assembly and peptidase activity study of mature Clpp1p2 Johns Hopkins university (Maryland)

Preceptor: Dr. Michael Maurizi

### PM-069. Gelare Ghajar-Rahimi

Subcellular Localization of NAT10 in Response to Metabolic Stress

University of Virginia (Virginia)

Preceptors: Dr. Shalini Oberdoerffer, Dr. Daniel Arango

#### PM-070. Heelah Gholian

Comprehensive Molecular Characterization of Liver Cancer

Darchei Binah Women's School for Advanced Torah Studies (Non-U.S.)

Preceptors: Dr. Anuradha Budhu, Dr. Marshonna Forgues, Dr. Xin Wang, Dr. Stephen Hewitt

## PM-071. Matthew Go

Development of a Microarray Data Analysis Web Application Using Shiny

West Ranch High School (California)

Preceptors: Dr. Maggie Cam, Dr. Fathi Elluomi

#### PM-072. Ellen Goldstein

Regulatory Effects by ZNF148 on Pancreatic Cancer Susceptibility Loci on chr5p15.33

University of Wisconsin - Madison (Wisconsin)

Preceptors: Dr. Ashley Jermusyk, Dr. Laufy Amundadottir

#### PM-073. Rainier Gomez

Kaplan-Meier Minimization to Identify Prognostically Relevant Genes in Cancer University of Maryland, College Park (Maryland)

Preceptors: Mr. Xinyu Wen, Dr. Javed Khan

### PM-074. Reet Goraya

Expression of PD-1 and PDL-1 in Malignant Brain Tumors Richard Montgomery High School (Maryland) Preceptor: Mrs. Patricia Fetsch

#### PM-075. Nomi Gordon

Comparing Response Rates of Two Cediranib Trials in ASPS Tumors
Hebrew Theological College (Non-U.S.)

Preceptors: Dr. Alice Chen, Dr. Robert Meehan, Dr. Geraldine O'Sullivan Coyne

#### PM-076. Monica Gouzoulis

Analysis of Intra-patient Full Length HIV gag Sequences Reveal Regions of Genetic Variability University of Maryland, College Park (Maryland)

Preceptors: Dr. Frank Maldarelli, Ms. Elizabeth Anderson

#### PM-077. Nikhil Gowda

Enhancing CCBR Workflows and Developing a VCF Browsing Tool St. Bonaventure University (New York)

Preceptors: Dr. David Wheeler, Dr. Parthav Jailwala, Dr. Fathi Elloumi, Dr. Justin Lack

### PM-078. Elisheva Greenberg

The Use of Erlotinib in Treatment of Non-Small Cell Lung Cancer Landers College for Women (New York)
Preceptors: Ms. Selamawit Addissie, Dr. Daniel Edelman

#### PM-079. Juliana Gruver

Molecular Cytogenetic Analysis of FGFR1 and NCOA2 Gene Rearrangements in Pediatric Rhabdomyosarcoma Using Tumor Tissue Microarrays

Thomas Jefferson High School for Science and Technology (Virginia)

Preceptors: Dr. Svetlana Pack, Dr. Ziedulla Abdullaev

### PM-080. Sabina Gudmundsson

Understanding the effects of HU Binding Non-Coding RNA on Chromosome Structure in Escherichia coli

Lehigh University (Pennsylvania)

Preceptors: Dr. Subhash Verma, Dr. Sankar Adhya

## PM-081. Megha Guggari

Targeting the Survival of TFE3-fusion Kidney Cancer Cells

Poolesville High School (Maryland) Preceptor: Dr. Carole Sourbier

## PM-082. Laquaundra Hampton

Evaluation of the specificity of CRISPR-based knockouts in neutrophil-like PLB-985 cells Hampton University (Virginia)

Preceptors: Dr. Bhagawat C. Subramanian, Dr. Carole A. Parent

## PM-083. Chenchen Handler

TIMP-2 treatment effects in a murine model of triple negative breast cancer (TNBC)

Thomas A. Edison High School (Virginia)

Preceptor: Dr. Sandra Jensen

## PM-084. Emerson Harris

Identification and Validation of Novel Candidate Susceptible Genes in Adrenocortical Carcinoma Harvard-Westlake School (California)

Preceptors: Dr. Sudheer Gara, Dr. Electron Kebebew

## PM-085. Shelby Hayes

The association of reproductive history with the risk of all-cause mortality among women diagnosed with non-small cell lung cancer

Ohio State University (Ohio)

Preceptors: Dr. Ashley Vargas, Dr. Curtis Harris, Ms. Elise Bowman

#### PM-086. Sylvia Herrada

Effect of Avelumab on the expression of immunomodulatory markers on bladder cancer lines University of Maryland, College Park (Maryland)

Preceptors: Dr. Jack Greiner, Dr. Maurice Morillon

#### PM-087. Brenda Ho

Clinical application of next generation sequencing: Analysis of Illumina library preparation protocols for FFPE tissue samples in cancer research

University of Maryland, College Park (Maryland)

Preceptor: Dr. Monika Mehta

#### PM-088. Jessica Ho

Development of a Droplet Digital PCR Assay for Pre-NGS Quality Assessment of DNA from FFPE Specimens

University of Georgia (Georgia)

Preceptors: Dr. Hye-Jung Chung, Dr. Ligiang Xi, Dr. Mark Raffeld

### PM-089. Karima Holmes

Characterization of Vaccine-Induced TARP-Specific Responses by Intracellular Cytokine Staining (ICS)

Howard University College of Medicine (District of Columbia)

Preceptors: Dr. Lauren Wood, Ms. Katherine McKinnon

#### PM-090. Luna Homsi

Purification of ABC Drug Transporters: Assessment of Protein Estimation Methods University of Maryland, College Park (Maryland)

Preceptors: Dr. Suresh Ambudkar, Dr. Suneet Shukla

## PM-091. Gregory E. Hoy

Genomic and Transcriptomic Analysis of 12q13-q14 Amplification in Human Cancer Baylor University (Texas)

Preceptors: Dr. Frederic G. Barr, Dr. Wenyue Sun

### PM-092. Kevin Hu

Donor-derived naive CD4+ T cells induce chronic graft-versus-host disease in a pre-clinical model

Eastern Virginia Medical School (Virginia)

Preceptor: Dr. Nataliya Buxbaum

## PM-093. Caroline Huang

Investigating Interactions between Candidate Cooperating Genes and the Natural Product Schweinfurthin in Malignant Peripheral Nerve Sheath Tumors

Walnut High School (California)

Preceptors: Dr. Karlyne Reilly, Mr. Robert Tuskan

#### PM-094. Erin Huiting

Vaccine-mediated induction of Simian Immunodeficiency Virus Env-Specific Germinal Center B-cells in Rhesus Macaques

Colgate University (New York)

Preceptors: Dr. Marjorie Guroff, Dr. Sabrina Helmond

### PM-095. Alissa Hummer

CRISPR/Cas9 Mediated Knockout of Glypican-3 in Hepatocellular Carcinoma

University of Oxford (Non-U.S.)

Preceptors: Dr. Mitchell Ho, Dr. Nan Li

### PM-096. Maddie Hurwitz

Biological Characterization of Synthetic Alarmins

Stanford Online High School (California)

Preceptors: Mrs. Anna Trivett, Dr. De Yang, Dr. Joost Oppenheim

## PM-097. Marsha-Kay Hutchinson

Blockade of CTLA-4 receptor alleviates dexamethasone-induced lymphopenia Howard University (District of Columbia)

Preceptors: Dr. Amber Giles, Ms. Caitlin Reid, Dr. Mark Gilbert

### PM-098. Abraham Ipe

miR-331-3p is a Novel Contributor of Disease Aggressiveness in Resected Pancreatic Cancer Patients

University of Maryland, College Park (Maryland)

Preceptor: Dr. Perwez Hussain

#### PM-099. Michelle Ji

Detection of tumor DNA in blood to determine the efficacy of T-cell based cancer immunotherapy in mice

Libertyville High School (Illinois)

Preceptors: Dr. Nicholas Restifo, Dr. Zhiya Yu

### PM-100. Nancy Jiang

Dissecting the Interplay Between Gene Expression and Topography in 3D Culture Systems Cornell University (New York)

Preceptors: Dr. Colin Paul, Dr. Kandice Tanner

## PM-101. Whitney Jin

The Biochemical and Structural Study of AAA+ p97 inhibitors Waubonsie Valley High School (Illinois)
Preceptors: Dr. Wai-Kwan Tang, Dr. Di Xia

### PM-102. David Johnson

Paradoxical signaling of primed T cells

Howard University College of Medicine (District of Columbia)

Preceptors: Dr. Gregoire Altan-Bonnet, Dr. Alon Oyler Yaniv, Mrs. Jennifer Oyler Yaniv, Dr.

Amir Erez

### PM-103. Joy Johnson

Regulation of Phage Lambda Promoters by Repressors CI and Cro Monterey Peninsula College (California)

Preceptors: Dr. Dale Lewis, Dr. Sankar Adhya

## PM-104. Shaq Junaid

Determining the Penetrance of UGT1A1 Variants in Anticancer Therapy

Duke University (North Carolina)

Preceptors: Dr. Tristan Sissung, Dr. William D. Figg

#### PM-105. Anusha Kambala

Impact of mTOR Inhibition with Rapamycin on Metastatic Progression in Canine Osteosarcoma University of Maryland, College Park (Maryland)

Preceptors: Ms. Christina Mazcko, Ms. Christine Tran Hoang, Dr. Arnulfo Mendoza, Dr. Amy LeBlanc

### PM-106. Nathan Kappler

Validation of potential substrates of the E3 ubiquitin ligase Smurf2 Baylor University (Texas)

Preceptors: Dr. Adam Thomas, Dr. Ying Zhang

### PM-107. Hameedah Khadar

Identifying New Molecular Markers for the Diagnosis of HLRCC Tumors Winston Churhcill High School (Maryland)

Preceptors: Dr. Xu Naizhen, Dr. Vanessa Moreno, Dr. Marston Linehan, Dr. Maria Merino

#### PM-108. Joshua Khan

SMCs produce extracellular matrix in response to tumor-derived factors that promotes tumor cell proliferation

University of Maryland, College Park (Maryland)

Preceptors: Mrs. Wei Ju, Dr. Meera Murgai, Dr. Rosandra Kaplan

#### PM-109. Shahrukh Khan

Expression of MUC-1 Protein on Bladder Cancer Cell Lines College of Staten Island, City University of New York (New York)

Preceptors: Dr. Piyush Agarwal, Dr. Reema Railkar

# PM-110. George Khludenev

In Search for Molecular Drivers in Diffuse Intrinsic Pontine Glioma: Characterization of DIPG Tumor Cell Lines by Spectral Karyotyping

George Washington University (District of Columbia)

Preceptors: Dr. Svetlana Pack, Dr. Zeidulla Abdullaev

### PM-111. Ria Kidner

The Role of Serine Metabolism in Pediatric Sarcomas
New Mexico Institute of Mining and Technology (New Mexico)
Preceptors: Dr. Lee Helman, Dr. Sameer Issaq

## PM-112. Bryce Killingsworth

Colorectal Cancer Extracellular Vesicle Identification by nanoFACS University of California, San Diego (California)

Preceptors: Dr. Jennifer Jones, Dr. Aizea Morales Kastresana

### PM-113. Justin Kim

Exploring Machine Learning for Cell Marker Tracking

Poolesville High School (Maryland)

Preceptors: Dr. Eric Stahlberg, Dr. George Zaki

### PM-114. Sarah Kim

Uncertainty in the esophagus dose in retrospective epidemiological study of radiotherapy patients

Clarksburg High School (Maryland)

Preceptor: Dr. Choonsik Lee

## PM-115. Jessica Kindrick

Effects of pH on the Physicochemical Properties of CRLX101, a Novel Nanopharmaceutical of Camptothecin

Georgetown College (Kentucky)

Preceptors: Dr. William D. Figg, Dr. Cody Peer, Dr. Keith Schmidt

### PM-116. Vikraant Kohli

Strategies to Direct Localization of RNAs to Specific Subcellular Compartments

The University of Texas at Austin (Texas)

Preceptors: Dr. Tianhong Wang, Dr. Stavroula Mili

#### PM-117. Laurie Kostecka

Effect of IL-17A on keratinocyte migration and differentiation

University of Tampa (Florida)

Preceptors: Dr. Christophe Cataisson, Ms. Mary Klosterman, Dr. Stuart Yuspa

#### PM-118. Max Krause

Effects of HB21-PE40 and 806-PE38 Immunotoxins on the Viability of A431 Carcinoma Cells Landon School (Maryland)

Preceptors: Dr. David FitzGerald, Dr. Nathan Simon

#### PM-119. Asha Kunchakarra

A Study of Protein A Mediated-Mitophagy Induced by Hypoxia

River Hill High School (Maryland)

Preceptors: Dr. Anling Zhang, Dr. Swati Choksi, Dr. Zhenggang Liu

#### PM-120. Sarah Lake

A Study of Glucocorticoid Receptor-Mediated Transcription at a Single Promoter Reporter Gene in Living Cells

Middlebury College (Vermont)

Preceptors: Dr. Diana Stavreva, Dr. Gordon Hager, Dr. Murali Palangat

## PM-121. Wayne Lawrence

Exploring Germline Risk Variants in Osteosarcoma

University At Albany, State University of New York (New York)

Preceptors: Dr. Josh Waterfall, Dr. Yonghong Wang, Dr. Jack Zhu, Dr. Paul Meltzer

# PM-122. Allyssa Lee

Evaluating p53 immunohistochemistry as a surrogate for mutation status in high grade gliomas Howard University College of Medicine (District of Columbia)

Preceptors: Dr. Martha Quezado, Dr. Drew Pratt

# PM-123. Alycia Lee

Knockout of LMO4 in Mouse Lin-Sca1+c-Kit+ Cells with CRISPR/Cas9

Wissahickon High School (Pennsylvania)

Preceptors: Dr. Avinash Bhandoola, Dr. Yueqiang Wang

#### PM-124. Jae woo Lee

Integrating Genomic and Proteomic Data to Understand the Role of CtBP in Breast Cancer

New York University (New York)

Preceptors: Dr. Kevin Gardner, Dr. Jung Byun

# PM-125. Jonathan Legesse

Investigation into N-Myc Interaction

Wheaton High School (Maryland)

Preceptor: Dr. Zhihui Liu

### PM-126. Hiwot Lema

Antibody-based Therapies against Rhabdomyosarcoma

Northwestern High School (Maryland)

Preceptors: Dr. Martin Skarzynski, Dr. Javed Khan

#### PM-127. Ben Levinson

PD-L1 as a Target in Glioblastoma

Northwestern University (Illinois)

Preceptors: Dr. Anita Tandle, Dr. Kevin Camphausen

#### PM-128. Bowen Lian

A Closer Look at the HIV-1 Rev Response Element: The Effect of Mutations in Domain I on

**Function** 

University of Maryland, College Park (Maryland)

Preceptors: Dr. Alan Rein, Ms. Demetria Harvin

### PM-129. V. Rose Lieberman

In B. subtilis, a methyltransferase prmC coordinates morphogenesis of a static structure during sporulation

George Washington University (District of Columbia)

Preceptors: Dr. Kumaran Ramamurthi, Ms. Amanda Decker

#### PM-130. Ann Lih

Volumetric assessment, and its relation to RECIST 1.1 response, in patients with Desmoid tumors

Rutgers University (New Jersey)

Preceptors: Dr. Geraldine O'Sullivan, Dr. Les Folio, Dr. Laura Machado-Pichardo, Dr. Alice Chen

#### PM-131. Hanna Lindner

Regional Trends and Patterns in Prostate Cancer Incidence among Blacks and Whites in the United States

University of Pennsylvania (Pennsylvania)

Preceptors: Dr. Phil Rosenberg, Dr. Pavel Chernyavskiy, Dr. Scott Kelly, Dr. Bill Anderson

#### PM-132. Andrew Liu

Production, Purification, and Characterization of TIMP-2 from E.coli

Richard Montgomery High School (Maryland)

Preceptors: Dr. Ananda Chowdhury, Dr. William G. Stetler-Stevenson

### PM-133. Sophia Liu, Maxwell Bao

Biophysical Study of Nucleosome Recognition by ISWI ATPase

Montgomery Blair High School (Maryland), Liberty High School (Maryland)

Preceptors: Mr. Yawen Bai, Mr. Jingjun Hong

#### PM-134. Jacob Lu

RiboSketch: An Interactive Visualization Tool for Intermolecular Base Pairing

Walter Johnson High School (Maryland)

Preceptors: Dr. Eckart Bindewald, Dr. Bruce Shapiro

### PM-135. Arushi Mahajan

A precise technique to trigger transformations in mesothelial cells: implications for mechanisms University of Michigan (Michigan)

Preceptors: Dr. Chuong Hoang, Dr. Nisan Bhattacharyya, Dr. Anand Singh

### PM-136. Mauricio Marquez Palencia

Exploring the Connection of Type III Interferons and PD-L1 Expression in Breast and Bladder cancer

University of California, San Diego (California)

Preceptors: Dr. Ludmila Prokunina-Olsson, Dr. Olusegun Onabajo

#### PM-137. Erin Marshall

Structure and Function of Stapled Peptides targeting LUBAC

Hood College (Maryland)

Preceptors: Dr. Federico Bernal, Dr. Amanda Whiting, Dr. Merissa Baxter

#### PM-138. Jennifer Marshall

Synthesis of Novel Linkers for the Stable Presentation of Biologically Relevant Molecules on Nanoparticles

High Point University (North Carolina)

Preceptors: Dr. Joseph Barchi, Dr. Shailesh Ambre

### PM-139. Monika Masanam

Effect of Mitochondrial Pyruvate Transporter Inhibition on Cancer Cell Radiation Response Rutgers University (New Jersey)

Preceptor: Dr. Aparna Kesarwala

### PM-140. Rebecca Matthews

Wnt-Regulated Transcription Factors Determine the Fate of Bipotential Embryonic Progenitors University of Maryland, College Park (Maryland)

Preceptors: Dr. Ravindra Chalamalasetty, Dr. Robert Garriock, Mrs. Sara Thomas, Dr. Terry Yamaguchi

#### PM-141. Ann McElvein

The lineage-restricted transcription factor C/EBPa blunts the DNA damage response University of California, Berkeley (California)

Preceptors: Dr. Anthony Tubbs, Dr. Andre Nussenzweig

#### PM-142. Charlotte Anne Miller

The Effect of Radiation Therapy on Glucose Transporter Levels in Glioblastoma versus Glioblastoma Stem-like Cell Lines

Holton-Arms (Maryland)

Preceptors: Dr. Elizabeth Spehalski, Dr. Kevin Camphausen

### PM-143. Nina K. Min

Testing the Applicability of "Catch-and-release" Communication to Other Cytokines and Cell Types

University of Maryland, College Park (Maryland)

Preceptors: Mrs. Jennifer Oyler-Yaniv, Dr. Grégoire Altan-Bonnet

### PM-144. Seog In Moon

Characterizing TMZ Sensitivity in IDH Mutant Gliomas Amherst College (Massachusetts) Preceptors: Dr. Yang Liu, Dr. Chunzhang Yang

### PM-145. Brittni Moore

The Effect of UVB Light Treatment on the Expression of IKK{alpha} in Human (H520) Lung

Carcinoma Squamous Cells

Pepperdine University (California)

Preceptors: Dr. Yinling Hu, Dr. Feng Zhu

### PM-146. Caroline Moore

Patient Demographics at the NCI Early Phase Clinic: Trends over 5 years

San Diego State University (California)

Preceptors: Dr. Geraldine O'Sullivan Coyne, Dr. Alice Chen, Dr. Robert Meehan

### PM-147. Brandon Mui

The Role of DNMT3b in Cancer Cell Clonal Evolution and Metastasis

Cornell University (New York)

Preceptors: Dr. Olga Aprelikova, Dr. Zhiguang Xiao, Dr. Li Yang

#### PM-148. Saida Muktar

Characterizing Cytokine Gene Expression in Mouse Peripheral Blood Mononuclear Cells Using

Real-time PCR in a Model of Neurofibromatosis Type 1

University of Maryland, Baltimore County (Maryland)

Preceptors: Dr. Souvik Karmakar, Dr. Karlyne Reilly

### PM-149. Diego Munoz

Validation of a Murine Xenograft Model System For Gene Expression Analysis of Human

Adrenocortical Cancer

Montgomery College (Maryland)

Preceptors: Dr. Kandice Tanner, Dr. King Leung Fung, Dr. Lyn Huff, Dr. Michael Gottesman

## PM-150. Christina Murphy

A High Throughput Drug Screen Identifies Inhibitors of PAX3-FOXO in Pediatric

Rhabdomyosarcoma

University of Notre Dame (Indiana)

Preceptor: Dr. Jack Shern

### PM-151. Gillian Murray

Characterization of phage λ immunity terminator

Colgate University (New York)

Preceptors: Dr. Lynn Thomason, Dr. Don Court

## PM-152. Eric Nguyen

Effect of GP78 on TRAIL sensitivity in triple negative breast cancer cell lines

Paint Branch High School (Maryland)

Preceptor: Dr. Stanley Lipkowitz

## PM-153. Khoa Dang Nguyen

Different Data Analysis Platforms to Interrogate Quantitative Mass Spectrometry Data in 3rd Generation EGFR TKI Response

University of California, Irvine (California)

Preceptors: Dr. Udayan Guha, Dr. Tapan Maity, Dr. Xu Zhang

## PM-154. Franklin Ning

Use of a Novel cIAP1 and XIAP Antagonist, SMAC-Mimetic in High-Grade Serous Ovarian Cancer

University of Maryland, College Park (Maryland)

Preceptors: Dr. Tina Annunziata, Dr. Kristen Zeligs

### PM-155. Brittany Nixon

Determining cytotoxicity of anti-glypican 3 immunotoxins in human cancer cell lines North Carolina Central University (North Carolina)

Preceptors: Dr. Bryan Fleming, Dr. Mitchell Ho

## PM-156. Karen-Alexandra Nogues

IRB Actions to Improve Regulatory Compliance

Harvard University (Massachusetts)

Preceptors: Dr. Michael Gottesman, Dr. Julia Slutsman, Ms. Charlotte Holden, Dr. Lynnette Nieman

#### PM-157. Aishwarya Nugooru

CD47 is required for activation and clustering of the TCR/CD3/ Intraflagellar Transport Complex to the Immune Synapse

Virginia Commonwealth University (Virginia)

Preceptors: Dr. Sukhbir Kaur, Dr. David Roberts

### PM-158. Evanna Nyambura

Minimal residual disease detection using patient specific IGH CDR3 in HCL and HCLv University of Maryland, Baltimore County (Maryland)

Preceptors: Dr. Robert Kreitman, Dr. Arons Evgeny, Ms. Katherine Potocka

#### PM-159. Obadi Obadi

Genome Wide Chromatin Accessibility in 2-Hydroxyglutarate Treated Breast Cancer Cell Line University of North Georgia (Georgia)

Preceptors: Dr. Wei Tang, Dr. Stefan Ambs, Dr. Prachi Mishra

### PM-160. Taivan Odzorig

Expression, Purification and Biochemical Study of P-glycoproteins University of Maryland, College Park (Maryland)

Preceptors: Dr. Di Xia, Dr. Fei Zhou

### PM-161. Priscilla Offei

Digital and Volumetric Tumor Response Assessment in Patients with Advanced Metastatic HER2+ Tumors Receiving An Autologous AdHER2 Dendritic Cell Vaccine Morgan State University (Maryland)

Preceptors: Dr. Lauren Wood, Dr. Laura Machado-Pichado, Dr. Les Folio

#### PM-162. Oluwole Olaku

Identifying Oncogenic Receptor Tyrosine Kinase Pathways in Urothelial Carcinoma of the Bladder

Morgan State University (Maryland)

Preceptors: Dr. Donald Bottaro, Dr. Andrea Apolo

#### PM-163. Ivannie Ortiz Rivera

Multi-Drug Resistance-Linked P-Glycoprotein (P-gp): Role of Non-Covalent Bonds in Substrate Interaction

University of South Florida (Florida)

Preceptors: Dr. Shahrooz Vahedi, Dr. Suresh Ambudkar

#### PM-164. Deborah Park

Uncovering LPA Signaling Cascades in Breast Cancer Cells University of Illinois at Chicago (Illinois) Preceptor: Ms. Christina Stuelten

#### PM-165. Swagata Patnaik

Determining the Effect of Differently Tagged Centromere Specific-Histone Variant CENP-A on Nucleosome Dynamics in Vivo

Northwestern University (Illinois)

Preceptors: Dr. Yamini Dalal, Dr. Daniël Melters, Dr. Minh Bui

### PM-166. Rhema Paul

Development of a Doxycycline-Inducible System in a Melanoma Cell Line to Elucidate the Role of Fibronectin in a Murine Model System

Howard University College of Medicine (District of Columbia)

Preceptors: Dr. Fung King, Dr. Kandice Tanner

### PM-167. Zaw Phyo

An Allelic Variant of mTOR Leads to Different Proliferation Pattern in Mouse Embryonic Fibroblasts

University of California, Los Angeles (California)

Preceptors: Dr. Joy Gary, Dr. Snehal Gaikwad, Dr. Patricia Wiley, Dr. Beverly Mock

### PM-168. Sydney Pimentel

Genetic Approaches to Understanding Regulated Proteolysis in Bacteria University of California, Berkeley (California)

Preceptors: Dr. Susan Gottesman, Dr. Arti Tripathi

## PM-169. Stephanie Pitts

Characterization of In Vitro Generated Osimertinib-resistant Lung Adenocarcinoma Cells Brown University (Rhode Island)

Preceptors: Dr. Udayan Guha, Dr. Tapan Maity

#### PM-170. Lauren Pruett

Precise Quantitation of DNA Molecules Bound to Protein

Clemson University (South Carolina)

Preceptors: Dr. Hidetaka Ohnuki, Dr. Giovanna Tosato

#### PM-171. Grace Purec

Patterns of Cancer Recurrence after 25 years in Patients Randomized to Mastectomy or Breast Conservation Therapy on Protocol 79-C-0111

Women's Institute of Torah Seminary (Maryland)

Preceptor: Dr. DeeDee Smart

#### PM-172. Nancy Qin

Radiation Induced mTOR Signaling in Prostate Carcinoma Cells after Single and Fractionated Radiation

Walt Whitman High School (Maryland)

Preceptors: Dr. Molykutty Aryankalayil, Dr. Adeola Makinde

### PM-173. Saqib Rana

Expression and Exploitation of Mesothelin in Certain Cancerous Cell Lines

Montgomery College (Maryland)

Preceptors: Dr. Swati Khanna, Dr. Raffit Hassan

#### PM-174. Mishal Rao, Sarah Baila Lazar

A Single-Molecule Study of Replication Origins in Mammalian Cells University of Maryland, College Park (Maryland), Bais Yaakov School for Girls (Maryland) Preceptors: Dr. Haiqing Fu, Dr. Christophe Redon, Dr. Mirit Aladjem

#### PM-175. Sneha Ravi. Jahnavi Prabhala

Radiation-Induced Senescence in MCF-7 Breast Cancer Cell Line
Thomas Jofferson High School for Science and Tochnology (Virginia). Thomas Jofferson High School for Science and Tochnology (Virginia).

Thomas Jefferson High School for Science and Technology (Virginia), Thomas Jefferson High School for Science and Technology (Virginia)

Preceptors: Dr. Murali Cherukuri, Dr. Chandra Nagineni, Dr. James Mitchell

### PM-176. Yuval Raviv

Transforming Growth Factor-β (TGF-β) Directly Regulates Breast Cancer Stem Cell Dynamics University of Maryland, College Park (Maryland)

Preceptors: Mr. Joshua Zent, Dr. Binwu Tang, Dr. Lalage Wakefield

### PM-177. Erika Rees-Punia

Predicted Body Fat Percentage versus Body Mass Index and Waist Circumference as Predictors of All-Cause Mortality

University of Georgia (Georgia)

Preceptors: Dr. Charles Matthews, Dr. Sarah Keadle

## PM-178. Bianca Reginauld

Differential regulation of cancer stem cell markers via TSP1 and SIRP Alpha Eleanor Roosevelt High School (Maryland)

Preceptor: Dr. Sukhbir Kaur

### PM-179. Alexander Restifo, Artemis Veizi, Pavan Ravindra

Atomic Resolution Structure Determination by Cryo-EM

Bethesda - Chevy Chase High School (Maryland), Thomas Jefferson High School for Science and Technology (Virginia), River Hill High School (Maryland)

Preceptors: Dr. Lesley Earl, Dr. Oleg Kuybeda, Ms. Tai Wei Guo, Dr. Sriram Subramaniam

### PM-180. Andrea Robinson

Targeting the multidrug resistant transporter, P-glycoprotein, in a model of Adrenocortical Cancer.

University of North Texas (Texas)

Preceptors: Dr. Michael Gottesman, Dr. Robert Robey, Dr. Fatima Ali-Rahmani

## PM-181. Louis Rodgers

Plasma and cerebrospinal fluid (CSF) pharmacokinetics of panobinostat following oral administration to nonhuman primates

Centre College (Kentucky)

Preceptors: Dr. Cody Peer, Dr. William Figg, Dr. Katherine Warren

### PM-182. Danielle Rossi

The Effect of Estradiol Fluctuations on Transcription in Monolayers and 3D Cell Cultures University of Maryland, College Park (Maryland)

Preceptors: Dr. Dan Larson, Dr. Joseph Rodriguez, Dr. Murali Palangat, Dr. Huimin Chen

#### PM-183. Jenna Salter

Assessing quantitative techniques for the use of [18F]FDG in PET/CT metabolic imaging to determine applicability in varying Patient Derived Mouse Xenograft models for co-clinical treatments

James Madison University (Virginia)

Preceptor: Dr. Joseph Kalen

### PM-184. Santiago Sanchez

Oncogenic activation of the RNA binding protein AGO2 in hepatocellular carcinoma University of Texas at Austin (Texas)

Preceptors: Dr. Hien Dang, Dr. Xin Wei Wang

#### PM-185. Jack Sanford

CRISPR/Cas9-based genetic modification of mouse signal-induced proliferation-associated 1 (SIPA1) gene with fluorescent mCherry tag and/or with inducible nuclear localization domain ERT2

Towson University (Maryland)

Preceptors: Dr. Kent Hunter, Dr. Karol Szczepanek, Dr. Ngoc-Han Ha

#### PM-186. Ontara Sarker

Analyzing the Role of 25-Hydroxycholesterol as a Part of the Innate Immune Response Against Herpesvirus Infection

University of Maryland, College Park (Maryland)

Preceptors: Dr. Joseph M. Ziegelbauer, Dr. Anna Serquina

### PM-187. Pranavi Sayyaparaju

Identifying a Novel Molecule in the Inflammasome Pathway

River Hill High School (Maryland)

Preceptors: Dr. Moran Choe, Dr. Swati Choksi, Dr. Zhenggang Liu

#### PM-188. Hadassah Schwartz

Using Lipid Coated RNA Nanoparticles to Target Dendritic Cells for Cancer Immunotherapy Bnos Yisroel of Baltimore (Maryland)

Preceptors: Dr. Daniel Edelman, Dr. Jessica Pierce

### PM-189. Drake Scott

Examining Potential Correlations Between CD20/CD22 Expression Trends and Cytogenetic data including Hb count, Plt count, ALC and FISH Data for Cases of CLL, SLL and MBL University of Maryland, College Park (Maryland)

Preceptors: Mrs. Dalia Salem, Mr. Greg Jasper, Mrs. Mary Alice Stetler-Stevenson, Mrs. Cathy McCoy

### PM-190. John Sears

A Buffered Alcohol-Based Fixative for Histomorphologic and Molecular Applications

Colby College (Maine)

Preceptors: Dr. Joon-Yong Chung, Ms. Candice Perry, Mr. Kris Ylaya, Dr. Stephen Hewitt

#### PM-191. Matthew Seebald

Silencing DNA repair pathways using ECO/siRNA nanoparticles for the enhancement of radiation response in glioblastoma

The Landon School (Maryland)

Preceptor: Dr. Jennifer Lee

### PM-192. Kishan Segu

Mapping the Interaction Site of the Arf GAP, ASAP1 PH, with the Arf1 Guanine Nucleotide Binding Protein

University of Maryland, College Park (Maryland)

Preceptor: Dr. Neeladri Roy

### PM-193. Saadiya Sehareen

Investigating the role of CEBPD transcription factor in inflammatory breast cancer University of Maryland, College Park (Maryland)

Preceptors: Dr. Balamurugan Kuppusamy, Dr. Esta Sterneck

# PM-194. Ashlee Seldomridge

Antitumor Mechanism of Ketogenic Diet: Ketosis versus Hypoglycemia

West Virginia University (West Virginia)

Preceptors: Dr. Jinkyu Jung, Dr. Amber Giles, Dr. Mark Gilbert, Dr. Deric Park

### PM-195. Claire Seo

Role of Akt Isoforms in Progression to Metastatic Status of Melanoma

Columbia University (New York)

Preceptors: Dr. Yanlin Yu, Dr. Glenn Merlino

## PM-196. Gian Sepulveda

Understanding the Differences between Chimeric Antigen Receptor and Endogenous T Cell Receptor Signaling

Colgate University (New York)

Preceptors: Dr. Terry Fry, Dr. Eric Kohler

### PM-197. Taresh Sethi

Cellular Topoisomerase I Inhibition and Antiproliferative Activity of Indenoisoquinolines Selected for Preclinical Development

Oakton High School (Virginia)

Preceptor: Dr. Keli Agama

### PM-198. Griffin Shoemaker

Pomalidomide Induces Expansion of Activated and Central Memory CD4+ and CD8+ T-Cells, and Decreases Senescent CD4+ and CD8+ T-Cells in Patients with Kaposi Sarcoma ETSU Quillen College of Medicine (Tennessee)

Preceptors: Dr. Thomas Uldrick, Dr. Robert Yarchoan, Dr. Irini Sereti

# PM-199. Maham Siddiqui

Clinical Cytology and Signal Transduction Dysregulation: A Translational Approach in Mesothelioma using public genomic data repositories in conjunction with Nanostring nCounter expression analysis to identify disease associated profiles

University of Virginia (Virginia)

Preceptors: Dr. Mark Roth, Dr. Armando Filie

### PM-200. Zoe Silsby

The Bcl-2/Bcl-xL inhibitor navitoclax with PARP inhibition results in greater cytotoxicity than monotherapy in ovarian cancer.

Boston College (Massachusetts)

Preceptors: Dr. Jung-Min Lee, Dr. Takuhei Yokoyama, Dr. Minshu Yu

## PM-201. Gurbani Singh

Association of Clinical Morbidities and Plexiform Neurofibroma Volume Changes in Neurofibromatosis Type 1

Thomas S. Wootton High School (Maryland)

Preceptors: Dr. Brigitte Widemann, Dr. Andrea Gross, Ms. Andrea Baldwin, Dr. Eva Dombi

### PM-202. Dylan Smith

In vitro Investigation of Lung Fibroblast Function of TIMP2 Mutant Mice St. Mary's College of Maryland (Maryland)

Preceptors: Dr. WIlliam Stetler-Stevenson, Dr. David Peeney

#### PM-203. Jillian P Smith

Imaging Fluorescent CAR Constructs on Lentiviral Transduced T cells to Assess CAR Functionality

Jacobs School of Medicine (New York)

Preceptor: Dr. Terry Fry

### PM-204. Mark Sokolsky

MYF6 Expression in Chronic B-Cell Malignancies University of Maryland, College Park (Maryland)

Preceptors: Dr. Evgeny Arons, Dr. Robert Kreitman, Mr. Nathan Chai

#### PM-205. Sarah Solomon

Bridging qualitative and quantitative methods: A study of perceived influence of childhood cancer on the parents' marital/partner relationship

Swarthmore College (Pennsylvania)

Preceptors: Mrs. Marina Noronha Ferraz de Arruda Colli, Dr. Sima Zadeh, Dr. Lori Wiener

#### PM-206. Haein Son

Identifying the Role of Golgi Phosphoprotein 3 in Merkel Cell Carcinoma University of Rochester (New York)

Preceptors: Dr. Isaac Brownell, Dr. Tara Gelb

### PM-207. Heather Sonnemann

Alerting the Immune System by Removing Epigenetic Silencing of TH1 Chemokines Arizona State University (Arizona)

Preceptors: Dr. Amber Giles, Ms. Caitlin Reid, Dr. Mark Gilbert

## PM-208. Zachary Stanik

Training and Skills Assessment for MRI/TRUS Fusion-Guided Prostate Biopsy: End-Fire vs. Side-Fire Ultrasound Probes

Solon High School (Ohio)

Preceptors: Dr. Peter Pinto, Dr. Abhinav Sidana, Dr. Brad Wood

### PM-209. Paul Stewart

Specific Targeting of Methylthioadenosine Phosphorylase (MTAP) Deficient Bladder Cancer Cells

Graceland University (Iowa)

Preceptors: Dr. Piyush Agarwal, Dr. Spencer Krane, Dr. Reema Railkar

### PM-210. John-Tod Surgeon

Elucidating Metastatic Tendencies of Dormant Cells in a Brain Mimetic Niche Howard University (District of Columbia)

Preceptors: Dr. Jack Staunton, Dr. Kandice Tanner, Ms. Alexus Devine, Dr. King Leung Fung

#### PM-211. Omid Tabatabaee

Characterization of an HLA-DP4-restricted NY-ESO-1 T Cell Receptor for Cancer Immunotherapy

Walt Whitman High School (Maryland)

Preceptor: Dr. Yong-Chen Lu

### PM-212. Amin Tafti

The Effect of AGAP1 on the ATPase Activity of a Kinesin-13 Called KIF2A Temple University (Maryland)

Preceptors: Dr. Ruibai Luo, Dr. Paul Randazzo

## PM-213. Elena Takas

Synthesis of Novel Analogues of the Antiproliferative Factor (APF) Glycopeptide for Anticancer Nanoparticle Drug Design

Urbana High School (Maryland)

Preceptors: Dr. Joseph Barchi Jr., Dr. Shailesh Ambre

## PM-214. Christopher Tao

Is Water Pipe Smoking Safer Than Cigarette Smoking? A Comparison of Cytokines Released from Immortalized Normal Airway Epithelial Cells

River Hill High School (Maryland)

Preceptors: Dr. Haobin Chen, Dr. David Schrump, Dr. Yin Xiong

## PM-215. Emma Taylor

Biospecimen Repository: Providing human biomaterial to research investigators

Reservoir High School (Maryland)

Preceptors: Dr. Joseph Chinquee, Dr. Martha Quezado

#### PM-216. Betel Teka

To test the anti-tumor activity of Triapine (3-Aminopyridine-2-arboxaldehydethiosemicarbazone), a potent inhibitor of ribonucleotide reductase in Glioblastoma Multiforme Georgetown University (District of Columbia)

Preceptor: Dr. Anita Tandle

## PM-217. Kenya Thrasher

Effect of TGF-beta blockade on a therapeutic vaccine

Georgia State University (Georgia)

Preceptors: Dr. Masaki Terabe, Dr. Jay Berzofsky, Ms. Katharine Clark, Dr. Lauren Wood

## PM-218. Leann To

Hfq-mediated control of mutS repair gene expression in Salmonella enterica LT2 Oklahoma City Community College (Oklahoma)

Preceptors: Dr. Jiandong Chen, Dr. Susan Gottesman, Mr. Francois de Mets

## PM-219. Alexandra Toscano

A Pilot Study of Volumetric Tumor Analysis in Adenoid Cystic Carcinoma Spencerville Adventist Academy (Maryland)

Preceptors: Ms. Molly Malarkey, Dr. Priscila Goncalves, Dr. James Gulley, Dr. Les Folio

#### PM-220. Tim Traynor

ROS Generation Following Proteasome Inhibition University of Maryland, College Park (Maryland) Preceptors: Dr. Beverly Mock, Dr. Snehal Gaikwad

### PM-221. Marguerite Tucker

Validation of a DNA Methylation Assay for Analysis of Lung Cancer Clinical Samples American University (District of Columbia)

Preceptors: Dr. Ana Robles, Dr. Curtis Harris

## PM-222. Onyinyechi Ukaire

IFN-lamda4 is a Potent Inhibitor of Hepatic Cancer Cell Proliferation

Tufts University (Massachusetts)

Preceptors: Dr. Olusegun Onabanjo, Dr. Adeola Obajemu, Dr. Ludmila Prokunina

## PM-223. Shriyash Upadhyay

5-hydroxymethylcytosine in E-Box motifs ACAT|GTG and ACAC|GTG increases DNA-binding of the B-HLH transcription factor TCF4 but not USF1

Montgomery Blair High School (Maryland)

Preceptors: Mr. Syed Khund-Sayeed, Dr. Charles Vinson

## PM-224. Hailey Vann

Gene Expression Analysis of Cereblon in Human Relevant Models

Georgetown University (District of Columbia)

Preceptors: Ms. Shaunna Beedie, Dr. William D Figg

#### PM-225. Akhil Wali

Statistically Significant Genes Between Non Muscle Invasive Bladder Cancer and Muscle Invasive Bladder Cancer With Their Targeted Pathways

Montgomery College (Maryland)

Preceptors: Dr. Piyush Agarwal, Dr. Habtom Ressom, Dr. Deepak Kumar, Dr. Kai Hammerich

#### PM-226. Kaitlyn Wang

Investigating Signaling Crosstalks in TGF-Beta Pathway

Richard Montgomery High School (Maryland)

Preceptors: Dr. Veenu Tripathi, Dr. Ying Zhang

## PM-227. Lydia Wang

Activation of ADAM Metalloproteinases Promotes Necroptosis and Cell Migration

Poolesville High School (Maryland)

Preceptors: Dr. Zhenggang Liu, Dr. Swati Choksi, Dr. Zhenyu Cai

## PM-228. Jazzmin Washington

Assessing synergistic drug response between the Unfolded Protein Response (UPR) and MAP-K pathways in melanoma

Gallaudet University (District of Columbia)

Preceptors: Dr. Kerrie Marie, Dr. Glenn Merlino

## PM-229. Isabella Waung

Histone Methyltransferase as a Target for the Radiosensitization of Cancer Cells Millburn High School (New Jersey)

Preceptors: Dr. Philip Tofilon, Dr. Barbara Rath

#### PM-230. Helen Webster

Role of Upf1 and HuR in a Novel 3'UTR Regulatory Mechanism in RAS Tumor Cells Davidson College (North Carolina)

Preceptors: Dr. Jacqueline Salotti, Dr. Peter Johnson

## PM-231. Ashley Williams

Dissecting in vivo Tumor Macrophage Interactions in Humanized Zebrafish (Danio rerio) Georgia Southern University (Georgia)

Preceptors: Dr. Kandice Tanner, Dr. Colin Paul, Dr. King Leung Fung, Ms. Alexus Devine

#### PM-232. Maria Wissler

Enhancement of Tumor Cell Radiosensitization by a Novel CDK4/6 Inhibitor Princeton University (New Jersey)

Preceptors: Dr. Sarwat Naz, Dr. James Mitchell, Ms. Anastasia Sowers

#### PM-233. Leah Wolfish

Molecular Mimicry and Its Potential Role in the Development of Multiple Sclerosis Bnos Yisroel (Maryland)

Preceptors: Dr. Daniel Edelman, Dr. Dionne Robinson

## PM-234. Hongjia Yang

Natural Killer Cells for HIV Eradication
Palisades Charter High School (California)
Preceptors: Dr. Dimiter Dimitrov, Mr. Wei Li

### PM-235. Jennifer Park

A Functional Study of Human Mitochondrial ClpX and ClpP and Variants University of Illinois at Urbana-Champaign (Illinois) Preceptors: Dr. Michael Maurizi, Dr. Yang Zhang

## PM-236. Ayobami Yoyin

Development of Non-Toxic Modulators for Multidrug Resistance-Linked ABC Drug Transporters Colgate University (New York)

Preceptors: Dr. Suresh Ambudkar, Dr. Eduardo Chufan, Dr. Biebele Abel

## PM-237. Jeffrey Yu

Identification and analysis of Helicobacter pylori and Epstein-Barr Virus nucleic acid sequences in gastric tissues

University of Maryland, College Park (Maryland)

Preceptors: Dr. Constanza Camargo, Dr. Charles Rabkin, Dr. Daoud Meerzaman

#### PM-238. Alex Zhang

Crystallization and X-ray diffraction studies of human-mouse chimeric and native human P-glycoprotein

University of Maryland, College Park (Maryland)

Preceptors: Dr. Lothar Esser, Dr. Di Xia

#### PM-239. Edward Zhao

NOX1 and NOX2 in Monocyte to Macrophage Differentiation

St. Albans School (District of Columbia)

Preceptors: Dr. Swati Choksi, Dr. Zhenggang Liu, Dr. Qing Xu, Dr. Chamila Kadigamuwa

## PM-240. Daniel Zhong

Study on tumor heterogeneity using targeted enrichment of single-cell genomic DNA and nextgeneration sequencing techniques

Thomas Sprigg Wootton High School (Maryland)

Preceptor: Dr. Yong-Chen Lu

# PM-241. Zhiying Zhu

Reproductive factors and risk of lung cancer: a systematic review and meta-analysis

City College of New York (New York)

Preceptors: Dr. Qing Lan, Dr. Wei Jie Seow

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

## PM-242. Eleanor Belilos

Subtype-Specific Breast Cancer Survival Trends

Cornell University (New York)

Preceptors: Dr. Jennifer Gao, Dr. Sandra Swain, Dr. William Anderson, Dr. Philip Rosenberg

## PM-243. Hannah Creutzfeldt, Elizabeth Chase

Geographic patterns in U.S. lung cancer incidence by histologic type

Wellesley College (Massachusetts), University of North Carolina at Chapel Hill (North Carolina)

Preceptors: Dr. Rena Jones, Dr. Susan Devesa

#### PM-244. Kelsey Decker

The global pattern of epidermal growth factor receptor mutations in lung adenocarcinoma Hood College (Maryland)

Preceptor: Dr. Wei Jie Seow

## PM-245. William Figg

Mosaic PPM1D Protein Truncating Variants and Risk in Breast Cancer Trinity College Dubllin (Non-U.S.)

Preceptors: Dr. Mitchell Machiela, Dr. Timothy Myers

## PM-246. Ernesto Gagarin

The effect of smoking on human gut microbiota Virginia Commonwealth University (Virginia)

Preceptor: Dr. Guogin Yu

## PM-247. Jessica Islam

Projections of cancer incidence among the HIV-positive population of the United states up to 2030

University of North Carolina at Chapel Hill, Gillings School of Global Public Health (North Carolina)

Preceptors: Dr. Meredith Shiels, Dr. Eric Engels

## PM-248. Justin Joseph

Effects on Metabolites of Reduced Dietary Sodium: The Dietary Approaches to Stop Hypertension-Sodium (DASH)-Sodium Feeding Study

Virginia Commonwealth University (Virginia)

Preceptors: Dr. Rachael Stolzenberg-Solomon, Dr. Andriy Derkach, Dr. Joshua Sampson

### PM-249. Yonathan Kefelegn

Comparative Analysis of Personal Samplers: A Field Study

Milken Institute of Public Health, George Washington University (District of Columbia)

Preceptors: Dr. Melissa Friesen, Dr. Jason Wong

#### PM-250, christen Khella

Screening for SNVs associated with clonal hematopoiesis

Rutgers University (New Brunswick) (New Jersey)

Preceptors: Dr. Stephen Chanock, Dr. Mitch Machiela

## PM-251. Natalie Kucharik

Associations of Breast Milk Erythropoietin and Lactoferrin Levels with HTLV-I Maternofetal Transmission in Jamaica

Tulane University (Louisiana)

Preceptors: Dr. Charles Rabkin, Dr. Maria Constanza Camargo

## PM-252. Margaret Langhamer

Associations between biliary tract cancers and family history of cancers in the Biliary Tract Cancers Pooling Project (BiTCaPP)

Emory University Rollins School of Public Health (Georgia)

Preceptors: Dr. Jill Koshiol, Dr. Alison Van Dyke

## PM-253. Seraph Han-Yin Lin

Identification of cellular factors regulating APOBEC3A and APOBEC3B expression in bladder cancer cell lines

Pasadena City College (California)

Preceptors: Dr. Rouf Banday, Dr. Olusegun Onabajo, Dr. Ludmila Prokunina-Olsson

## PM-254. Jessica Merberg

Identification/verification of a potentially deleterious CASP9 mutation in two Hairy Cell Leukemia (HCL) pedigrees and evaluation of the enzyme activity in cell lysates from affected and unaffected individuals

Boston College (Massachusetts)

Preceptors: Dr. Alex Pemov, Dr. Doug Stewart

#### PM-255. Adam Olson

NGS Analysis of Frequently Altered RCC Genes and Occupational Exposures to Carcinogens Miami University (Ohio)

Preceptors: Dr. Lee Moore, Dr. Michael Nickerson

#### PM-256. Arbor Quist

Nitrate Ingestion from Drinking Water and Diet and Pancreatic Cancer among Postmenopausal Women

University of North Carolina at Chapel Hill (North Carolina)

Preceptors: Dr. Rena Jones, Dr. Mary Ward

### PM-257. Sandhiya Ravichandran

Pulmonary Functions in Patients with Inherited Bone Marrow Failure Syndromes Washington University in St. Louis (Missouri)

Preceptors: Dr. Blanche Alter, Dr. Neelam Giri

#### PM-258. Loredana Santo

A prospective study of circulating resistin levels and multiple myeloma risk

George Washington University (District of Columbia)

Preceptor: Dr. Jonathan Hofmann

## PM-259. Ariana Savramis

Evaluation of Exome NGS to Confirm Variants in TCGA patients with Kidney Cancer Maret School (District of Columbia)

Preceptor: Dr. Michael Nickerson

## PM-260. Lucy Sun

Association Between Intake of Flavonoids and Incidence of Upper Gastrointestinal Cancers in the NIH-AARP Diet and Health Study

Harvard T.H. Chan School of Public Health (Massachusetts)

Preceptors: Dr. Jessica Petrick, Dr. Michael Cook, Dr. Katherine McGlynn

### PM-261. Andrew Teng

Genomic Characterization of Human Papillomavirus 16

Georgia Institute of Technology (Georgia) Preceptors: Dr. Kai Yu, Dr. Lisa Mirabello

#### PM-262. Janelle Thomas

Functional Characterization of a Pancreatic Cancer Risk Locus on Chr13q22.1

George Washington University (District of Columbia)

Preceptors: Dr. Laufey Amundadottir, Dr. Jason Hoskins

## PM-263. Natalie Turner

Age-specific incidence trends for non-cardia gastric carcinoma among younger and older adults University at Albany, State University of New York (New York)

Preceptors: Dr. Kai Yu, Dr. Charles Rabkin, Dr. Phil Rosenberg, Dr. William Anderson, Dr. Maria Constanza Camargo

### PM-264. Rachel Ungar

Comprehensive Genomic Analyses of Autosomal Recessive Hoyeraal-Hreidarsson Syndrome University of Arkansas (Arkansas)

Preceptor: Dr. Sharon Savage

#### PM-265. Eric Xiao

Systematic Review of the Impact of Smoking on Breast and Prostate Cancer Survivors Montgomery Blair High School (Maryland)

Preceptor: Dr. Fangyi Gu

#### PM-266. Rona Yu

An Investigation of Association of Genetic Susceptibility Risk with Somatic Mutation Burden in Prostate Cancer

Montgomery Blair High School (Maryland)

Preceptor: Dr. Bin Zhu

## PM-267. Clara Zettelmeyer

Exploring the effect of estradiol exposure on the expression of the APOBEC3 gene family in breast cancer cell lines

University of Edinburgh (Non-U.S.)

Preceptors: Dr. Ludmila Prokunina-Olsson, Dr. A. Rouf Banday, Ms. Krizia-Ivana Udquim

#### PM-268. Tracey Zhai

Microbiome associations by collection methods in two populations University of Maryland, College Park (Maryland)

Preceptors: Dr. Jianxin Shi, Dr. Emily Vogtmann, Dr. Xing Hua

# National Institute on Alcohol Abuse and Alcoholism (NIAAA)

## PM-269. Mohammed Akbar

The Identification of the Promoter Region for the Gene Encoding the Small G-Protein Rem2 University of Maryland, Baltimore County (Maryland)

Preceptors: Dr. Henry Puhl III, Dr. Stephen Ikeda

## PM-270. Ayelet Berkowitz

Modulation of Dietary n-6 and n-3 Fatty Acids on White Adipose Tissue Fatty Acid Composition The Siena School (Maryland)

Preceptors: Dr. Joe Hibbeln, Mr. James Loewke, Dr. Chuck Chen

## PM-271. Lindsay Eberhart

The Role of Striatal D2 Receptors on Indirect Medium Spiny Neurons in Cocaine Reinforcement Franklin and Marshall College (Pennsylvania)

Preceptor: Dr. Lindsay Eberhart

### PM-272. Daniel Gao

The Role of Lipocalin 2 in Neutrophilic Inflammation caused by Infections and Injuries in Liver Centennial High School (Maryland)

Preceptors: Dr. Bin Gao, Dr. Hongjie Li, Dr. Dechun Feng

#### PM-273. David Holovac

Cannabinoid 1 Receptor (CB1R) and Interferon Regulatory Factor 5 (IRF5) in Macrophages: Role in Type-2 Diabetes?

Colonel Zadok A. Magruder High School (Maryland)

Preceptors: Dr. Tony Jourdan, Dr. Grzegorz Godlewski, Dr. George Kunos

#### PM-274. Michelle Hu

Endoplasmic reticulum stress contributes to chronic-plus-binge ethanol feeding-induced liver injury

Thomas Sprigg Wootton (Maryland)

Preceptors: Dr. Yan Cai, Dr. Ming-jiang Xu, Dr. Bin Gao

#### PM-275. Dorsa Jalali

Developmental Studies on 129S1 and C57B6: Understanding Fear Extinction

Montgomery College (Maryland)

Preceptors: Dr. Olena Bukalo, Mr. Aaron Limoges, Dr. Mio Nonaka, Dr. Andrew Holmes

## PM-276. Andrew Koch

Role of GSK-3beta in Striatum-dependent Behaviors

University of South Dakota (South Dakota)

Preceptors: Dr. Kari Johnson, Dr. David Lovinger

#### PM-277. Vanessa Kolb

The Role of Dopamine D2 Receptors in the Modulation of Consummatory Behaviors University of Rhode Island (Rhode Island)

Preceptors: Dr. Miriam Bocarsly, Dr. Veronica Alvarez

#### PM-278. Kristina Murani

Effects of Circadian Rhythms on fMRI Brain Reward Responses to Subliminal and Consciously Perceived Food Cues

American University (District of Columbia)

Preceptors: Dr. Corinde Wiers, Dr. Jizheng Zhao, Dr. Dardo Tomasi, Dr. Gene-Jack Wang

#### PM-279. Rachel Qian

Effects of Ethanol Consumption on Protein Expression in Rat Amygdala Poolesville High School (Maryland)

Preceptors: Dr. Hee-Yong Kim, Dr. Bill Huang

#### PM-280. Veronica Ramirez

Characterization of Physical Activity and Psychological Traits University of San Diego (California)

Preceptors: Dr. Ehsan Shokri Kojori, Dr. Gene-Jack Wang

### PM-281. Zichen Wang

Does alcohol drinking induce macrophages infiltration and inflammation in mouse stomach? University of Maryland, College Park (Maryland)

Preceptors: Dr. Tony Jourdan, Dr. Grezgorz Godlewski, Dr. George Kunos

## PM-282. Elgin Yalin

Social Delay Discounting: How One's Peers Impact Impulsive Choice in Healthy Non-dependent Drinkers

University of North Carolina at Chapel Hill (North Carolina)

Preceptors: Dr. Vijay Ramchandani, Dr. Bethany Stangl

## PM-283. Andrew Yi

The Effect of Acute Ethanol Binge in Adipocyte Death Richard Montgomery High School (Maryland) Preceptors: Dr. Seung-Jin Kim, Dr. Bin Gao

# National Institute of Arthritis and Muscoloskeletal and Skin Diseases (NIAMS)

## PM-284. Naveen Ambati

Identifying RNA targets of hnRNP A2/B1, Argonaute 2 and Drosha by PAR-CLIP University of Virginia (Virginia)

Preceptors: Dr. Aishe Sarshad, Dr. Markus Hafner

#### PM-285. Carensa Cezar

Trans-end mortality of patients with Systemic Lupus Erythematosus from 1960-present Howard University College of Medicine (District of Columbia)

Preceptors: Dr. Michael Ward, Dr. Maria Tektonidou

#### PM-286. Rachel Darko

Integrating Signaling and Cellular Phenotyping to understand Inflammatory Disease due to NF-kB Signaling Defects

Howard University (District of Columbia)

Preceptors: Dr. Eric Hanson, Dr. Younglang Lee

# PM-287. Elijah Davis

Bisphosphonate Associated Proteinuria in Patients with SLE University of Maryland, Baltimore County (Maryland)

Preceptors: Dr. Sarfaraz Hasni, Dr. Ann Biehl

#### PM-288. Joshua Glazier

Dynamic Regulation of lymphocyte IL-18 Receptor Expression: The basis for susceptibility to Macrophage Activation Syndrome University of Virginia (Virginia) Preceptor: Dr. Scott Canna

## PM-289. Sophia Gutierrez

Effect of ERAP1 Deficiency on Aberrant Forms of HLA-B27 Protein and UPR Gene Expression in HLA-B27 Transgenic Rats

Duke Ellington School of the Arts (District of Columbia)

Preceptor: Dr. Tri Tran

#### PM-290. Jazz Jacobs

Differences in circulating neutrophil extracellular trap (NET) complexes in healthy adult males and females: A surrogate marker for NETosis

Stevenson University (Maryland)

Preceptors: Dr. Mariana Kaplan, Dr. Sarthak Gupta, Ms. Nickie Seto

## PM-291. Somin Kim

Single cell innate immune signaling coupled with functional analysis of transcription factors IRF3 and NF-kappaB yields insights into inflammatory disease mechanisms

Emory University (Georgia) Preceptor: Dr. Eric Hanson

#### PM-292. Kathleen Marinelli

The Association between FDG-PET Imaging and Disease Activity in Takayasu's Arteritis

Creighton University (Nebraska)

Preceptor: Dr. Peter Grayson

#### PM-293. James Perez

Can chromatin accessibility predict whether transcription factor binding activates or represses gene expression?

University of California, Santa Barbara (California)

Preceptor: Dr. Fred Davis

# PM-294. Mary Rostom

Cloning and Purification of a Thermostable Reverse Transcriptase

University of Pittsburgh (Pennsylvania)

Preceptors: Dr. Daniel Benhalevy, Dr. Markus Hafner

#### PM-295. Erica Sadler

Deciphering the Role of the Mediator Complex in Mammalian Cells using CRIPSR/Cas9 Technology

Cornell University (New York)

Preceptors: Dr. Laila el Khattabi, Dr. Daniel Chauss, Dr. Kyong-Rim Kieffer-Kwon, Dr. Rafael

Casellas

# PM-296. Tiahna Spencer

Rheumatoid Arthritis Fibroblast-Like Synoviocytes Produce IL-9 and Its Production is Regulated by Pro-Inflammatory Cytokines

University of Connecticut School of Medicine (Connecticut)

Preceptors: Dr. Carmelo Carmona-Rivera, Mr. Philip Carlucci, Dr. Mariana Kaplan

# PM-297. Chrystal Thomas

AMPK Activation in Human and Mouse Bone Marrow Derived Macrophages

Carnegie Mellon University (Pennsylvania)

Preceptors: Dr. Cornelia Cudrici, Dr. Richard Siegel

## PM-298. Eugenia Zeng

The role of STAT3 in NLRP3-inflammasome activation

University of Rochester (New York)

Preceptors: Dr. Jehad Edwan, Dr. Robert Colbert

# National Institute of Environmental Health Sciences (NIEHS)

## PM-299. Mai-Han Trinh

The Impact of Pulmonary Infections and Alcohol Consumption on the Risk of Developing Anti-Synthetase Syndrome

University of Maryland, Baltimore County (Maryland)

Preceptor: Dr. Adam Schiffenbauer

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

## PM-300. Ruth Chang

Outlining an Open-Source Medical Graphics Library: User Interactivity and Asset Development University of Toronto (Non-U.S.)

Preceptors: Ms. Anne Altemus, Mr. Donald Bliss

#### PM-301. Nola Chen

Improving the Giardia proteome annotation using clusters of orthologous domains Northeastern University (Massachusetts)

Preceptors: Dr. Sergei Mekhedov, Dr. Eugene Koonin

## PM-302. Peng Guo

Java-Based Deep Learning Network for Medical Informatics Missouri University of Science and Technology (Missouri) Preceptor: Mr. Rodney Long

## PM-303. Deepa Gupta

Efficient fMRI processing using MATLAB and SPM on Hadoop University of Maryland, Baltimore County (Maryland) Preceptor: Mr. Leonard Rodney Long

#### PM-304. Emily Hendryx

Extracting Signals from Scanned ECG Images for Imaging Informatics Applications Rice University (Texas)
Preceptor: Dr. Sameer Antani

### PM-305. Farrah Hermes

Visualizing Complexity in Specific Genome Regions via RNA-Seq and Structural Variant Datasets

Virginia Commonwealth University (Virginia)

Preceptor: Dr. Ben Busny

#### PM-306. Brendan Joyce

Developing User Friendly Graphics Utilities for the RAId Tandem Mass Spectometry Database Search Tool

University of Maryland, College Park (Maryland)

Preceptors: Dr. Gelio Alves, Dr. Yi-Kuo Yu

#### PM-307. Cara Lwin

Massively Parallel Mapping of RNA-Seq Data to RefSeq with Magicblast

University of Pittsburgh (Pennsylvania)

Preceptor: Dr. Ben Busby

## PM-308. Sanna Madan, Jill Mantel

Mutational Patterns and Signatures in Cancer Genomes

Poolesville High School (Maryland), Pennsylvania State University (Pennsylvania)

Preceptors: Dr. Yoo-Ah Kim, Dr. Teresa Przytycka

## PM-309. Alexander Mykris

Production and Testing of Medical-Imaging-Derived Anatomical Models For Use in a Prototype Open-Source Scientific 3D Model Library

University of Toronto (Non-U.S.)

Preceptors: Mrs. Kristen Browne, Ms. Anne Altemus

#### PM-310. Rebekah Narum

Semi-Automated Ground-Truth Data Collection and Annotation for Journal Figure Analysis University of South Carolina (South Carolina)

Preceptors: Dr. Jie Zou, Dr. Sameer Antani

#### PM-311. Pruthvi Pota

Screening Metagenomic WGS Data for Nucleocytoplasmic Large DNA Viruses Using the Major Capsid Protein as Bait

Saint Louis University (Missouri)

Preceptors: Dr. Natalya Yutin, Dr. Yuri Wolf, Dr. Eugene Koonin

#### PM-312. Richard Wang

Computer Simulation of Protein Folding Using 2D Hydrophobic-Polar Lattice Model

Poolesville High School (Maryland)

Preceptor: Dr. Sigian He

# Office of the Director (OD)

#### PM-313. Avi Aggarwal

National Institutes of Health Pathways to Prevention Program: Weighing the Evidence, Identifying the Research Gaps, and Disseminating to the Prevention Research Community North Carolina State University (North Carolina)

Preceptors: Dr. Carrie Klabunde, Dr. Stephanie George, Dr. Elizabeth Neilson

## PM-314. Tierra Robinson-Morgan

Antibiotic Effects on the Composting Process University of Maryland University College (Maryland)

Preceptor: Mr. Edward Pfister

LUNCH SESSION LCH . 11:00 AM-1:00 PM

AFTERNOON SESSION PM 1:00 PM-3:00 PM

PARTICIPANTSESSION-POSTER#	Basu, Aakash	Castellano, David
Aarabi, Siavash	Battina, Rohith	Castillo, Ashley LCH-135
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Adetunji, Modupe LCH-011	Bawek, Sawyer	Cephas, DuyaniaPM-030
Afable, Jessica LCH-243	Bear, Christina LCH-170	Cervi, Meredith
Afsar, NinaPM-001	Beasley, Rebecca	Cezar, Carensa
Aggarwal, Avi	Beckford, Charlotte PM-012	Chadda, Ari LCH-176
Ajegba, Brittany LCH-041	Begaye, Brittany	Chakraborty, Shuvam AM-239
Akakpo, DianeLCH-042	Behrend, David LCH-255	Chan, WeilinLCH-225
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Akyatan, AlaraLCH-166	Belgrad, Jillian LCH-171	Chang, RuthPM-300
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Amchin, Daniel	Biberfeld, NechamaPM-018	Chen, JenniferPM-034
Amin, Vanisha AM-004, AM-237	Biberfeld, Nechama	Chen, JessicaLCH-086
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Anderson, SarahLCH-003	Blain, Hailey LCH-172	Chen, NolaPM-301
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Aredo, JacquelineAM-234	Brauneis, Elizabeth	Chigurupati, Snigdha LCH-136
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Balanda, Nick LCH-044	Calabrese, Samantha LCH-047	Clark, Michael
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Damon, Alyssa         PM-042         Esteves, Anabela.         L.CH-097         Glison, Genevieve         L.CH-267           Danchikk, Carina         AM-051         Estrada, Katherine         L.CH-097         Giordano, Nicholas.         L.CH-307           Danikenko, Anna         PM-046         PM-268         PM-268         Glazier.         Glazier.         John January	Dadkhoo, DonnaLCH-260	Esquinca, Adilene LCH-095	Ghosh, RoyLCH-189
Danchik, Carina	Damon, Alyssa		Gilson, Genevieve LCH-269
Danilenko, Anna			Giordano, NicholasLCH-307
Darko, Rachel         PM-286         Faidas, Maria         LCH-195         Glazier, Joshua         .PM-288           Das, Ria         AM-170         Fang, Francia         AM-253         Go, Matthew         .PM-071           Davies, Benjamin         .PM-045         Feizukner, Mia         LCH-208         Gold, Aniket         .AM-283           Davies, Ritey         .LCH-061         Feitsker, Alexander         .AM-083         Goldub, Stephanie         .AM-086           Davis, Sardndon         .LCH-0687         Feleke, Kidus         .PM-057         Gomez, Jordy         .LCH-196           Davis, Briana         .LCH-227         Feng, Austin         .AM-254         Goodwin, Agelet         .LCH-101           Davis, Elijah         .PM-287         Fenton, Graeme         .AM-255         Goodwin, Adam         .AM-259           Deans, Sphie         .PM-046         Ferrari Escoto, Jorge         .LCH-016         Goodwin, Adam         .AM-087           Dean, Spohie         .PM-047         Finik, Julia         .AM-013         Goraya, Reet         .PM-072           Decke, Samuel         .AM-171         Fisher, Emilie         .AM-064         Gordon, Nomi         .PM-075           Decker, Kelsey         .PM-248         Fishman, Nicolas         .LCH-051         Gowda, Nikhil <td></td> <td></td> <td></td>			
Das, Ria         AM-170         Fang, Francia.         AM-253         Go, Matthew         .PM-071           Davies, Benjamin         .PM-045         Faulkner, Mia         L.CH-208         Goel, Aniket         AM-251           Davies, Riley         LCH-261         Feistritzer, Alexander.         AM-083         Goldb, Stephanie         AM-086           Davis, Andrew         LCH-048         Feilek, Kidus         .PM-057         Gomez, Jordy         LCH-108           Davis, Briana         LCH-227         Feilek, Kidus         .PM-057         Gomez, Jordy         LCH-109           Davis, Briana         LCH-227         Feilz, Laura         AM-012         Gomez, Jordy         LCH-101           Davis, Bliah         .PM-247         Fenton, Graeme         .AM-254         Gonzez, Barine         .PM-070           Davis, Bliah         .PM-287         Fenton, Graeme         .AM-255         Goodman, Ayelet         .LCH-101           Davis, Briana         .AM-080         Ferrari Escoto, Jorge         .LCH-016         Goodwin, Adam         .AM-019           De Raya, Jianne         .AM-080         Fig.         William         .PM-245         Goodwin, Adam         .AM-019           Debloy, Emily         .PM-047         Fish         Jell         .PM-058         <			
Davidson, Hannah.         LCH-304         Faulkner, Mia         LCH-208         Goel, Aniket.         AM-258           Davies, Benjamin         P.M-045         Felinman, Hannah         .PM-056         Goldstein, Ellen.         .PM-072           Davis, Andrew         LCH-087         Felsek, Kidus.         .PM-057         Gorder, Bendon         .CH-048           Davis, Brandon         .CH-048         Felix, Laura         .AM-012         Gornzele, Selena.         .PM-079           Davis, Elijah         .PM-287         Feng, Justin.         .AM-524         Goodman, Ayelet.         .CH-101           Davson, Miranda         .PM-046         Ferrari Escoto, Jorge.         .LCH-016         Goodwin, Adam.         .AM-087           DeRaya, Jianne         .AM-080         Figg, William         .PM-245         Goodwin, Adam.         .AM-087           DeBoy, Emily         .PM-048         Fink, Yaeli.         .PM-058         Gordon, Nomi.         .PM-075           Decker, Kelsey         .PM-248         Fisher, Emilie         .AM-084         Gouzoulis, Monica         .PM-075           Dedouis, Christine         .LCH-261         Fishman, Nicolas         .LCH-051         Gowdon, Nikhil         .PM-077           Dedrazia, Zoe         .LCH-262         Flores, Alejandra         .AM-173 </td <td></td> <td></td> <td></td>			
Davies, Benjamin			
Davies, Riley         LCH-261         Feistritzer, Alexander.         AM-083         Golub, Stephanie         AM-086           Davis, Bradon         LCH-087         Felke, Kidus         PM-057         Gomez, Jordy.         LCH-198           Davis, Briana         LCH-227         Feng, Austin.         AM-0254         Gonzalez, Selena.         AM-259           Davis, Elijah.         PM-287         Fenton, Graeme         AM-255         Goodman, Ayelet         LCH-101           Dawson, Miranda         PM-046         Ferrari Escoto, Jorge         LCH-016         Goodwin, Adam         LCH-270           Dean, Sophie         PM-047         Fink, Julia         AM-013         Gordon, Amn         LCH-270           Deck, Samuel         AM-171         Fisher, Emilie         AM-086         Gordon, Nomi         PM-075           Decker, Ketsey         PM-244         Fisher, Emilie         AM-848         Gouzoulis, Monica         PM-076           DeGrazia, Zoe         LCH-265         Flores, Alejalara         AM-173         Greenberg, Lielheva         PM-076           Demises, Vealshaday         PM-049         Flower, Cameron         LCH-206         Goyal, Nikhil         PM-078, PM-078           Demmark, Iris         LCH-265         Foster, Pete         PM-059         Grimes			
Davis, Andrew         LCH-087         Feleke, Kidus         PM-057         Gomez, Jordy         LCH-190           Davis, Brandon         LCH-048         Felix, Laura         AM-012         Gomez, Rainier         PM-075           Davis, Etijah         PM-227         Feng, Austin         AM-259         Goodman, Ayelet         LCH-101           Dawson, Miranda         PM-046         Ferrari Escoto, Jorge         LCH-016         Goodwin, Adam         AM-027           De Raya, Jianne         AM-080         Figig, William         PM-0245         Goodwin, Adam         ALM-013           Dean, Sophie         PM-047         Fink, Julia         AM-013         Goraya, Reet         PM-072           Deboy, Emily         PM-048         Fisher, Emilile         AM-084         Gouzoulis, Monica         PM-075           Decker, Kelsey         PM-244         Fishman, Nicolas         LCH-051         Gowda, Nikhil         PM-077           Dedoulis, Christine         LCH-183         Flagg, Victoria         LCH-261         Goyal, Nikhil         AM-015           Derises, Sealshaday         PM-049         Foo, Ann.         PM-046         Goraya, Nikhil         AM-015           Demises, Vealshaday         PM-049         Foo, Ann.         PM-040         Grissom, Spencer         <	-		
Davis, Brandon         LCH-048         Felix, Laura         AM-012         Gomez, Rainier         PM-073           Davis, Briana         LCH-227         Feng, Austin         AM-254         Gonzalez, Selena         AM-256           Dawson, Miranda         PM-046         Ferrari Escoto, Jorge         LCH-016         Goodwin, Adam         AM-087           De Raya, Jianne         AM-080         Figg, William         PM-245         Goodwin, Anan         LCH-010           Dean, Sophie         PM-047         Fink, Julia         AM-013         Goraya, Reet         PM-074           Deboy, Emily         PM-048         Fink, Yaell         PM-058         Gordon, Nomi         PM-074           Deck, Samuel         AM-171         Fisher, Emille         AM-084         Gouzoulis, Monica         PM-076           Decker, Kelsey         PM-244         Fishman, Nicolas         LCH-051         Gowla, Nikhil         PM-076           DeGrazia, Zoe         LCH-262         Fiores, Alejandra         AM-173         Greenberg, Elisheva         PM-078           Demises, Yeatshaday         PM-049         Foo, Ann         PM-059         Greenberg, Elisheva         PM-078, PM-079           Demmark, Iris         LCH-089         Fortna, Sarah         AM-015         Griesenberg, Elisheva	-		·
Davis, Briana         LCH-227         Feng, Austin         AM-255         Gonzalez, Selena         AM-259           Davis, Elijah         P.M-287         Fenton, Graeme         AM-255         Goodman, Ayelet         LCH-101           Dawson, Miranda         P.M-046         Ferrari Escoto, Jorge         LCH-016         Goodwin, Adam         AM-087           De Raya, Jianne         AM-080         Figg, William         P.M-245         Goodwin, Anna         LCH-270           Dean, Sophie         P.M-047         Fink, Julia         AM-013         Gordon, Nomi         P.M-074           Deck, Samuel         AM-171         Fisher, Emilie         AM-084         Goordon, Nomi         P.M-075           Decker, Kelsey         P.M-244         Fishman, Nicolas         LCH-051         Gowda, Nikhil         PM-077           Dedrazia, Zoe         LCH-183         Flage, Victoria         LCH-266         Goyal, Nikhil         AM-015           Delaney, Dalton         LCH-088         Flower, Cameron         LCH-098         Greenblott, David         AM-015           Dennark, Iris         LCH-087         Foster, Pete         P.M-060         Griswol, Kira         AM-017           Deshpande, Rajiv         LCH-096         Foster, Pete         P.M-060         Griswold, Kira			-
Davis, Elijah         .PM-287         Fenton, Graeme         .AM-255         Goodman, Ayelet         .LCH-101           Dawson, Miranda         .PM-046         Ferrari Escoto, Jorge         .LCH-016         Goodwin, Adam         .AM-087           De Raya, Jianne         .AM-080         Figg, William         .PM-043         Gordwin, Anna         .LCH-270           Dean, Sophie			
Dawson, Miranda         PM-046         Ferrari Escoto, Jorge         LCH-016         Goodwin, Adam         AM-087           De Raya, Jianne         AM-080         Figg, William         .PM-245         Goodwin, Anna         .LCH-270           Dean, Sophie         .PM-047         Fink, Julia         .AM-013         Goraya, Reet         .PM-075           Debay, Emily         .PM-048         Fink, Yaeli         .PM-056         Gordon, Nomi         .PM-075           Deck, Samuel         .AM-171         Fisher, Emilie         .AM-084         Gouzoulis, Monica         .PM-076           Deck, Samuel         .AM-171         Fisher, Emilie         .AM-084         Gouzoulis, Monica         .PM-076           Deck, Samuel         .AM-171         Fisher, Emilie         .AM-086         Gouzoulis, Monica         .PM-076           Dedoulis, Christine         .LCH-183         Flores, Alejandra         .AM-075         Goval, Nikhil         .PM-076           DeGrazia, Zoe         .LCH-262         Flores, Alejandra         .AM-173         Greenblott, David         .AM-077           Delaney, Dalton         .LCH-088         Flover, Cameron         .LCH-098         Grienblott, David         .AM-078, PM-078, PM-078           Demises, Yealshaday         .PM-049         Foo, Ann         .PM-0			
De Raya, Jianne         AM-080         Figg, William         PM-245         Goodwin, Anna         LCH-270           Dean, Sophie         PM-047         Fink, Julia         AM-013         Goraya, Reet         PM-074           DeBoy, Emily         PM-048         Fink, Yaeli         PM-088         Gordon, Nomi         PM-076           Deck, Samuel         AM-171         Fisher, Emilie         AM-084         Gouzoulis, Monica         PM-076           Decker, Kelsey         PM-244         Fisher, Emilie         AM-084         Gouzoulis, Monica         PM-077           Dedoulis, Christine         LCH-183         Flagg, Victoria         LCH-261         Govada, Nikhil         PM-077           Delaney, Dalton         LCH-262         Flores, Alejandra         AM-173         Greenblott, David         AM-015           Delaney, Dalton         LCH-088         Flower, Cameron         LCH-098         Greenblott, David         AM-052           Deminses, Yealshaday         PM-049         Foot, Ann         PM-059         Grimes, Samantha         LCH-308           Deminses, Yealshaday         PM-049         Footan, Sarah         AM-014         Gripp, Emily         LCH-038           Deminses, Yealshaday         PM-049         Footan, Am         PM-050         Grimes, Samantha </td <td>-</td> <td></td> <td></td>	-		
Dean, Sophie         PM-047         Fink, Julia         AM-013         Goraya, Reet         PM-074           Deboy, Emily         PM-048         Fink, Yaeli.         PM-058         Gordon, Nomi         PM-075           Deck, Samuel         AM-171         Fisher, Emilie         AM-084         Gouzoulis, Monica         PM-076           Decker, Kelsey         PM-244         Fisher, Emilie         AM-084         Gouzoulis, Monica         PM-077           Dedoulis, Christine         LCH-183         Flagg, Victoria         LCH-266         Goyal, Nikhil         AM-015           DeGrazia, Zoe         LCH-262         Flores, Alejandra         AM-173         Greenberg, Elisheva         PM-078, PM-019           Delaney, Dalton         LCH-088         Flower, Cameron         LCH-098         Greenbott, David         AM-052           Demises, Yealshaday         PM-049         Foo, Ann         PM-059         Greenberg, Elisheva         PM-078, PM-019           Denmark, Iris         LCH-089         Fortna, Sarah         AM-014         Gripp, Emily         LCH-052           Denmark, Iris         LCH-087         Foster, Pete         PM-060         Grissom, Spencer         AM-018           Dinh, Duyhoang         AM-081         Fraccone, Sonia         PM-061         Griver, Ju		_	
DeBoy, Emily         PM-048         Fink, Yaeli         PM-058         Gordon, Nomi         PM-075           Decker, Samuel         AM-171         Fisher, Emilie         AM-084         Gouzoulis, Monica         PM-077           Decker, Kelsey         PM-244         Fishman, Nicolas         LCH-051         Gowda, Nikhil         PM-077           Dedulis, Christine         LCH-183         Flagg, Victoria         LCH-266         Gowda, Nikhil         AM-015           DeGrazia, Zoe         LCH-262         Flores, Alejandra         AM-173         Greenberg, Elisheva         PM-078, PM-019           Delaney, Dalton         LCH-088         Flower, Cameron         LCH-098         Greenblott, David         AM-052           Demises, Yealshaday         .PM-049         Foo, Ann         .PM-059         Greenblott, David         AM-052           Demmark, Iris         .LCH-089         Fortna, Sarah         AM-014         Gripp, Emily         .LCH-052           Demmark, Iris         .LCH-263         Foster, Pete         .PM-060         Grips, Emily         .LCH-052           Demmark, Iris         .LCH-263         Foster, Pete         .PM-061         Grips, Emily         .LCH-052           Demmark, Iris         .LCH-090         Foster, Pete         .PM-060         Grips, Emi			
Deck, Samuel         AM-171         Fisher, Emilie         AM-084         Gouzoulis, Monica         .PM-076           Decker, Kelsey         .PM-244         Fishman, Nicolas         .LCH-051         Gowda, Nikhil         .PM-077           Dedoulis, Christine         .LCH-183         Flagg, Victoria         .LCH-266         Goyal, Nikhil         .AM-015           DeGrazia, Zoe         .LCH-028         Flores, Alejandra         .AM-173         Greenblott, David         .AM-019           Delaney, Dalton         .LCH-088         Flower, Cameron         .LCH-098         Greenblott, David         .AM-019           Demises, Yealshaday         .PM-049         Foo, Ann         .PM-059         Grimes, Samantha         .LCH-308           Denmark, Iris         .LCH-089         Fortna, Sarah         .AM-014         Gripp, Emily         .LCH-052           Denmark, Iris         .LCH-203         Foster, Pete         .PM-060         Grissom, Spencer         .AM-016           Deshpande, Rajiv         .LCH-090         Fowler, Lauren         .LCH-099         Grissom, Spencer         .AM-016           Dinh, Duyhoang         .AM-81         Francone, Sonia         .PM-060         Gruver, Juliana         .PM-080           Diriscanayake Bogoda, Gishan         .LCH-091         Frasier, Dorian	·		
Decker, Kelsey         .PM-244         Fishman, Nicolas         LCH-051         Gowda, Nikhil         .PM-077           Dedoulis, Christine         .LCH-183         Flagg, Victoria         .LCH-266         Goyal, Nikhil         .AM-015           DeGrazia, Zoe         .LCH-262         Flores, Alejandra         .AM-173         Greenberg, Elisheva         .PM-078, PM-019           Delaney, Dalton         .LCH-088         Flower, Cameron         .LCH-098         Greenblott, David         .AM-052           Demises, Yealshaday         .PM-047         Foo, Ann         .PM-059         Grimes, Samantha         .LCH-052           Denmark, Iris         .LCH-089         Fortna, Sarah         .AM-014         Gripp, Emily         .LCH-052           Denmark, Iris         .LCH-090         Foster, Pete         .PM-060         Grissom, Spencer         .AM-016           Deshpande, Rajiv         .LCH-090         Fowler, Lauren         .LCH-099         Griswold, Kira         .AM-088           Dissanayake Bogoda, Gishan         .LCH-091         Francone, Sonia         .PM-061         Gruver, Juliana         .PM-079           Doan, Lan         .LCH-049         Freebern, Ellen         .AM-174         Gudan, Hannah         .AM-177           Doand Son, Katelyn         .AM-251         Fuchs, Matthew </td <td></td> <td></td> <td></td>			
Dedoulis, Christine         LCH-183         Flagg, Victoria         LCH-266         Goyal, Nikhil         AM-015           DeGrazia, Zoe         LCH-262         Flores, Alejandra         AM-173         Greenberg, Elisheva         PM-078, PM-019           Delaney, Dalton         LCH-088         Flower, Cameron         LCH-098         Greenblott, David         AM-052           Demises, Yealshaday         PM-049         Foo, Ann         PM-059         Grimes, Samantha         LCH-052           Denmark, Iris         LCH-263         Foster, Pete         PM-060         Gripp, Emily         LCH-052           Deshpande, Rajiv         LCH-090         Fowler, Lauren         LCH-099         Grissom, Spencer         AM-016           Deshpande, Rajiv         LCH-090         Fowler, Lauren         LCH-099         Grissom, Spencer         AM-016           Deshpande, Rajiv         LCH-090         Fowler, Lauren         LCH-099         Grissom, Spencer         AM-016           Dissanayake Bogoda, Gishan         LCH-091         Francone, Sonia         PM-061         Gruver, Juliana         PM-079           Dissanayake Bogoda, Gishan         LCH-091         Frazier, Dorian         PM-062         Gu, Aaron         LCH-194           Dittentholer, Cole         AM-250         Frazier, Dorian			
DeGrazia, Zoe         LCH-262         Flores, Alejandra         AM-173         Greenberg, Elisheva. PM-078, PM-019           Delaney, Dalton.         LCH-088         Flower, Cameron         LCH-098         Greenblott, David         AM-052           Demises, Yealshaday         .PM-049         Foo, Ann.         .PM-059         Grimes, Samantha         LCH-308           Denmark, Iris         .LCH-089         Fortar, Sarah         .AM-014         Gripp, Emily.         .LCH-092           Deshpande, Rajiv         .LCH-090         Foster, Pete         .PM-060         Grissom, Spencer         .AM-016           Deshpande, Rajiv         .LCH-091         Fowler, Lauren         .LCH-099         Grissom, Spencer         .AM-016           Deshpande, Rajiv         .LCH-091         Fowler, Lauren         .LCH-099         Grissom, Spencer         .AM-016           Deshpande, Rajiv         .LCH-091         Fowler, Lauren         .LCH-099         Grissom, Spencer         .AM-016           Deshpande, Rajiv         .LCH-091         Frachone, Sonia         .PM-061         Grissom, Spencer         .AM-016           Deshpande, Rajiv         .LCH-091         Frachone, Sonia         .PM-061         Gruer, Juliana         .PM-079           Dominde, Davida         .LCH-094         Frach, Marilyn <t< td=""><td></td><td></td><td></td></t<>			
Delaney, Dalton.         LCH-088         Flower, Cameron         LCH-098         Greenblott, David         AM-052           Demises, Yealshaday         .PM-049         Foo, Ann.         .PM-059         Grimes, Samantha         .LCH-308           Deng, John.         .LCH-089         Fortna, Sarah         .AM-014         Gripp, Emily.         .LCH-052           Denmark, Iris         .LCH-263         Foster, Pete         .PM-060         Grissom, Spencer         .AM-018           Dinh, Duyhoang.         .AM-081         Francone, Sonia         .PM-061         Griswolt, Kira         .AM-088           Dinh, Duyhoang.         .AM-081         Francone, Sonia         .PM-061         Gruver, Juliana         .PM-079           Dissanayake Bogoda, Gishan .LCH-091         Frank, Marilyn         .LCH-005         Gu, Aaron         .LCH-194           Dittentholer, Cole         .AM-250         Frazier, Dorian         .PM-062         Guan, Hannah         .AM-177           Doan, Lan         .LCH-049         Freebern, Ellen         .AM-174         Gudmundsson, Sabina         .PM-080           Domingo, Ron Ulric         .LCH-305         Freedman, Esther         .PM-063         Guedes, Sabrina         .AM-017           Donoghue, Thomas         .LCH-264         Fuksenko, Alex         .AM-267			
Demises, Yealshaday         .PM-049         Foo, Ann         .PM-059         Grimes, Samantha         LCH-308           Deng, John         LCH-089         Fortna, Sarah         .AM-014         Gripp, Emily         .LCH-052           Denmark, Iris         LCH-263         Foster, Pete         .PM-060         Grissom, Spencer         .AM-016           Deshpande, Rajiv         LCH-090         Fowler, Lauren         LCH-099         Griswold, Kira         .AM-088           Dinh, Duyhoang         .AM-081         Francone, Sonia         .PM-061         Gruver, Juliana         .PM-079           Dissanayake Bogoda, Gishan         LCH-091         Francone, Sonia         .PM-061         Gruver, Juliana         .PM-079           Dissanayake Bogoda, Gishan         LCH-091         Frank, Marilyn         .LCH-005         Gu, Aaron         .LCH-114           Dittentholer, Cole         .AM-250         Frezier, Dorian         .PM-062         Guan, Hannah         .AM-177           Doan, Lan         .LCH-049         Freedman, Esther         .PM-062         Guan, Hannah         .AM-177           Domingo, Ron Jako         .LCH-0305         Freedman, Esther         .PM-063         Guedes, Sabrina         .AM-177           Domingo, Ron Ulric         .LCH-002         LCH-030         Fush, Ma			
Deng, John.LCH-089Fortna, SarahAM-014Gripp, EmilyLCH-052Denmark, IrisLCH-263Foster, Pete.PM-060Grissom, Spencer.AM-016Deshpande, RajivLCH-090Fowler, LaurenLCH-099Griswold, Kira.AM-088Dinh, Duyhoang.AM-081Francone, Sonia.PM-061Gruver, Juliana.PM-079Dissanayake Bogoda, GishanLCH-011Francone, Sonia.PM-061Gruver, Juliana.PM-079Dissanayake Bogoda, GishanLCH-014Francone, Sonia.PM-062Gu, Aaron.LCH-144Dittentholer, Cole.AM-250Frazier, Dorian.PM-062Guan, Hannah.AM-177Doan, Lan.LCH-049Freebern, Ellen.AM-174Gudmundsson, Sabina.PM-080Domingo, Ron Jako.LCH-305Freedman, Esther.PM-063Guegari, Megha.PM-080Domigo, Ron Ulric.LCH-002Fuchs, Matthew.PM-064Guo, Binghan.LCH-271Donoghue, Thomas.LCH-264Fuksenko, Alex.AM-267Guo, Jennifer.LCH-271Donoghue, Thomas.LCH-264Fuksenko, Alex.AM-267Guo, Jennifer.LCH-053Douglas, Bonnie.LCH-050Fuss, Timothy.LCH-306Guo, Peng.PM-302Douglas, Bonnie.LCH-014Gadson, Davetrina.AM-256, AM-278Gupta, Deepa.PM-303Driscoll, Riley.LCH-137Galiano, Christina.LCH-140Hackbarth, Kevin.LCH-054Duffing Romero, Adelmut XiadaniGanesan, Anurudh.PM-066Ha			
Denmark, IrisLCH-263Foster, Pete.PM-060Grissom, Spencer.AM-016Deshpande, Rajiv.LCH-090Fowler, Lauren.LCH-099Grissom, Spencer.AM-088Dinh, Duyhoang.AM-081Francone, Sonia.PM-061Gruver, Juliana.PM-079Dissanayake Bogoda, Gishan.LCH-091Frank, Marilyn.LCH-005Gu, Aaron.LCH-194Dittentholer, Cole.AM-250Frazier, Dorian.PM-062Guan, Hannah.AM-177Doan, Lan.LCH-049Freebern, Ellen.AM-174Gudmundsson, Sabina.PM-080Domingo, Ron Jako.LCH-305Freedman, Esther.PM-043Guedes, Sabrina.AM-017Domingo, Ron Ulric.LCH-002Fu, Noah.LCH-139Guggari, Megha.PM-081Donaldson, Katelyn.AM-251Fuksenko, Alex.AM-267Guo, Binghan.LCH-271Donsghue, Thomas.LCH-264Fuksenko, Alex.AM-267Guo, Jennifer.LCH-053Dotson, Gabrielle.LCH-050Fuss, Timothy.LCH-306Guo, Peng.PM-302Douglas, Bonnie.LCH-014Gadson, Davetrina.AM-256, AM-278Gutterrez, Sophia.PM-289Driscoll, Riley.LCH-137Gaines, Aliyah.PM-246Gutterrez, Sophia.PM-289Duffing Romero, Adelmut XiadaniGanesan, Anurudh.PM-065Hackbarth, Kevin.LCH-054Duffing Romero, Adelmut XiadaniGanesan, Anurudh.PM-066Hall, Jessica.AM-053Durcan, Benjamin.LCH-184Gao, Daniel.PM-272 <td< td=""><td></td><td></td><td></td></td<>			
Deshpande, RajivLCH-090Fowler, LaurenLCH-099Griswold, KiraAM-088Dinh, Duyhoang.AM-081Francone, Sonia.PM-061Gruver, Juliana.PM-079Dissanayake Bogoda, Gishan.LCH-091Frank, Marilyn.LCH-005Gu, Aaron.LCH-194Dittentholer, Cole.AM-250Frazier, Dorian.PM-062Guan, Hannah.AM-177Doan, Lan.LCH-049Freebern, Ellen.AM-174Gudmundsson, Sabina.PM-080Domingo, Ron Jako.LCH-305Freedman, Esther.PM-063Guedes, Sabrina.AM-017Domingo, Ron Ulric.LCH-002Fu, Noah.LCH-139Guggari, Megha.PM-081Donaldson, Katelyn.AM-251Fuksenko, Alex.PM-064Guo, Binghan.LCH-271Donsoghue, Thomas.LCH-264Fuksenko, Alex.AM-267Guo, Jennifer.LCH-053Dotson, Gabrielle.LCH-050Fuss, Timothy.LCH-306Guo, Peng.PM-302Douglas, Bonnie.LCH-014Gadson, Davetrina.AM-256, AM-278Guyta, Deepa.PM-302Driscoll, Riley.LCH-137Gaines, Aliyah.PM-065Hackbarth, Kevin.LCH-054Dubick, Bethany.LCH-138Galiano, Christina.LCH-140Hagege, Ermias.LCH-055Duffing Romero, Adelmut XiadaniGanesan, Anurudh.PM-066Hall, Jessica.AM-053Duffy, Korrina.PM-050Gao, Alisa.LCH-186Hampton, Laquaundra.PM-082Duncan, Benjamin.LCH-184Gao, Daniel.PM-272Han	<u> </u>		
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Dissanayake Bogoda, Gishan LCH-091 Frank, Marilyn LCH-005 Gu, Aaron LCH-194 Dittentholer, Cole AM-250 Frazier, Dorian PM-062 Guan, Hannah AM-177 Doan, Lan LCH-049 Freebern, Ellen AM-174 Gudmundsson, Sabina PM-080 Domingo, Ron Jako LCH-305 Freedman, Esther PM-063 Guedes, Sabrina AM-017 Domingo, Ron Ulric LCH-002 Fu, Noah LCH-139 Guggari, Megha PM-081 Donaldson, Katelyn AM-251 Fuchs, Matthew PM-064 Guo, Binghan LCH-271 Donoghue, Thomas LCH-264 Fuksenko, Alex AM-267 Guo, Jennifer LCH-053 Dotson, Gabrielle LCH-050 Fuss, Timothy LCH-306 Guo, Peng PM-302 Douglas, Bonnie LCH-014 Gadson, Davetrina AM-256, AM-278 Guiterrez, Sophia PM-289 Driscoll, Riley LCH-137 Gaines, Aliyah PM-065 Hackbarth, Kevin LCH-054 Dubick, Bethany LCH-138 Galiano, Christina LCH-140 Hagege, Ermias LCH-055 Unffing Romero, Adelmut Xiadani LCH-093 Gao, Alisa LCH-186 Hampton, Laquaundra PM-082 Duffy, Korrina PM-050 Gao, Alisa LCH-186 Hampton, Laquaundra PM-080 Duncan, Benjamin LCH-184 Gao, Daniel PM-272 Handler, Chenchen PM-083 Duncan, Kiley PM-051 Gao, David AM-257 Hanona, Paul PM-013 Dunlow, Ryan LCH-094 Gao, James AM-295 Harris, Ellen LCH-141			
Dittentholer, Cole AM-250 Doan, Lan LCH-049 Domingo, Ron Jako LCH-305 Domingo, Ron Ulric LCH-002 Fukson. LCH-139 Domingo, Ron Ulric LCH-002 Guggari, Megha PM-081 Domingo, Ron Ulric LCH-004 Domingo, Ron Ulric LCH-055 Domingo, Ron Ulric LCH-054 Domingo, Rom Illie LCH-054	-		Gruver, Juliana
Doan, Lan.LCH-049Freebern, Ellen.AM-174Gudmundsson, SabinaPM-080Domingo, Ron JakoLCH-305Freedman, Esther.PM-063Guedes, Sabrina.AM-017Domingo, Ron UlricLCH-002Fu, Noah.LCH-139Guggari, MeghaPM-081Donaldson, Katelyn.AM-251Fuchs, MatthewPM-064Guo, BinghanLCH-271Donoghue, ThomasLCH-264Fuksenko, Alex.AM-267Guo, JenniferLCH-053Dotson, GabrielleLCH-050Fuss, Timothy.LCH-306Guo, Peng.PM-302Douglas, Bonnie.LCH-014Gadson, DavetrinaAM-256, AM-278Gupta, Deepa.PM-303Drakopoulos, Michael.LCH-092Gagarin, Ernesto.PM-246Gutierrez, Sophia.PM-289Driscoll, Riley.LCH-137Gaines, Aliyah.PM-065Hackbarth, Kevin.LCH-054Dubick, Bethany.LCH-138Galiano, Christina.LCH-140Hagege, Ermias.LCH-055Duffing Romero, Adelmut Xiadani.Ganesan, Anurudh.PM-066Hall, Jessica.AM-053LCH-093Gannot, Noam.LCH-186Hampton, Laquaundra.PM-082Duffy, Korrina.PM-050Gao, Alisa.LCH-267Han, Chen.LCH-056Duncan, Benjamin.LCH-184Gao, Daniel.PM-272Handler, Chenchen.PM-013Duncan, Kiley.PM-051Gao, James.AM-257Hanona, Paul.PM-013Dunlow, Ryan.LCH-094Gao, James.AM-257Harris, Ellen.LCH-141<	Dissanayake Bogoda, GishanLCH-091	Frank, MarilynLCH-005	Gu, AaronLCH-194
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Donaldson, KatelynAM-251Fuchs, Matthew.PM-064Guo, BinghanLCH-271Donoghue, ThomasLCH-264Fuksenko, Alex.AM-267Guo, Jennifer.LCH-053Dotson, GabrielleLCH-050Fuss, Timothy.LCH-306Guo, Peng.PM-302Douglas, BonnieLCH-014Gadson, Davetrina.AM-256, AM-278Gupta, Deepa.PM-303Drakopoulos, MichaelLCH-092Gagarin, Ernesto.PM-246Gutierrez, Sophia.PM-289Driscoll, RileyLCH-137Gaines, Aliyah.PM-065Hackbarth, Kevin.LCH-054Dubick, BethanyLCH-138Galiano, Christina.LCH-140Hagege, Ermias.LCH-055Duffing Romero, Adelmut XiadaniGanesan, Anurudh.PM-066Hall, Jessica.AM-053LCH-093Gannot, Noam.LCH-186Hampton, Laquaundra.PM-082Duffy, Korrina.PM-050Gao, Alisa.LCH-267Han, Chen.LCH-056Duncan, Benjamin.LCH-184Gao, Daniel.PM-272Handler, Chenchen.PM-083Duncan, Kiley.PM-051Gao, David.AM-257Hanona, Paul.PM-013Dunlow, Ryan.LCH-094Gao, James.AM-295Harris, Ellen.LCH-141	Domingo, Ron JakoLCH-305	Freedman, EstherPM-063	Guedes, Sabrina
Donoghue, ThomasLCH-264Fuksenko, Alex.AM-267Guo, Jennifer.LCH-053Dotson, GabrielleLCH-050Fuss, TimothyLCH-306Guo, Peng.PM-302Douglas, BonnieLCH-014Gadson, Davetrina.AM-256, AM-278Gupta, Deepa.PM-303Drakopoulos, MichaelLCH-092Gagarin, Ernesto.PM-246Gutierrez, Sophia.PM-289Driscoll, RileyLCH-137Gaines, Aliyah.PM-065Hackbarth, Kevin.LCH-054Dubick, BethanyLCH-138Galiano, Christina.LCH-140Hagege, Ermias.LCH-055Duffing Romero, Adelmut XiadaniGanesan, Anurudh.PM-066Hall, Jessica.AM-053LCH-093Gannot, Noam.LCH-186Hampton, Laquaundra.PM-082Duffy, Korrina.PM-050Gao, Alisa.LCH-267Han, Chen.LCH-056Duncan, Benjamin.LCH-184Gao, Daniel.PM-272Handler, Chenchen.PM-083Duncan, Kiley.PM-051Gao, David.AM-257Hanona, Paul.PM-013Dunlow, Ryan.LCH-094Gao, James.AM-295Harris, Ellen.LCH-141	Domingo, Ron Ulric LCH-002	Fu, NoahLCH-139	Guggari, Megha
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Douglas, BonnieLCH-014Gadson, Davetrina.AM-256, AM-278Gupta, Deepa.PM-303Drakopoulos, MichaelLCH-092Gagarin, Ernesto.PM-246Gutierrez, Sophia.PM-289Driscoll, RileyLCH-137Gaines, Aliyah.PM-065Hackbarth, Kevin.LCH-054Dubick, BethanyLCH-138Galiano, Christina.LCH-140Hagege, Ermias.LCH-055Duffing Romero, Adelmut XiadaniGanesan, Anurudh.PM-066Hall, Jessica.AM-053LCH-093Gannot, Noam.LCH-186Hampton, Laquaundra.PM-082Duffy, Korrina.PM-050Gao, Alisa.LCH-267Han, Chen.LCH-056Duncan, Benjamin.LCH-184Gao, Daniel.PM-272Handler, Chenchen.PM-083Duncan, Kiley.PM-051Gao, David.AM-257Hanona, Paul.PM-013Dunlow, Ryan.LCH-094Gao, James.AM-295Harris, Ellen.LCH-141	Donoghue, ThomasLCH-264	Fuksenko, Alex	Guo, JenniferLCH-053
Drakopoulos, MichaelLCH-092Gagarin, Ernesto.PM-246Gutierrez, Sophia.PM-289Driscoll, RileyLCH-137Gaines, Aliyah.PM-065Hackbarth, Kevin.LCH-054Dubick, BethanyLCH-138Galiano, Christina.LCH-140Hagege, Ermias.LCH-055Duffing Romero, Adelmut XiadaniGanesan, Anurudh.PM-066Hall, Jessica.AM-053LCH-093Gannot, Noam.LCH-186Hampton, Laquaundra.PM-082Duffy, Korrina.PM-050Gao, Alisa.LCH-267Han, Chen.LCH-056Duncan, Benjamin.LCH-184Gao, Daniel.PM-272Handler, Chenchen.PM-083Duncan, Kiley.PM-051Gao, David.AM-257Hanona, Paul.PM-013Dunlow, Ryan.LCH-094Gao, James.AM-295Harris, Ellen.LCH-141	Dotson, Gabrielle LCH-050	Fuss, Timothy LCH-306	Guo, PengPM-302
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LCH-093Gannot, NoamLCH-186Hampton, LaquaundraPM-082Duffy, Korrina.PM-050Gao, Alisa.LCH-267Han, Chen.LCH-056Duncan, Benjamin.LCH-184Gao, Daniel.PM-272Handler, Chenchen.PM-083Duncan, Kiley.PM-051Gao, David.AM-257Hanona, Paul.PM-013Dunlow, Ryan.LCH-094Gao, James.AM-295Harris, Ellen.LCH-141	Dubick, Bethany LCH-138	Galiano, ChristinaLCH-140	Hagege, ErmiasLCH-055
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Duncan, BenjaminLCH-184Gao, DanielPM-272Handler, ChenchenPM-083Duncan, Kiley.PM-051Gao, David.AM-257Hanona, Paul.PM-013Dunlow, Ryan.LCH-094Gao, James.AM-295Harris, Ellen.LCH-141			
Duncan, Kiley.         PM-051         Gao, David         AM-257         Hanona, Paul.         PM-013           Dunlow, Ryan         LCH-094         Gao, James         AM-295         Harris, Ellen         LCH-141			
Dunlow, RyanLCH-094 Gao, JamesAM-295 Harris, EllenLCH-141			

MORNING SESSION AM 9:00 AM-11:00 AM

AFTERNOON SESSION PM 1:00 PM-3:00 PM

. LUNCH SESSION . LCH . 11:00 AM-1:00 PM

Harrison, LucasAM-148	Islam, RafiqueLCH-108	Kikani, Bijal LCH-194
Harrison, SarahAM-089	Ivanina, Natalie LCH-143	Killingsworth, BrycePM-112
Haskie, Kaitlyn	Jacobs, HannahLCH-275	Kim, CarolineLCH-158
Hatch, Marie LCH-272	Jacobs, JazzPM-290	Kim, GloriaLCH-230
Hayes, Shelby	Jain, Chirag LCH-060	Kim, HyongAM-266
Heil, BenjaminLCH-057	Jalali, DorsaPM-275	Kim, JonathanAM-099
Hendryx, Emily	Jang, Seung Jin LCH-109	Kim, Justin
Henke, TravisAM-090	Jaramillo, ManuelaLCH-061	Kim, SarahPM-114
Hepler, Charlotte LCH-058	Jayapal, AishwarryaLCH-228	Kim, SominPM-291
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Hermes, Farrah	Jensen, PatrickAM-021	Kindrick, JessicaPM-115
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Hernandez-Avila, Emily AM-180	Ji, SuzheLCH-229	Kittock, Claire
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Herrada, Sylvia	Jiang, Wendy	Koch, AndrewPM-276
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Heyman, ChanaAM-261	John, Tibin	Konduru, Hima LCH-019
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Hinduja, Aarti LCH-017	Johnson, JosephLCH-310	Kostecka, LauriePM-117
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Ho, Bryan	Johnson, Mitchell LCH-110	Kouam, CedircLCH-197
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Hoang, VanLCH-104	Jones, BobbyAM-095	Krishna, Avantika
Hochstein, JonAM-019	Jordan, Alexander	Krishnan, Pranab
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Hoy, Gregory EPM-091	Kabatova, Barbora	Kung, JustinLCH-144
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Hu, Kevin	Kaiser, ClaireAM-022	Laird, Noah LCH-114
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Hu, Tiffany	Kambala, Anusha	Langhamer, Margaret PM-252
Hu, Yidong LCH-273	Kang, Lei (Linda)AM-023	Lawrence, Wayne
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Huang, Caroline	Kaperst, EmilyLCH-062	Lazarovits, Roey
Huff, Trey LCH-106	Kaplan, CarlyAM-265	Lazere, AdamLCH-021
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Huiting, Erin	Kathawate, Ranganath LCH-018	Lee, Alycia
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Humphrey, Nadine LCH-191	Keat, KarlLCH-063	Lee, Jane
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Islam Jessica PM-247	Kidner Ria PM-111	Lehman Joshua LCH-003

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Lema, HiwotPM-126	Martinage, AlexAM-273	Needle, Carli LCH-081
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Li, JulianLCH-200	McCarthy, Kaikeline	Nguyen, Quang
Li, TianmingLCH-201	McClusky, Waverly LCH-146	Nguyen, Tuyet
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Lin, Seraph Han-Yin	McNeely, Sean	Nixon, BrittanyPM-155
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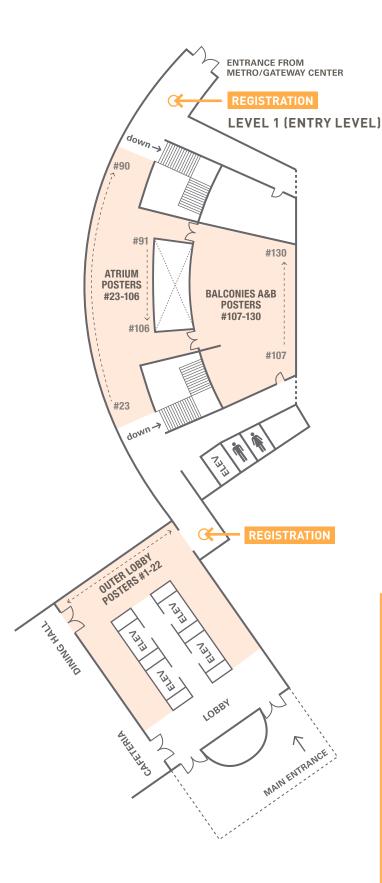
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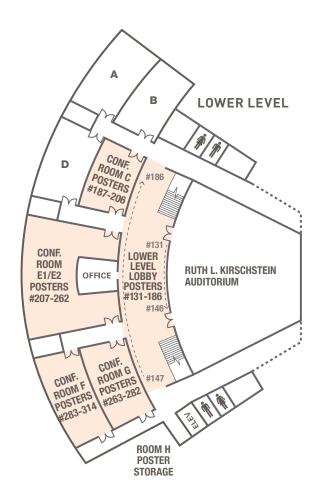
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