



**NISBRE  
2026**

# **10th National IDeA Symposium of Biomedical Research Excellence**

June 14-17, 2026 | Bethesda North Marriott Hotel  
and Conference Center, Rockville, Maryland

# POSTER PRESENTATION SCHEDULE

Monday, June 15, 2026

## Administrative and Core Facility

1. Abigail Kaija, MaineHealth Institute for Research. **Development of Clinically Relevant Mouse Models for Research.** CTR.
2. Angela Kull, Dartmouth College, Geisel School of Medicine. **bioMT Core Facilities: Advancing Research at Dartmouth College.** COBRE.
3. Carmen J. Buxó-Martínez, Alliance for Clinical and Translational Research (Alliance IDeA CTR-N), San Juan, Puerto Rico. **Building a Sustainable Clinical and Translational Research Workforce: The Investigator Development Pipeline Program (IDPP) of the Alliance CTR-N.** CTR.
4. Chelsea G. Miller, University of Hawaii at Manoa. **Genome on the Go: Decentralizing Molecular Biology Education through Portable Genomics Tools and Near-Peer Mentorship.** INBRE.
5. Claire Rudolph, ChristianaCare. **Implementing a Skills Based Matching Platform to Strengthen Research Collaboration Within an INBRE Affiliated Institution.** INBRE.
6. Craig Porter, Arkansas Children's Research Institute. **Ensuring Long-term Sustainability of COBRE Core Resources Through Centralized Leadership and Management.** COBRE.
7. Cyndy Buckhaults, SC INBRE/USC School of Medicine. **Getting the Word Out: SC INBRE's Approach to Building Communication Across a Statewide Network.** INBRE.
8. Daria Chefan, University of Delaware. **i-GONAD Genome Editing: Enabling Cost-Effective Mouse Model Generation in Small Institutional Cores.** COBRE.
9. Eduardo E Romero Camacho, University of Nebraska-Lincoln. **NCIBC Light and Electron Microscopy Core Facility: CryoEM workflows at the University of Nebraska-Lincoln.** COBRE.
10. Filipa Godoy-Vitorino, University of Puerto Rico, School of Medicine. **The new COBRE Puerto Rico Center for Microbiome Sciences.** COBRE.
11. Michael G. Nichols, Creighton University. **Mass Spectrometry Applications at Creighton University's Mass Spectrometry Core.** COBRE.
12. Jackilyn E Hemphill, Montana State University. **Rethinking Aqueous Behavior of PFOA: Indications of Aggregation.** INBRE.
13. Jennifer Wenner, Dartmouth College. **Evaluating COBRE Research Core Effectiveness.** COBRE, INBRE.
14. Jessica Sampson, University of Delaware. **High Throughput Experimentation and Chromatography at the University of Delaware.** COBRE, INBRE.
15. John C. Marecki, University of Arkansas for Medical Sciences. **The UAMS Center for Molecular Interactions in Cancer (CMIC) Biomolecular Interactions Core (BIC).** COBRE.
16. Kate Karelina Weil, West Virginia University. **WVU Rodent Experimental Stroke and Surgical Core.** COBRE.
17. Marla Jayne Berry, University of Hawaii at Manoa. **University of Hawaii Precision Nutrition COBRE 2026.** COBRE.

18. Mystera Samuelson, University of Nebraska Medical Center. **The UNMC Animal Behavior Core: Overview & Impacts.** COBRE.
19. Pam Borek, The Miriam Hospital. **Technology, Assessment, Data, and Analysis Core.** COBRE.
20. Prateek Verma, University of Arkansas. **Data Science Core of Arkansas Integrative Metabolic Research Center.** COBRE.
21. Ryan Grigsby, University of Kansas. **University of Kansas Nanofabrication Facility: Equipment and Capabilities.** COBRE.
22. Shalon Howard, University of South Carolina. **Advancing Resident & Fellow Physician-Scientists Through Structured Research Development: ClinTrUSC RADAR Program.** CTR.
23. Simon Chung, Arkansas Children's Research Institute and University of Arkansas for Medical Sciences. **Biostatistics Core of the Center for Childhood Obesity Prevention at Arkansas Children's Research Institute.** COBRE.
24. Thomas Gallien, Clemson University. **South Carolina COBRE for Translational Research Improving Musculoskeletal Health.** COBRE.
25. Yina Huang, Dartmouth College. **NH-INBRE: First 15 Years of Impact on NH's Research Training, Infrastructure, Capacity, and Biomedical Workforce.** INBRE.

## AI-Powered Surveillance, Data Science, and Machine Learning

26. Angelica Valdez, University of Hawai'i at Mānoa. **From Pilot to Powerhouse: The Multi-year Evolution of a Bioinformatics Training Program.** INBRE.
27. Cagri Ozdemir, Delaware State University. **Pathway-aware Multimodal Fusion for Breast Cancer Recurrence Prediction.** CTR.
28. Devesh Sarda, Louisiana State University Shreveport (LSUS). **Automatic Cognitive Classification for Alzheimer's Disease using 3D Modeling of fMRIs.** INBRE.
29. Ochiabuto Jideofor, Louisiana State University Shreveport. **Reducing Low-yield Colonoscopy using Machine Learning.** INBRE.
30. Qinghao Zhang, University of Oklahoma. **Optical Coherence Tomography Evaluation of Mebendazole Therapeutic Efficacy in Ovarian Cancer Xenografts.** COBRE.
31. Yuye Ling, University of Oklahoma. **AI-Empowered System-Algorithm Co-Design for High-Speed Optical Coherence Tomography.** COBRE.

## Cancer

32. Amanda Ashley, New Mexico State University. **Assessing Innate Toxicity and Inflammatory Signaling of Cannabidiol Derivatives in Mammalian Cells.** INBRE.
33. Angelis Milete, Universidad Central del Caribe. **Thera-GRP Drives Apoptotic Cell Death and Disrupts Metabolic Signaling in Glioblastoma.** INBRE.
34. Ashton Dean, University of Charleston. **The Role of N-Myc Downstream Regulated 1 (NDRG1) in clear cell Renal Cell Carcinoma.** INBRE.
35. Christen Woods, SUBR. **Structure-Guided  $\delta/\gamma$ -Lactam Immunomodulators Define a Novel Redox-sEH Axis that Enhances Oncolytic HSV-1 Efficacy in Resistant Melanoma.** INBRE.
36. Connor Westfall, University of Central Oklahoma. **Design of Non-Reciprocal Heat Flow Scaffold for Magnetic Hyperthermia.** INBRE.

37. Elizabeth Larson, Montana State University Billings. **Analysis of Protein Interaction Between B7-H3 and MDK by Mutagenesis.** INBRE.
38. Emily Jean Avery, Eastern Kentucky University. **Utilization of Antioxidants for the Improved Efficacy of Established Prostate Cancer Treatment Strategies.** INBRE.
39. Ganesan Muthusamy, Louisiana State University. **Chemoresistance Rewires Lipid and Redox Metabolism to Create a Cystine-Dependent Ferroptosis Vulnerability in Ovarian Cancer.** COBRE.
40. Jack Moellenkamp, University of North Dakota. **Exposure to Heavy Metals and the Tobacco Smoke Carcinogen NNK (Nicotine-derived Nitrosamine Ketone or 4- methylnitrosamino-1-3-pyridyl-1-butanone) Can Affect the Development of the Basal Sub-type of Bladder Cancer.** INBRE.
41. Karoline Rios-Rodriguez, Universidad Ana G. Mendez, Recinto Cupey. **Comparison of the Cytotoxicity Effects and Marker Potential of BQs Analogs on Human Melanoma Cells under Normoxic and Hypoxic Conditions.** INBRE.
42. Keishly Pagan Espinosa, University of Puerto Rico at Humacao. **Gallium Maltolate Disrupts Iron-Dependent Bioenergetics and Induces Concentration-Dependent Cytotoxicity in Glioblastoma.** INBRE.
43. Leila Rahimian, Louisiana State University. **Synthesis and Biological Assessment of Functionalized Lactams as Potential Therapeutics for Triple-Negative Breast Cancer.** COBRE.
44. Maddox Johnson, Pittsburg State University. **RNA Structure-Based Targeting of MALAT1 Modulates Triple-Negative Breast Cancer Cell Behavior.** INBRE.
45. Melanie Medellin, Arkansas State University. **Synthesis and Cytotoxic Studies of Bis(trifluoromethyl) Phenyl Thiourea Derivatives.** INBRE.
46. Mohammed Tanveer Hussain, Louisiana State University. **Targeting Cervical Cancer: VC-2 as a Vaccine and Treatment for HPV infections.** COBRE.
47. Poorna Sai Vaddi, Southern University. **Oncolytic Virotherapy as a Dual Modulator of Tumor Immunity and Stemness in Glioblastoma.** COBRE.
48. Siam Chowdhury, Arkansas State University. **Docking Studies of Thiazole and Imidazole Fused Derivatives against mTOR Proteins.** INBRE.
49. Tej Nath Lamichhane, University of Central Oklahoma. **Latest Strategies in the Synthesis and Characterization of Chiral Magnetic Nanoparticles for Cancer Research.** INBRE.
50. Udaysinh Rahulkumar Rathod, Louisiana State University Shreveport. **Mortality Outcomes of Colorectal Cancer on Long Panel PLCO Using Machine Learning.** INBRE.
51. Jian Zhao, University of Oklahoma. **Computational Chemical Microscopy Imaging.** COBRE.

## Cardiovascular Biology, Cerebrovascular Biology, and Stroke

52. Graden Baker, Eastern Kentucky University. **Vasicine Exhibits Dual Antiplatelet and Anticoagulant Activity In Vitro.** INBRE.
53. Kylie Bentley, University of Pikeville. **Transient Plant-Based Production of Bioactive Nattokinase for Thrombolytic Applications.** INBRE.
54. William Weader, University of Wyoming. **Citrullination and Aging in Female Mice: Investigating the Patterns of Peptidylarginine Deiminase 2 Production.** INBRE.

## Chronic Disease Mechanisms, Risk, and Prevention

55. Carole A. Oskeritzian, University of South Carolina. **Resveratrol as a Targeted Inhibitor of Signaling Pathways in Mast Cell-initiated Skin Inflammation: A Mechanistic Study with Promising Preclinical and Pre-translational Outcomes.** COBRE.
56. Grace Tiegs, Lewis-Clark State College. **BTEX and PM2.5 from Wildfire Smoke in the Western United States.** INBRE.
57. Kristen C Johnson, UNH Manchester. **From Flatworms to Humans: Discovering New Regulators of Ciliary Function.** INBRE.
58. Raja Gaddam, UNH Manchester. **Functional Investigation of CEP290 in Ciliary Signaling and Adipocyte Differentiation Using Planaria and 3T3-L1 Systems.** INBRE.
59. Robert Rosales, Brown University. **Alcohol Use Mediates the Effects of Discrimination on Binge Eating Among Hispanic Adults with Obesity who Binge Drink.** COBRE.
60. Sujoy Ghosh, Pennington Biomedical Research Center. **Regulation of Epitranscriptomic Modifiers in Adipose Tissue from Mouse Models of Obesity and Type 2 Diabetes.** COBRE.
61. Ethan Wilkins, Mississippi University for Women. **Upregulation of the Predominant Cystic Fibrosis Causing Mutation,  $\Delta F508$ -CFTR, by Triazole Compounds in Epithelial Cells.** INBRE.
62. Oluwaseyi Oyewole, West Virginia University School of Medicine. **Ozone-induced Lipid Dysregulation and its Effects on Pulmonary Inflammation.** COBRE.

## Genetic and Gene-Environment Interactions

63. Danika Maki, Northern Kentucky University. **Determination of the Translational Effect of 2'-O-methylation at Positions 32 and 34 in Eukaryotic tRNA.** INBRE.
64. Johannes Smal, Northern Kentucky University. **Identifying Functionally Critical Residues in Trm732 Through Mutagenesis and Next Generation Sequencing.** INBRE.
65. Nhyira Sarpong, Northern Kentucky University. **Exploring The Effects of Folate Cycle Perturbations On The Methyl Cycle and Genome Stability.** INBRE.
66. Victoria Stepka, University of Mary. **Quantifying Morphological Differences with Landmark-free Morphometrics.** INBRE.

## Health Across the Lifespan and Lifestyle Interventions for Disease Prevention (Children's Health, Nutrition, Obesity, and Aging)

67. Augustine Nwafor, Louisiana State University Shreveport. **A Wearable Dual-IMU Framework for Real-Time Knee Motion Analysis and ACL Injury Risk Assessment.** INBRE.
68. Jacqueline Stephens, Pennington Biomedical. **Loss of Adipocyte KAT8, a Lysine Acetyltransferase, Confers Lipodystrophy and Metabolic Dysfunction.** COBRE.
69. Jung Eun Lee, University of Rhode Island College of Nursing. **SMILE: A Chatbot-Based Self-Management Intervention for Older Adults Living Alone with Multimorbidity.** CTR.
70. Lisa T. Jansen, Arkansas Children's Nutrition Center - University of Arkansas for Medical Sciences. **Design of Micro Lessons for Remote Healthy Pregnancy Support in Arkansas: A Behavioral Intervention Support Tool for the GEM Study.** COBRE.
71. Patricia Young, Hawaii Pacific University. **Effects of a Hula-based Intervention on Balance and Fall Risk in Native Hawaiian and Pacific Islander Older Adults: A Pilot Study.** INBRE, CTR.

72. Yuan Wen, University of Kentucky. **Mapping Stem Cell Extracellular Vesicle Recipients Reveals Age-Dependent Retargeting.** COBRE.
73. Baily Isaak, University of Wyoming. **Female Peptidylarginine Deiminase 2 and 4 Double Knockout Mice have Abnormal Estrous Cycles and Reduced Fertility.** INBRE.

## Microbiology and Infectious Disease

74. Abigail Straight, University of Wyoming. **Mechanisms of PopZ-Mediated Client Recruitment.** INBRE.
75. Andrea Grindeland Panter, Weissman Hood Institute at Touro; McLaughlin Research Institute. **Advancing Antemortem Detection of Chronic Wasting Disease Through Plasma Biomarkers and Comprehensive Phenotypic Profiling.** COBRE.
76. Bryan Benitez, University of Nebraska Medical Center. **Evaluating Bimane-CGH as a Site-Specific Probe for the Active Site of Mycobacterium tuberculosis EgtD.** INBRE.
77. Erik Yukl, New Mexico State University. **H-NOX and NosP Regulate Motility and Virulence Factor Production in Vibrio cholerae.** INBRE.
78. Hayden Leavitt, College of Eastern Idaho. **A Comparative Analysis of Wolbachia Strains Present in Flies Around the College of Eastern Idaho Campus.** INBRE.
79. Julie A Dragon, University of Vermont. **The Tick Interrogation Class (TIC).** INBRE.
80. Mackenzie Hall, West Liberty University. **Characterization of Resorufin Derivatives with Antimicrobial Activity Against Neisseria gonorrhoeae.** INBRE.
81. Megan A Barela Hudgell, Northern New Mexico College. **Identification and Annotation of Syntenic Regions Containing Major Histocompatibility Complex Class II Genes within Three Pupfish (Cyprinodontidae) Species.** INBRE.
82. Mya Tena, University of Mary. **Genes from F1 Subcluster Bacteriophages that Affect the Host Infectivity of Multiple Mycobacterium Species.** INBRE.
83. Owen Long, Biology Department, Pittsburg State University. **Metagenome Analysis of Poultry Litter Collected from Farms Across Eastern Region of Kansas with a Focus on Antibiotic Resistant and Foodborne Pathogens.** INBRE.
84. Sabrina Faozia, Infectious Diseases Section, Veterans Affairs Medical Center, Boise, ID; Idaho Veterans Research and Education Foundation. **Establishing Functional Assays for Streptococcal Exotoxins SpeA and SpeB to Enable Antitoxin Therapeutics.** INBRE.
85. Stephanie E. Ander, Louisiana State University Health Shreveport. **Regulation of Viral Dissemination by Specific Heparan Sulfate Interactions.** COBRE.
86. Tirumalai Rangasamy, Louisiana State University. **Development of Human Lung Mesenchymal Stem Cell-based Interventions Against Infection Caused by Multidrug-resistant Gram-negative and Gram-positive Bacterial Pathogens.** COBRE.
87. Dylan Muse, University of Central Oklahoma. **Development of Corrosion Resistant Antibacterial Non-Woven Nano Fiber Coatings.** INBRE.
88. Jason Kuhn, University of Alaska Southeast. **Advancing the Molecular Detection of Harmful Algal Bloom Species to Improve Toxin Monitoring by Coastal Communities.** INBRE.

## Neurodevelopment, Behavioral and Mental Health, and Related Comorbidities (Tobacco, Alcohol, Drug Misuse)

89. Anastacia Kudinova, Alpert Medical School of Brown University. **When Social Media Follows Teens to Bed: Exploring Social Media Use Concerns and Sleep Quality in Adolescents.** COBRE.
90. Elizabeth Murnane, Dartmouth College. **Community-Engaged Design and Implementation of a Just-In-Time Adaptive Intervention (JITAI) to Improve Adolescent Stress and Anxiety in Rural Populations.** COBRE.
91. Jorlyann M. Campos Ortiz, Department of Biology, University of Puerto Rico-Cayey. **Evaluation of the Neuroproteomic Response: Padina vs. Styopodium Treatment in Drosophila melanogaster.** INBRE.
92. Madeline Wildman, Western Kentucky University. **Therapy Engagement Patterns Among College Students with NSSI and Mood Disorders.** INBRE.
93. Ruben G. Martinez, Department of Psychiatry and Human Behavior, Brown University. **Post-injury Mental Health Care: An Interim Analysis of A Pilot Pre-Implementation Study to Inform Programming.** COBRE, CTR.
94. Taylor Kalgren, Western Kentucky University. **Suicidal Ideation, Social Media, and Sleep in a Community Sample of Young Adults.** INBRE.
95. Rammohan Shukla, University of Wyoming. **Genetic Architecture of Ribosome Biology Across Psychiatric Disorders.** COBRE, INBRE.

## Neuroscience and Neurological Disorders

96. Aya Naser, Clemson University. **Differentiation of Human Dental Pulp Stem Cells to Neuron-Like Cells in 3D Hydrogel Cultures for Neurodegenerative Diseases.** CTR.
97. Dakota Green, Boise State University. **Effects of Opioids on Ventral Pallidum Neuronal Populations.** COBRE.
98. Ethan Forbis, University of Wyoming. **Refining Circadian Biomarkers: Core Temperature Logging as an Alternative to Exercise-Derived Metrics.** INBRE.
99. Gustavo Adolfo Hernandez, University of Wyoming. **Tick Tock Exercise O'Clock.** COBRE.
100. Jessica Riggs, Lewis-Clark State College. **Loss of Blm Helicase Alters Circadian Period in Drosophila melanogaster.** INBRE.
101. Makayla Ellison, Furman University. **The Time-Dependent Effects of Taste Experience on Neural Plasticity, Learning, and Taste Discrimination.** INBRE.
102. Miranda Mireles Flores, Furman University. **The Impact of Motivation and Hedonic Feeding during Pregnancy on Future Taste Behaviors in Offspring.** INBRE.
103. Patrick Ledwidge, Western Kentucky University. **A Mobile EEG Approach for Examining Brain Dynamics of Suboptimal Cognitive-Motor Integration and Injury-Risk Biomechanics during Running.** INBRE.
104. Peng Zhong, University of Nebraska Medical Center. **Sleep Disruptions in the Tauopathy Condition of Neurodegenerative Disease.** COBRE.

## Structural and Cell Biology

105. Alongkorn Kurilung, Center for Musculoskeletal Disease Research, University of Arkansas for Medical Sciences. **Dnase1B-Mediated Production of Extrachromosomal Circular DNA by Osteoblastic Cells Regulates Bone Mass.** COBRE.
106. Bradley Webb, West Virginia University, Department of Biochemistry and Molecular Medicine. **Structural Basis of PFK1 Autoinhibition and Filament-Driven Compartmentalization of Glycolysis.** COBRE.
107. Clara Davis, The College of Idaho. **Methylene Blue Enhancement of Neuro-regeneration and Blastema Cellular Density in *Dugesia tigrina*.** INBRE.
108. Daniel Cline, Creighton University. **Structural analysis of *Crassostrea gigas* OAZ-PK RNA via Selective 2'-Hydroxyl Acylation analyzed by Primer Extension (SHAPE).** INBRE.
109. Emily Stotts, West Liberty University. **Thyroxine Exposure Enhances Late Stage Osteoblast Maturation in Cranial Sutures From Embryonic Chickens Using an Avian Model of Induced Thyrotoxicosis.** INBRE.
110. Giancarlo J. Nevado Cruz, University of Puerto Rico, Mayagüez Campus. **Expression and Purification of the Cytoplasmic Tail of Wsc2p, a Domain Directly Involved in the CWI Pathway, for Future Crystallographic Studies.** INBRE.
111. Irosha Nawarathne, Lyon College. **Undergraduate-Driven Biomedical Research at a Liberal Arts College.** INBRE.
112. Joseph Roeder, University of Nebraska at Kearney. **Examining How Vaping Impacts the Response of B Cells to Peanut.** INBRE.
113. Lauren Makenzie Hughes, Wichita State University. **What's Linker Got to Do with It? Examining the Structure and Stability of Palladin's IG3-4 Linker Region.** INBRE.
114. Lynne Dieckman, Creighton University. **Structure and Function of the PCNA-CAF-1 Complex Crucial for Nucleosome Assembly.** INBRE.
115. Marimel Rolón Rivera, University of Puerto Rico Ponce Campus. **Development and Optimization of TGA and PEI-Coated ZnSe Quantum Dots as Selective, Low Cost Nanosensors for Heavy Metal Detection in Water.** INBRE.
116. Nesreen Alsou, University of Central Oklahoma. **Portable Microwave Imaging Device using Off-The-Shelf Components for in vitro and in vivo Medical Imaging.** INBRE.
117. Priscilla Phan, University of Wyoming. **Investigating the Role of the LINC Complex in Nuclear Morphology Regulation Using *Xenopus laevis* Egg Extracts.** INBRE.
118. Sarah Fowler, Creighton University. **Investigating a Potential Eukaryotic Riboswitch in OAZ mRNA from *Agaricus bisporus* via In-line Probing.** INBRE.
119. Stephanie Limaye, Creighton University. **Biophysical Studies of Two Proteins Involved in Gene Silencing.** INBRE.
120. Zhenhua Shang, University of Louisville. **Exploring the Spatial Transcriptome at Subcellular Resolution via Visium HD.** INBRE.
121. Haley Royce, University of New Hampshire. **Mechanical Tunable Hydrogels with Versatile Adhesive Peptides for Cell Culture.** COBRE.

- 122. Kristy Kounovsky-Shafer, University of Nebraska - Kearney. **Improved Containment of Large DNA Molecules in an Inverted Insert.** INBRE.
- 123. Nathan Buchweitz, Clemson University. **Establishing Regional Biomechanical Benchmarks in Caprine Cervical Intervertebral Discs for Allograft Transplantation.** COBRE.
- 124. Sanja Novak, UAMS. **Inflammation Reveals a Novel CD115<sup>+</sup>Adgre4<sup>+</sup> Myeloid Osteoclast Progenitor Population.** COBRE.

## Tuesday, June 16, 2026

### Administrative and Core Facility

- 125. Alan Woessner, University of Arkansas. **High-Resolution, Multi-Scale Imaging Across Biological Model Systems: A Core Facility Showcase.** COBRE.
- 126. Audra Van Wart, Brown University. **Advance RI-CTR K Scholar Career Development Program: A One-year Intensive Program for Developing Early Career Researchers in an IDeA State.** CTR.
- 127. Chamani Perera, University of Kansas. **The Synthetic Chemical Biology Core (SCB): A Resource for Research in Chemical Biology.** COBRE.
- 128. Chris WDJurgens, University of North Dakota. **ND INBRE Microscopy Core Facility at the University of North Dakota: Comprehensive Resource for Light Microscopy and Analysis.** INBRE.
- 129. Claudine Jurkovitz, ChristianaCare Health Services, Inc. **A Multidisciplinary BERD Core Supporting Translational Research Across Delaware: Five-Year Metrics and New Initiatives.** CTR, INBRE.
- 130. Derald E. Wentzien, Delaware State University. **The Creation of Workshops Designed to Incorporate Data Cleaning Procedures in Methodologies, Budgets, and Timelines.** Other.
- 131. Eric J. Enemark, University of Arkansas for Medical Sciences. **The Structural Biology Shared Resource of the Arkansas INBRE Research Technology Core and CMIC COBRE.** COBRE, INBRE.
- 132. Gloria Guevara Alvarez, Geisel School of Medicine, Dartmouth College. **From Frameworks to Fieldwork: Building Implementation Research Capacity in Rural New England and Across the IDeA Network.** COBRE.
- 133. Hongwei Yao, Providence VA Medical Center. **Cell Isolation and Organ Function (CIOF) Core Strengthens Cardiopulmonary Vascular Biology Research in Rhode Island.** COBRE.
- 134. James Denvir, Marshall University. **Enabling Education and Research at WV Undergraduate Institutions Through Data Science.** INBRE, CTR.
- 135. Jennifer Wolff, Emma Pendleton Bradley Hospital COBRE Center on Sleep and Circadian Rhythms in Child and Adolescent Mental Health, Pediatric Biopsychology Research Core. **Bradley Hospital COBRE Center for Sleep and Circadian Rhythms in Child and Adolescent Mental Health: A Pediatric Biopsychology Research Core in a Child Psychiatry Hospital.** COBRE.
- 136. Jingjie Hao, University of Nebraska-Lincoln. **Biomedical and Obesity Research Core (BORC).** COBRE.
- 137. John E McGeary, Brown University. **Bradley Hospital COBRE Center for Sleep and Circadian Rhythms in Child and Adolescent Mental Health: A Biomarker-Research Core (B-RC) in a Child Psychiatry Hospital.** COBRE.
- 138. Kimber McKay, Center for Population Health Research, University of Montana. **Mentorship That Moves the Needle: Evaluating Investigator Development in a COBRE Program.** COBRE.

139. Martha L. Peterson, University of Kentucky SuRE Resource Center. **University of Kentucky SuRE Resource Center.** Other.
140. Nathan L. Vanderford, University of Kentucky. **The University of Kentucky Center for Cancer Metabolism: Administrative Core.** COBRE.
141. Peter McDonald, University of Kansas. **Infectious Disease Assay Development & High Throughput Screening Laboratory at the University of Kansas.** COBRE.
142. Qi Zhang, University of New Hampshire. **The Data Science Core at University of New Hampshire.** COBRE, INBRE.
143. Samir P. Patel, Spinal Cord & Brain Injury Research Centre, Department of Physiology, University of Kentucky. **Linking Metabolism and Mitochondrial Function: The CNS-Metabolism COBRE Core for Integrated Metabolomics and Bioenergetics.** COBRE.
144. Sharon Elaine Sanders, The LINK at Arkansas Children's Research Institute. **Leveraging Implementation and eNgagement for Knowledge impact (The LINK): A Model for Community Engagement Core Sustainability.** COBRE, I-RED.
145. Sujoy Ghosh, Pennington Biomedical. **The Pennington Biomedical Bioinformatics and Computational Biology Core: Harnessing big data to drive breakthrough discoveries in nutrition and metabolism research.** COBRE.
146. Tom Palys, Geisel School Medicine Dartmouth. **The COBRE Center for Molecular Epidemiology Biorepository Core at Dartmouth: Comprehensive Support for Diverse and Large-scale Research.** COBRE.

## AI-Powered Surveillance, Data Science, and Machine Learning

147. Alex Gomez, University of Central Oklahoma. **Microwave-Based Scanner for Foodborne Pathogen Detection.** INBRE.
148. Aubrie Woodward, University of New Hampshire. **Voices, Boundaries, and Belonging: Ethical Considerations of In-Home Robot Use in Dementia Care.** INBRE.
149. Dana N. Joseph, Dartmouth Geisel School of Medicine. **Single-Molecule Profiling of Ganciclovir Incorporation Using Deep Learning.** COBRE.
150. Maricela Espinoza, Northeastern State University. **Automating Identification of Pericyte Cell Loss in Mouse Models.** INBRE.
151. Prateek Verma, University of Arkansas. **Machine Learning Frameworks for Automated Analysis of Biological Imaging and Behavior.** COBRE.
152. Shanshan Ding, University of Delaware. **Dimension Reduction and Hypergraph-assisted Deep Generative Modeling for Single Cell Genomic Data.** INBRE, CTR.
153. Sebastian Sereno, LSU Health Sciences Center Shreveport. **An Automated Interactive Reporting System for Accessible RNA-seq Data Analysis.** COBRE.

## Cancer

154. Andie Engleson, University of North Dakota. **Long Term-treatment with Carcinogens Present in Tobacco Smokes Affects the Expression of Basal Genes in the Immortalized Urothelial Tell Line, UROtsa.** INBRE.

155. Anjali S Poulo, University of Central Oklahoma. **Synthesis of Fe<sub>3</sub>O<sub>4</sub> Core-shell Metallic/Magnetic Nanoparticles up to ~50 nm as Dual-purpose Agents for Tumor Imaging and Cancer Treatment.** INBRE.
156. Caitlin Howe, Geisel School of Medicine at Dartmouth. **Feasibility of Implementing a Low-Cost Tool to Effectively Reduce Arsenic Exposure (FILTER Arsenic Study).** COBRE.
157. Christopher Bolden, Xavier University of Louisiana. **Evaluating SorLA as a Therapeutic Target in the Glioblastoma Tumor Microenvironment.** INBRE.
158. Danielyz Serrano-Pérez, Inter American University of Puerto Rico Bayamon Campus. **Novel Seleno-Modified Cembrane Diterpenes: From Tobacco Extraction to Anticancer Screening.** INBRE.
159. Elsie Horwath, University of North Dakota. **Long-term Combined Exposure to Multiple Carcinogens can Decrease the Expression of the Proto-oncogene CMYC and the Stem Cell Marker ALDH1A1 in Normal Urothelial Cells.** INBRE.
160. Emily Shore, Eastern Kentucky University. **Utilization of Cytotoxicity Assays as a Technique in Determining the IC<sub>50</sub> of Docetaxel Treatment In Vitro.** INBRE.
161. Israel Bellinger, Winthrop University. **Does RYBP Sensitize Glioblastoma Cells to Temozolomide?** INBRE.
162. Joseph Biggane, University of Mary. **Ion Homeostasis Dysregulation Attenuates Human Cancer Cell Proliferation.** INBRE.
163. Katherine Hallman, University of North Dakota. **Expression of Basal Keratins in Normal Urothelial Cells Can be Altered by Exposure to Carcinogens Present in Tobacco Smoke.** INBRE.
164. Kiran Fida, Louisiana State University. **The Transcriptional Signature of KSHV Infection in the Guinea Pig Host.** COBRE.
165. Linel Demar, Drew University. **Synthesis of Stilbenes: Combretastatins.** Other.
166. Mansi Dere, University Of North Dakota. **Coordinated Intra-Family Regulation by Schlafen12 and Schlafen5 in Triple Negative Breast Cancer.** INBRE.
167. Michelle M. Martinez-Montemayor, Universidad Central del Caribe School of Medicine. **Ergosterol Peroxide Targets the E3 Ubiquitin Ligase UBR4 Inducing Proteostasis Collapse Cell Death in Triple-Negative Breast Cancer.** I-RED, INBRE, CTR.
168. Norah Kay, Winthrop University. **RING1- and YY1-Binding Protein Inhibits Glioblastoma Cell Invasion.** INBRE.
169. Prajesh Shrestha, Louisiana State University. **In vitro Evaluation of Grafted Peptidomimetic SFTI-G5 Across Various NSCLC Animal Models.** INBRE.
170. Sumit Lnu, Arkansas State University. **Efficient Synthesis of Thiazole-Attached Diazaborines as Potential Therapeutic Agents.** INBRE.
171. Thanh Ha Vy Nguyen, University of Arkansas for Medical Sciences. **Rnd3 Regulates Lung Cancer Cell Migration and Invasion via Integrin Alpha 5 Modulation and Lung Cancer Metastasis.** COBRE.
172. Wei Chen, Louisiana State University Shreveport. **A Shared PRC2/H3K27-GPCR Axis Underlies Aggressive Microenvironments in Breast, Ovarian, and Endometrial Cancer.** INBRE.
173. Madison Walker, Montana State University - Billings. **Proteomic and Metabolomic Characterization of Paruroctonus boreus Venom.** INBRE.

## Cardiovascular Biology, Cerebrovascular Biology, and Stroke

174. Ilka Pinz, MaineHealth Institute for Research. **Rab27a is an Important Mediator of Cardiovascular Health in Female Mice.** COBRE.
175. M. Rizwan Siddiqui, Murray State University. **PP2A-C Alleviates LPS-induced Endothelial Permeability and Inflammation by Attenuating Autophagy Signaling.** INBRE.

## Chronic Disease Mechanisms, Risk, and Prevention

176. Barbara Day Chief, Blackfeet Community College; Montana State University. **Traditional Ecological Knowledge.** INBRE.
177. Erika Lindsey, Department of Physiology and Cell Biology, University of Arkansas for Medical Sciences. **Enhancing Mitochondrial Resilience in Subchondral Bone Reduces Severity of Post-Traumatic Osteoarthritis.** COBRE.
178. Kathleen Downs, University of Delaware. **Effects of Acute Exercise on Gait in Knee Osteoarthritis.** INBRE.
179. Logan Tracy Crooks, Northeastern State University. **Retinal Capillary Cell Identification and Quantification Within Diabetic Mouse Models.** INBRE.
180. Ranjita Misra, West Virginia University & University of South Florida. **Understanding Patient-Centered Barriers and Facilitators to Patient-Provider Communication in Diabetic Retinopathy Care.** CTR.
181. Saige Rigby, Idaho State University. **Effects of Asbestos Dosage on Kidney IgG Deposition.** INBRE.
182. Adneliz Gisel Catala Catala, Universidad Ana G. Mendez- Recinto de Cupey. **Early Biomarkers of Metabolic Dysfunction-associated Steatotic Liver Disease in Juvenile Mice Exposed to Diesel Exhaust Particles.** INBRE.
183. Jadiel Pinto Ruiz, Universidad Ana G. Mendez-Gurabo. **Development of an Electrochemical Biosensor for the Detection of Serotonin in Sweat Using Metallic Alloys.** INBRE.
184. Rebecca J. McCreight, Washburn University. **Alternative Solvents to Dichloromethane for Ring Closing Metathesis of Azamacrocycles.** INBRE.

## Genetic and Gene-Environment Interactions

185. Hazel Frans, Fort Hays State University. **Impact of One Nucleotide on Organ Enumeration and Phyllotaxy in Arabidopsis thaliana.** INBRE.
186. Logan Eddy, West Liberty University. **Sex-Dependent Modulation of Induced-Thyrototoxicosis in Developing Chicken Embryos.** INBRE.
187. Soleil Rosenblum, University of Hawaii at Hilo. **Elevation and Ecosystem Transitions Shape Arthropod Assemblages with Implications for Public Health and Food System Resilience.** INBRE.

## Health Across the Lifespan and Lifestyle Interventions for Disease Prevention (Children's Health, Nutrition, Obesity, and Aging)

188. Annie W. Wang, University of Pikeville. **Edible Mushrooms as Emerging Biofactories for Oral Biopharmaceutical Production.** INBRE.
189. Beth Marschner, Minot State University. **AlterG Anti-Gravity Treadmill Versus Traditional Gait Training and Strengthening Effect in Lower Extremity Osteoarthritis.** INBRE.

190. Joanne Wilkinson, Warren Alpert School of Medicine, Brown University. **Trauma-informed Cancer Screening: Ideas for Human-centered Design.** COBRE.
191. Kathy Burge, University of Oklahoma Health Campus. **Succinate Receptor Signaling within the Developing Infant Intestine.** COBRE.
192. Lisa T. Jansen, Arkansas Children's Nutrition Center - University of Arkansas for Medical Sciences. **Glucoregulatory and Inflammatory Trajectories During an Antepartum Exercise Intervention in Pregnancies with Obesity: Secondary Analysis of a Randomized Controlled Trial.** COBRE.
193. Tess A. Carlson, University of Montana. **A Pilot Randomized Controlled Trial for Doula Intervention to Improve Perinatal Mental Health Outcomes.** COBRE.
194. Alex Kienow, North Idaho College. **Analysis of BOD5 and TSS Reduction in Lagoon-based Wastewater Treatment Systems.** INBRE.
195. Ka'Miya Dillon, Alcorn State University. **Long-term Impact of Indoxyl Sulfate Following Hypertensive Pregnancies.** INBRE.

## **Microbiology and Infectious Disease**

196. Allison Coffel, College of Eastern Idaho. **Examining Viability of Testing Single Small Size Arthropod Plant Pests for the Presence of Wolbachia.** INBRE.
197. Bailey Sebroski, West Liberty University. **Contribution of perR to the Resazomycin Susceptibility of Neisseria gonorrhoeae.** INBRE.
198. Chloe Harmon, Fort Hays State University. **Detection of Beta-Lactamase Antibiotic Resistance Genes in Rural Kansas Soils Across Agricultural Land-Use Types.** INBRE.
199. Foster Antwi Ofosuhene, Hampton University. **Biochemical and Biophysical Characterization of Neisseria gonorrhoeae Nucleoside Diphosphate Kinase (NDPK).** COBRE, INBRE, CTR.
200. Jasper Brown, West Liberty University. **Photoaffinity Labeling of Francisella tularensis LVS to Identify Potential Targets of Resazomycin Antibiotics.** INBRE.
201. Krista Permentier, Minot State University. **Green Synthesis of Shaped Silver Nanoparticles with Enhanced Antimicrobial Properties Using Sugars, Ultrasonic Energy, and LED Irradiation.** INBRE.
202. Madison P. M. Collins, Montana State University Billings. **SaeR/S-mediated Virulence in Staphylococcus aureus; The Multi-tool for Immune Escape.** INBRE.
203. Megan R. Gates, Boise State University. **Impact of a Natural Isoprenoid on an In-Vitro Model of Gut Microenvironment.** COBRE, INBRE.
204. Natalya Kaza, Lyon College. **Synthesis of Modified Rifamycins Using Click Chemistry to Combat Drug Resistance.** INBRE.
205. Pius Babawale, Louisiana State University, Baton Rouge. **Transcriptional Signatures of Airway Epithelial Damage During Pneumovirus Infections.** COBRE.
206. Seanna Latimer, Western Wyoming Community College. **High-resolution Genetic Analysis of Connectivity in a Membraneless Compartment.** INBRE.
207. Stuart Cantlay, West Liberty University. **Morphological and Physiological Differentiation of the Intracellular Pathogen, Francisella tularensis.** INBRE.
208. Vicki Jeffers, University of New Hampshire. **Divergent TATA Box-binding Proteins in the Apicomplexan Parasite Toxoplasma gondii.** COBRE.

209. Emma Guter, Montana State University. **Development and Characterization of a Human Gastric Assemblid System for Modeling Epithelial-Stromal Interactions and Helicobacter pylori Pathogenesis.** INBRE.
210. Mason M. Lemer, Minot State University. **Heavy Metal Concentrations in the Mosquitoes of Lake Darling, North Dakota.** INBRE.

## **Neurodevelopment, Behavioral and Mental Health, and Related Comorbidities (Tobacco, Alcohol, Drug Misuse)**

211. Asan F Abdulkareem, Dartmouth College. **Electrophysiological and Phosphoproteomics Profiling of Pten KO Mouse Granule Neurons Demonstrate a Divergent Role of Pten in regulating mTOR Complexes.** COBRE.
212. Gangqing (Michael) Hu, West Virginia University. **Evaluation of Artificial Intelligence-generated Vignettes Depicting Patient Chatbot Use in Psychiatric Contexts.** INBRE.
213. Kaitlyn Ahlers, Geisel School of Medicine at Dartmouth; Dartmouth Health. **Study Protocol for an Implementation Science-Guided Pilot Study of Trauma-Focused Cognitive Behavioral Therapy for Autistic Youth in Community Mental Health Settings.** COBRE.
214. Markelle Alexander, Minot State University. **Effects of Methamphetamine on Adrenal Cells.** INBRE.
215. Solomia Mayevsky, Saint Anselm College. **Neonatal Pain, Lidocaine Administration and Long-Term Behavioral and Sensory Outcomes in Rats.** INBRE.
216. Tyler B. Downnen, Northern Kentucky University. **Reward Seeking in Rats Previously Administered the Antipsychotic Drug, Risperidone.** INBRE.

## **Neuroscience and Neurological Disorders**

217. Audrey D. Wells, Boise State University. **Examining Molecular Changes in Ventral Pallidum Neurons Following Opioid Dependence.** COBRE.
218. Bibechana Khanal, Colby-Sawyer College. **Neuro Efficiency in the Prefrontal Cortex Following a Single Bout of Moderate Exercise in young adults.** INBRE.
219. Elizabeth Engler-Chiurazzi, Tulane University. **Defining Mechanisms Driving Central Nervous System Manifestations of Infection Experience in Brain Aging and Disease.** COBRE.
220. Evelyn Brittin, Montana State University. **Quantifying Co-release and Co-transmission in Dual Neurotransmitter Neurons.** INBRE.
221. Isabelle Wasseen, Department of Zoology and Physiology, University of Wyoming, Laramie, Wyoming. **iRhom2 Regulates Neuroinflammation-Driven Cognitive Dysfunction.** INBRE.
222. Kriya L Dunlap, University of Alaska Fairbanks. **Vitamin D and Healthy Aging: Establishing the Sled Dog Sentinel for the Circumpolar North.** COBRE.
223. Maria Azmerin, University of Wyoming. **Generation and Preliminary Behavioral Characterization of 5xFAD-iRhom2-Deficient Mice in Alzheimer's Disease.** COBRE.
224. Morgan Bridi, West Virginia University. **Investigating the Acute Role of Corticotrophin Releasing Factor in Sensory Cortex and Affective Sensory Circuitry.** COBRE.

## **Structural and Cell Biology**

225. Abigale Riggle, West Liberty University. **Localization of the Divisome Protein FtsL in Francisella tularensis LVS.** INBRE.

226. Ariel Alperstein, University of Delaware. **Towards Two-dimensional Infrared Microscopy of Amyloid-chaperone Interactions.** COBRE.
227. Carmen L. Cadilla, University of Puerto Rico Medical Sciences, Biochemistry Department. **The bHLH Transcription Factor TWIST2 and Its Truncated Mutant, Q119X, Share Structural Features.** INBRE.
228. Cohen P Cisneros, Creighton University. **In Vivo Studies of the Phosphorylation of Chromatin Assembly Factor-1.** INBRE.
229. Darianys T. Hernández-Rivera, University of Puerto Rico - Mayaguez. **rHemoglobin I from L. pectinata/Collagen Moiety for Hydrogen Sulfide Therapeutic Delivery.** INBRE.
230. Fatemeh Moradi, Department of Physiology and Cell Biology University of Arkansas for Medical Sciences (UAMS). **SLC22A17 Is the Molecular Gatekeeper of LCN2 Signaling in Bone.** COBRE.
231. Heather Callaway, Montana State University. **Structure and Function of the West Caucasian Bat Lyssavirus Glycoprotein.** INBRE.
232. Jae Yeon Hwang, University of Louisville. **An Integrated Pipeline for Detecting Actively Translated Circular RNAs from RNA-seq and Ribo-seq Data.** INBRE.
233. Juliane Strauss-Soukup, Creighton University. **Evolutionary Conservation of Ornithine Decarboxylase Antizyme Pseudoknot RNA Binding To Spermine.** INBRE.
234. Leo Napoleon, University of New Hampshire. **FGF Activates Wnt Signaling during Newt Lens Regeneration.** COBRE.
235. Mallory Johnson, University of Pikeville. **Six-element PCR Strategy for Gene Synthesis.** INBRE.
236. Matthew Girard, Northeastern State University. **POLE1 Meets MCM2: Defining a Critical Interaction During Human DNA Replication.** INBRE.
237. Olivia M Williams, University of New Hampshire. **A Single Cell Atlas of the Newt Iris During Lens Regeneration.** COBRE.
238. Rabeya Sharmin Lima, University of New Hampshire. **Degradation Mediated Fibronectin Remodeling from Cell Spheroids in 3D.** COBRE.
239. Shangping Wang, Clemson University. **Vitrification Enables Long-Term Preservation of a Viable Whole Meniscus and Supports Transplantation in a Large Animal Model.** COBRE.
240. Steven Nguyen, Creighton University. **Investigation of a Putative Riboswitch in Crassostrea gigas OAZ RNA.** INBRE.
241. Visanu, University of Arkansas for Medical Sciences. **Transcriptome-Guided Deconvolution of the Mesenchymal Cells via TENGU: A High-Fidelity Spatial Transcriptomics Pipeline.** COBRE.
242. Emily Myers, University of Idaho. **Actin Cytoskeleton Disruption Impairs Engineered Tendon Formation within a 3D Cell Self-assembly Model.** INBRE.
243. Judith Roe, University of Maine at Presque Isle. **Lumbriculus Variegatus Worm Regeneration: Histology and Gene Expression Patterns.** INBRE.
244. Mac Pholo Aguirre Huamani, Dartmouth College. **Understanding the Quality Control of m7G-modified tRNAs in Mammals.** COBRE.
245. P. Alex Swider, Emporia State University. **Hemp as a Hive Protector: HPLC Detection of Phytocannabinoids in Foraging Honey Bees.** INBRE.
246. Seann Mulcahy, Providence College. **Adventures in Atropisomerism with Undergraduates.** INBRE.

### Administrative and Core Facility

247. Angel Mayor, Universidad Central del Caribe Alliance. **HPV Related Neoplasm Incidence and Mortality Risk Among People Living with HIV in Puerto Rico.** CTR.
248. Bara Altartouri, University of Nebraska-Lincoln. **Imaging Support from the UNL Microscopy Core: Confocal, SEM-EDX, and TEM.** COBRE.
249. Chamani Perera, University of Kansas. **The Computational Chemical Biology and Molecular Modeling Core.** COBRE.
250. Christopher Hemme, University of Rhode Island. **The RI-INBRE Molecular Informatics Core (MIC).** INBRE.
251. Craig Porter, Arkansas Children's Research Institute. **Arkansas Children's Research Institute's Rodent Metabolic and Behavioral Phenotyping Core.** COBRE.
252. Cyndy Buckhaults, SC INBRE Administrative Core, Department of Cell Biology & Anatomy, University of South Carolina School of Medicine Columbia. **Promoting Professional Development to Support SC INBRE Students, Staff and Faculty.** INBRE.
253. Diane Smith, Boise State University. **The Power of the Hub: Scaling Research Capacity by Centralizing NIH IDeA Program Administration.** COBRE, CTR.
254. Ernestine Jennings, The Miriam Hospital. **Community Collaborative Core, COBRE for Stress, Trauma, and Resilience (STAR).** COBRE.
255. Heather Driscoll, Norwich University. **Vermont Biomedical Research Network Data Science Core Facility.** INBRE.
256. Ilka Pinz, MaineHealth Institute for Research. **Small Animal Imaging by  $\mu$ CT and High-Resolution Ultrasound.** COBRE.
257. Jennifer Hackett, University of Kansas. **Next Generation Sequencing at KU Genome Sequencing Core.** COBRE.
258. Jeremiah R. Brown, Dartmouth College. **Building a Robust Implementation Science Network and In-Depth Training Opportunities: The COBRE Center for Implementation Science at Dartmouth.** COBRE.
259. Joan M Lakoski, West Virginia University; WVCTSI. **Pilot Outcomes of a Mentorship Development Certificate Program in Clinical and Translational Science.** CTR.
260. Julia Aebersold, University of Louisville. **KY INBRE Information Training and Education Core (ITEC).** INBRE.
261. Loyda B. Mendez, Universidad Ana G. Mendez, Carolina. **Building Biomedical Research Capacity in Puerto Rico Through Mentorship: The PR-INBRE Science and Technology Competency Enhancement Core.** INBRE.
262. Hong Zhu, University Of Mississippi Medical Center. **Neurophysiology Research Core: A Centralized Resource for Comprehensive Vestibular and Auditory Functional Testing and Rodent Models of Inner Ear Traumatic Injury and Ototoxicity.** COBRE.

263. Nazratun N. Monalisa, University of South Carolina Center for Applied Research and Evaluation. **The impact of the South Carolina INBRE program on developing biomedical research capacity among INBRE-funded faculty at undergraduate institutions.** INBRE.
264. Peter R McDonald, University of Kansas. **Flow Cytometry Core: A Chemical Biology of Infectious Disease COBRE Core Laboratory.** COBRE.
265. Renee Reijo Pera, McLaughlin Research Institute; Touro University. **Successes and Challenges in Building Research Capacity in a Unique Geographic and Academic Setting in Montana.** COBRE.
266. Sanam Sanei, University of New Hampshire. **Statistical and Data Science Services by the NH-INBRE/CIBBR Data Science Core at UNH.** INBRE.
267. Sharon M Feeney, Dartmouth Hitchcock Medical Center. **Building Capacity for Community Engagement Studios in Health Care Delivery Science in Rural New England.** COBRE.
268. Teresa Gunn, McLaughlin Research Institute; Weissman Hood Institute. **Accelerating Biomedical Discovery through the Gene Editing and Mouse Models Assessment (GEMMA) Core.** COBRE.
269. Xiaolu Zhang, Center for Applied Immunology and Pathological Processes, Department of Microbiology and Immunology, Louisiana State University Health Sciences Center-Shreveport. **The CAIPP Bioinformatics and Modeling Core: Service, Innovation, and Independent Discovery.** COBRE.

## AI-Powered Surveillance, Data Science, and Machine Learning

270. Alex Gomez, University of Central Oklahoma. **Microwave-Based Scanner for Pathogen Detection.** INBRE.
271. Brandon Weathers, University of South Carolina Aiken. **An Algorithm for the Constrained Longest Common Subsequence and Substring Problem for Multiple Strings.** INBRE.
272. Daniel Burns, University of Wyoming. **"Paging Dr. Chatbot": A Cross-sectional Comparison of Emotional Content of Text Responses to Patient Health Queries between Physicians & Artificial Intelligence Chatbots.** INBRE.
273. Micheal J. Mello, Brown University Health. **The Post-Acute Trauma and Health (PATH) Dataset: Creating a Longitudinal Post-Injury Cohort to Characterize Healthcare Outcomes Following Traumatic Presentations to the Emergency Department (ED).** COBRE.
274. Qinghao Zhang, University of Oklahoma. **Evaluating the Efficacy of Mebendazole Repurposing for Ovarian Cancer Therapy using Optical Coherence Tomography.** COBRE.
275. Xiaohua D Zhang, University of Kentucky. **AI-Driven Classification of Impaired Awareness of Hypoglycemia via Multidimensional Physiological and Symptom Clustering.** COBRE.

## Cancer

276. Abigail Rose Smith, Clemson University. **Characterization of long non-coding RNA (lncRNA) isoforms for Early-Detection of Triple-Negative Breast Cancer (TNBC).** COBRE, INBRE.
277. Andrew Dixon, Northwest Nazarene University. **Pinpointing Rate Controlling Factors in Endometrial Cancer Cell Glycolysis.** INBRE.
278. Ashley Thompson, ECU. **Establishment of Clonogenic Assays as a Technique in Determining Phenotypic Effects of Drug Treatment In Vitro.** INBRE.

279. Bayley Scott, University of North Dakota. **Long-term Exposure to Chemicals Found in Tobacco Smoke Affects the Expression of Stemness Genes in Normal Immortalized Urothelial Cells.** INBRE.
280. Claudia Ospina-Millán, Inter American University of Puerto Rico Bayamon Campus. **Chemistry-Guided Exploration of Simalikalactone D: Structural Features and Synthetic Analog Design for STAT4 Pathway Modulation.** INBRE.
281. Ekhtear Hossain, Southern University and A&M College at Baton Rouge (SUBR). **Tire-Wear Pollutant 4-Aminodiphenylamine Promotes Prostate Cancer Cell Proliferation via PI3K-Independent AKT/mTOR Signaling.** INBRE.
282. Emily Cox, University of Arkansas Medical Sci - Little Rock, AR. **Identifying Drivers of Cell Invasion and Metastatic Progression in Triple Negative Breast Cancer.** COBRE.
283. Faith Magstadt, University of North Dakota. **Combined Treatment with Cigarette Carcinogens Alters the Expression of KRT6A and KRT19 and may Alter the Molecular Subtype of Bladder Cancer.** INBRE.
284. Ivette Agront Medina, Universidad Ana G. Méndez Universidad Ana G. Méndez Recinto CupeyCupey. **Comparison of Cell Death Activation in Advanced Prostate Cancer mediated by Novel Promising Agents ABQ-48 and BQ-108.** INBRE.
285. Kabita Kunwar, Louisiana State University. **Synergistic Effects of Intracellular Tyrosine Kinase Inhibitors and Extracellular Domain Targeting Peptidomimetics for Non-small Cell Lung Cancer.** Other.
286. Katie Rose Ryan, University of Arkansas for Medical Sciences. **Defining how Rnd3, a Novel Regulator of Breast Cancer Invasion, Affects the Metastatic Potential of Triple-negative Breast Cancer.** COBRE.
287. Laura Naldi, Louisiana State University Health Sciences Center, New Orleans. **Tolvaptan as a Potential Anticancer and Immunomodulatory Treatment for Triple-negative Breast Cancer Through Modulation of Sodium Homeostasis.** COBRE.
288. Luis Diego Lazo Loya, New Mexico State University. **Investigating Synthetic Cannabinoid Derivatives Toxicity and Gene Expression in Breast Cancer Lines.** INBRE.
289. Mayumi Jijiwa, University of Hawaii. **Spatial Transcriptomics Reveals Subgroup-specific and Histology-dependent Transcriptional Programs in Medulloblastoma.** INBRE.
290. Mike Nichols, Creighton University. **Prolonged Modification of Culture Conditions Induces a Shift in Mitochondrial Energetics of Squamous Cell Carcinoma Cells.** INBRE.
291. Noureen Siraj, University of Arkansas at Little Rock. **From Design to Biological Performance: Emerging Ionic Nanomedicines.** INBRE.
292. Shreya Pokharel, Louisiana State University. **Caveolin-1 Drives Stemness and Multidrug Resistance via FAK/c-Myc Signaling in TNBC.** COBRE.
293. Taylor Malloy, University of North Dakota. **Effect of Tobacco Specific Carcinogens on the Expression Levels of Keratin 6B and Keratin 6C in a Normal Urothelial Cell Line.** INBRE.
294. Tuoen Liu, West Virginia School of Osteopathic Medicine. **Keratin 18 Overexpression Inhibits Brain Metastasis of Triple-negative Breast Cancer In Vitro.** INBRE.

295. Yamixa Delgado, San Juan Bautista School of Medicine. **Natural Is Not Neutral: Oregano, Graviola, and Cinnamon Phyto-Nanostructures Show Multi-Target Antitumor Activity but Antagonistic Interactions with Main Chemotherapies in NSCLC.** COBRE, INBRE.

## **Cardiovascular Biology, Cerebrovascular Biology, and Stroke**

296. Denicia Stokley, University of Hawaii. **Cardiac Remodeling is Regulated by Chromatin Reader, PRKCBP1.** INBRE.
297. Jaclyn Megan Sions, University of Delaware. **Cardiovascular Health Concerns after Lower-Limb Amputation.** COBRE.
298. Shane Scholten, Dakota State University. **Ischemic Preconditioning is Effective at Improving Human Athletic Performance.** INBRE.

## **Chronic Disease Mechanisms, Risk, and Prevention**

299. Bernard Khomenko, The University of Montana. **From Medication Access to “Medication Home”: A Claims-Based Measure of Rural Pharmacy Affiliation.** COBRE.
300. Gary ZeRuth, Murray State University. **Characterization of a Zebrafish Model of Diabetes Mellitus and Polycystic Kidney Disease.** INBRE.
301. Kimberlee Mix, Loyola University New Orleans. **Protective Roles for Orphan Nuclear Receptor NR4A2 in Osteoarthritis.** INBRE.
302. Noha Shawky Elsayed, Department of Pharmacology and Toxicology, Mississippi Center of Excellence in Perinatal Research, Women’s Health Research Center, University of Mississippi Medical Center. **Inflammatory Modulation of Angiotensin II Hypertension Programmed by Maternal Polycystic Ovary Syndrome.** COBRE.
303. Rebecca Pejak, Center for Population Health Research, University of Montana. **Cardiovascular Health Before and After an Indoor Air Quality Intervention (AIRWISE) in Older Adults.** COBRE.
304. Shreechandra Salukuti, Southern University and A&M College. **Cadmium Differentially Drives Profibrotic Signaling in Lung Cells.** INBRE.
305. Arpan Chowdhury, Louisiana State University. **Orthosteric Inhibition of CD2:CD58 nexus by Designed Peptidomimetics to Alleviate Rheumatoid Arthritis.** Other.
306. John Mossbacher, Montana State University Billings. **Water Quality and Biodiversity on the Yellowstone River.** INBRE.

## **Genetic and Gene-Environment Interactions**

307. Belinda Joyce Petri, University of Louisville. **Long-read Isoform Sequencing Reveals Aroclor1260-induced Isoform Expression in Mouse Liver.** INBRE.
308. Jeff Flores, Northern Kentucky University. **Analysis of Purine Biosynthesis and Salvage Pathway Genes and their Contributions to Genome Stability in *Saccharomyces cerevisiae*.** INBRE.
309. Lyle G Best, Turtle Mountain College. **The Relationship of CRP Variants to Body Mass Index.** INBRE.
310. Tyler David Armstrong, Department of Biological Sciences, Gregg Wadley College of Science and Health Professions Northeastern State University. **Towards the Development of the ‘Partial Rescue’ Strategy for FILS syndrome.** INBRE.

## Health Across the Lifespan and Lifestyle Interventions for Disease Prevention (Children's Health, Nutrition, Obesity, and Aging)

311. Ariana Costoso, New England College. **Self-Perceptions of Facial Expressivity in People with Parkinson's Disease.** INBRE.
312. Grayson Madsen, Dakota State University. **Using Momentum to Determine Loading Strategies for Loaded Jumps.** INBRE.
313. Joy Scaria, Oklahoma State University. **CoreCom: A Minimal Human-Derived Core Gut Microbiota that Stably Colonizes Germ-Free Mice and Promotes Mucosal Immune Maturation.** COBRE.
314. Laura Vene Maze LaTray, Blackfeet Community College. **Birthwork in Indigenous Communities.** INBRE.
315. Megan Ham, Keene State College. **Somatic Responses to Arsenic Exposure in Keystone Species Daphnia.** INBRE.
316. Yesenia Jimenez, Hawaii Pacific University. **Marker-Based vs Markerless Motion Capture Systems for Greater Accessibility: Evaluating Postural Sway During Single-Leg Stance.** INBRE.
317. Alexis E. Santana-Cruz, Universidad Ana G. Méndez, Carolina Campus. **Drosophila melanogaster Tracheal System Morphometry: Implications for Inhaled Dosimetry Predictions.** INBRE.
318. Paul Enlow, Nemours Children's Hospital, Delaware. **Peer Mentorship may Improve Psychosocial Outcomes among Adolescents with Type 1 Diabetes.** COBRE.

## Microbiology and Infectious Disease

319. Amelia Pinto, University of Kentucky. **Metabolic Regulation of West Nile Virus Replication and Neuroinvasive Disease Severity.** COBRE.
320. Brooke Horridge, Louisiana Biomedical Research Network. **SID-1, a Key Protein Involved in Systemic RNAi, Functions as a Pro-viral Factor in C. elegans.** INBRE.
321. Christopher W Lennon, Murray State University. **A Molecular Chaperone Can Promote Protein Splicing Through Precursor Stabilization.** INBRE.
322. Graysen Jones, Arkansas State University. **Inhibitory Effects of Novel Compounds on Biofilm Formation in Streptococcus mutans.** INBRE.
323. Juan Otero, Loyola University New Orleans. **Assessment of Putative rRNA Binding Sites in Erythromycin Resistance Methyltransferase E.** INBRE.
324. Kyle Vogtman, Saint Anselm College. **Adaptation of a High Throughput Assay to Quantify C. difficile Spore Germination.** INBRE.
325. Md Imran Hossain, Louisiana State University. **Regulation of Dynein-Dependent HSV-1 Virion Retrograde Transport by Viral and Cellular.** COBRE, INBRE.
326. Miranda J Oliver, College of Eastern Idaho. **Investigating Pet Store Arthropod Populations as a Source of Wolbachia Bacteria.** INBRE.
327. Nishanthini Pirashanna, Department of Pathobiological Sciences, School of Veterinary Medicine, Louisiana State University. **Alpha-ketoglutarate Restriction Augments Macrophage Host Defenses by Generating Nitric Oxide.** COBRE.
328. Robyn Kent, University of Oklahoma Health Science. **Elucidating Parasite Specific Requirements for Chronic T. gondii Infection in Disparate Tissues.** COBRE.

329. Simone Kaiamalia Marcelo Gonzalez, Boise State University. **Safer SuFEx-Derived Small-Molecule Inhibitors of Streptococcal SpeB.** INBRE.
330. Teagan Potter, Montana State University Billings. **Regulation of Autophagy Protein Expression in Neutrophils during *S. aureus* Interaction.** INBRE.
331. Zannatul Haque Tumpa, Department of Pathobiological Sciences, Louisiana State University School of Veterinary Medicine. **Pulmonary Innate Immune Responses Restrict *Staphylococcus aureus* Small Colony Variants-associated pneumonia.** COBRE.
332. Hanna Justice, University of Pikeville. **A Sensitive Assay for Quantifying T Cell Receptor Excision Circles in Humans.** INBRE.

## **Neurodevelopment, Behavioral and Mental Health, and Related Comorbidities (Tobacco, Alcohol, Drug Misuse)**

333. Alejandro Ramirez, Western Kentucky University. **The Impact of Expectancies on Intoxicating Hemp-Derived Product Use and Driving.** INBRE.
334. Cutter Barrus, University of Wyoming. **Xenopus Tadpoles Display Distinct and Enduring Visual Preferences.** INBRE.
335. Hanna E Forrest, Western Kentucky University. **Effectiveness of a Modified Digital Brief Intervention on Alcohol-Related Outcomes for Heavy Drinking Emerging Adults with Interpersonal Trauma.** INBRE.
336. Mackenzie Feltner, Northern Kentucky University. **The Effect of Offspring Exercise on Learning, Memory and Motor Function in Two Genotypes of Mice Exposed to Benzo[a]pyrene During Early Brain Development.** INBRE.
337. Nathan D. Meredith, Western Kentucky University. **Evaluation of an Interactive Mobile Phone-Based Brief Intervention to Reduce Driving Under the Influence of Cannabis among Emerging Adults: A Randomized Controlled Trial.** INBRE.
338. Sophie Jerome, Western Kentucky University. **PTSD, Depression, and Anxiety Outcomes in a Digital Brief Intervention for Substance-Using Interpersonal Trauma Survivors.** INBRE.
339. Riley Crews, University of Montana. **Teaching with Confidence: Association Between Confidence and Student Outcomes.** INBRE.

## **Neuroscience and Neurological Disorders**

340. Austin Keeler, University of Delaware. **Spatial Proteomic Atlas of the Peripheral Somatosensory Ganglia During Chronic Pain.** COBRE.
341. Caroline Geisler, University of Kentucky. **Astrocyte Lipometabolic Regulation by Acyl-CoA Binding Protein as a Neurobiological Target Underlying Central Metabolic Dysfunction in Alzheimer's Disease.** COBRE.
342. Elizabeth G. Lind, Creighton University. **The Gatekeeper of Choroid Plexus Integrity.** INBRE.
343. Fani Del Toro, University of Delaware. **Organic Electrochemical Transistors for Selective Detection of Amyloid- $\beta$ .** COBRE.
344. Jaime Heckler, Western Kentucky University. **A Chronometric and Mobile EEG Examination of Directionally Informed Cueing Effects on Plantar Flexion Response Conflict.** INBRE.
345. Li Li, University of Wyoming. **Serotonin (5-HT) Receptor Signaling in Gut-Brain Communication.** COBRE.

346. Mikael Klingeborn, Weissman Hood Institute at Touro University, McLaughlin Research Institute. **Desmosome and Hemidesmosome Overexpression in Retinal Pigmented Epithelium Protects Against Oxidative Stress-induced Epithelial-Mesenchymal Transition.** COBRE.
347. Natalie Sofaly, Boise State University. **Bovine Colostrum Supplementation Modulates Intestinal Tract Functionality in a Murine Multiple Sclerosis Model.** COBRE, INBRE.
348. Vandana Sharma, Department of Zoology and Physiology, University of Wyoming. **Molecular Characterization of the Progressive Landscape of Depression.** COBRE, INBRE.

## Structural and Cell Biology

349. Alexey L. Arkov, Murray State University. **Strategies to Assemble Different Membraneless RNA-protein Organelles: Lessons from Germ Cells.** INBRE.
350. Benjamin Rudo, University of Hawaii at Hilo. **Convenient Synthesis of Diazirines as Photoaffinity Labels.** INBRE.
351. Christian Wright, University of Oklahoma Health Sciences Center, Oklahoma Medical Research Foundation. **Detecting Genomic Instability Using Third Generation Sequencing.** COBRE.
352. Daisy Grove, Northern Kentucky University. **Investigating Distinct Roles of the Yeast AdoMet Synthetases Sam1 and Sam2.** INBRE.
353. David McDaniel, North Idaho College and University of Idaho. **Structural Comparison of the K62 Killer Toxin and its Orthologs.** INBRE.
354. Gabrielle R. Bresson-Tan, Montana State University (MSU). **Structure-guided Design of a Broadly Neutralizing Antibody Against Rabies and West Caucasian Bat Lyssavirus.** INBRE.
355. Intawat Nookaew, University of Arkansas for Medical Sciences. **CRISPR-based Lineage Tracing and Single Cell Transcriptional Profiles Analysis Uncover Osteo-CAR Cells are Osteoblast Progenitors in Mice.** COBRE.
356. John Erik Mylroie, Millsaps College. **Zebrafish, a Powerful Tool for Studying Organism by Environment Interactions at Undergraduate Institutions.** INBRE.
357. Kirk L West, University of Arkansas for Medical Sciences. **Biochemical Characterization of Tausled-like Kinase Interactions with DNA Sliding Clamps.** COBRE.
358. Lynda Clayton, University of Idaho. **Determination of the Mechanism Behind Species Specificity of Yeast and Human Hsp90 and Aha1.** INBRE.
359. Maria Moyet, University of New England College of Osteopathic Medicine. **Exploring NAD<sup>+</sup> Metabolic Pathways as Therapeutic Targets in Tuberous Sclerosis Complex and Lymphangiomyomatosis.** COBRE.
360. Md Wasi Ul Kabir, University of New Orleans. **CEG-IDP: Disorder-Informed Energy Reweighting for Conformational Ensemble Generation of Intrinsically Disordered Proteins.** Other.
361. Olivia M. Rocchio, West Liberty University. **Investigating Myogenic Regulation of Craniofacial Morphology in a Murine Model of Craniosynostosis.** INBRE.
362. Samira Aditya Kunapareddy, University of Mississippi Medical Center. **Radio-Frequency Debonding of Zirconia Using a Novel Primer.** INBRE.
363. Shian Liu, West Virginia University. **Activation Mechanisms of Single-Pass Transmembrane Guanylate Cyclase-A.** COBRE.

364. Taedyn Jacobsen, Idaho State University. **Enhanced Encapsulin Cargo Loading Efficiency via Rational Targeting Peptide Modifications.** INBRE.
365. Zachary Boyce Joy, Department of Biochemistry and Cell Biology, Geisel School of Medicine at Dartmouth. **PATL2 RNA Binding Dynamics in Mouse Oocytes.** INBRE.
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369. Samantha Bursaw, University of Nebraska - Kearney. **Elution and Concentration *S. cerevisiae* DNA in Large Inserts Using 3D-printed Devices.** INBRE.