



# Ongoing Research Projects

The research projects listed here were ongoing and active in 2024, having received funding from Cure Alzheimer's Fund in a previous year.

Project/Researcher	Distribution Amount
<b>FOUNDATIONAL RESEARCH</b>	
<b>BIOLOGICAL RESEARCH MATERIALS: NEW ANIMAL AND CELLULAR MODELS, AND HUMAN SAMPLES</b>	
<b>Adding Genomics and Methyloomics to Personalized Disease Prediction for Alzheimer's Disease (EPIC4AD)</b> Lars Bertram, M.D., University of Lübeck, Germany Christina M. Lill, M.D., M.Sc., University of Münster, Germany; Imperial College London, England	<b>\$116,684</b>
<b>Influence of Plaque Vicinity on Microglial and Astrocyte Gene Expression; Role of Human Tau and TREM2</b> Frances Edwards, Ph.D., University College London, England John Hardy, Ph.D., University College London, England	<b>\$172,369</b>
<b>Cerebrospinal Fluid Neuroinflammatory Signature in Alzheimer's Disease and Related Proteopathies</b> Mathias Jucker, Ph.D., German Center for Neurodegenerative Diseases (DZNE); University of Tübingen, Germany Stephan Kaeser, Ph.D., University of Tübingen, Germany Stefan Lichtenthaler, Ph.D., German Center for Neurodegenerative Diseases (DZNE); Technische Universität München (TUM), Germany	<b>\$180,550</b>
<b>Personalized Disease Prediction for Alzheimer's Disease Using Proteome Profiling: The EPIC4AD Study</b> Christina M. Lill, M.D., M.Sc., University of Münster, Germany; Imperial College London, England Lars Bertram, M.D., University of Lübeck, Germany	<b>\$541,897</b>
<b>Characterization of the Longitudinal Trajectories of the Synaptic Blood Marker Beta-Synuclein During Alzheimer's Disease Pathogenesis and Improvement of the Measurement Procedure</b> Patrick Oeckl, Ph.D., German Center for Neurodegenerative Disease (DZNE), Germany Markus Otto, M.D., Martin-Luther-University Halle-Wittenberg, Germany	<b>\$144,325</b>
<b>Neurobiological Basis of Cognitive Impairment in African Americans: Deep Phenotyping of Older African Americans at Risk of Dementia—The Dementia (in) African American Population Phenotyping (for) Potential Elevated Risk (DAAPPER) Study</b> Henry L. Paulson, M.D., Ph.D., University of Michigan Bruno Giordani, Ph.D., University of Michigan Benjamin M. Hampstead, Ph.D., ABPP/CN, University of Michigan	<b>\$243,407</b>
<b>Multidisciplinary Phenotyping of a Novel Humanized LOAD Mouse Model</b> Giuseppina Tesco, M.D., Ph.D., Tufts University School of Medicine	<b>\$201,250</b>
<b>EPIGENETIC FACTORS</b>	
<b>CIRCUITS: Characterizing Epigenetic Biomarkers of Human Cognitive Aging</b> Lars Bertram, M.D., University of Lübeck, Germany	<b>\$252,250</b>
<b>CIRCUITS: A Unified Approach to Actionable Alzheimer's Disease Signatures</b> Winston Hide, Ph.D., Beth Israel Deaconess Medical Center; Harvard Medical School	<b>\$248,980</b>
<b>TRANSLATIONAL RESEARCH</b>	
<b>STUDIES OF NOVEL ALZHEIMER'S DISEASE GENES</b>	
<b>Exploring the Therapeutic Potential of Clusterin in a Preclinical Model of Alzheimer's Disease</b> Alban Gaultier, Ph.D., University of Virginia	<b>\$201,250</b>
<b>ABCA7 Loss of Function in Aging and Alzheimer's Disease</b> Takahisa Kanekiyo, M.D., Ph.D., Mayo Clinic, Jacksonville	<b>\$201,250</b>

ONGOING RESEARCH PROJECTS (CONTINUED)

Project/Researcher	Distribution Amount
<b>STUDIES OF AMYLOID PRECURSOR PROTEIN AND AMYLOID BETA</b>	
<b>SFRP1 as a Therapeutic Target and Diagnostic/Prognostic Factor in Alzheimer's Disease</b> Paola Bovolenta, Ph.D., Universidad Autónoma de Madrid, Spain	\$172,500
<b>APP Gene Dose-Mediated Dysregulation of the Endolysosomal Network Acts to Compromise Synaptic Structure and Function Leading to Alzheimer's Disease in Down Syndrome</b> William C. Mobley, M.D., Ph.D., University of California, San Diego	\$230,000
<b>STUDIES OF TAU</b>	
<b>Alzheimer's Disease Tau Consortium: Role of VCP/p97 in Tau Prion Replication</b> Marc I. Diamond, M.D., University of Texas Southwestern Medical Center	\$287,000
<b>Alzheimer's Disease Tau Consortium: Impact of Tau Mutations and Amyloid Beta on Tau Post-Translational Modifications and Conformation</b> Karen E. Duff, Ph.D., University College London, England	\$344,993
<b>Alzheimer's Disease Tau Consortium: How Do Soluble Tau Species Replicate?</b> Bradley T. Hyman, M.D., Ph.D., Massachusetts General Hospital; Harvard Medical School	\$287,169
<b>Toxic Effects of Extracellular Tau Oligomers on Neurons</b> George S. Bloom, Ph.D., University of Virginia	\$192,020
<b>RNA as a Determinant of Tau Seeding</b> Marc I. Diamond, M.D., University of Texas Southwestern Medical Center	\$230,000
<b>Characterization of Tau Pathology Heterogeneity Across the Alzheimer's Disease Spectrum</b> Oskar Hansson, M.D., Ph.D., Lund University, Sweden Rik Ossenkoppele, Ph.D., Amsterdam University Medical Center, The Netherlands; Lund University, Sweden	\$201,250
<b>Using Long-Read Sequencing to Investigate the MAPT Locus and Transcripts in Neurodegeneration</b> John Hardy, Ph.D., University College London, England	\$201,250
<b>Regional Variability of Pathology-Associated Properties of Tau in Posterior Cortical Atrophy</b> Bradley T. Hyman, M.D., Ph.D., Massachusetts General Hospital; Harvard Medical School John R. Dickson, M.D., Ph.D., Massachusetts General Hospital; Harvard Medical School	\$172,000
<b>Targeting Microglial TSG101 for Synaptic Protection and Cognitive Enhancement in Alzheimer's Disease</b> Seiko Ikezu, M.D., Mayo Clinic, Jacksonville Tsuneya Ikezu, M.D., Ph.D., Mayo Clinic, Jacksonville	\$172,500
<b>STUDIES OF APOLIPOPROTEIN E (APOE)</b>	
<b>Fleming APOE Consortium: APOE4-Mediated Dysfunction of CD8 T Cell-Microglia Crosstalk in Alzheimer's Disease</b> Oleg Butovsky, Ph.D., Brigham and Women's Hospital; Harvard Medical School	\$287,500
<b>Fleming APOE Consortium: Role of APOE Isoforms in Immune Responses in a Model of Tauopathy</b> David M. Holtzman, M.D., Washington University School of Medicine in St. Louis	\$345,000
<b>Fleming APOE Consortium: Modulation of Selective Neuronal Vulnerability in Alzheimer's Disease by Apolipoprotein E</b> Jean-Pierre Roussarie, Ph.D., Boston University	\$287,500
<b>Mitochondrial Alzheimer's Risk Factors Control APOE Expression and Secretion</b> Victor Faundez, M.D., Ph.D., Emory University	\$201,250
<b>Sex Matters: Understanding the Influence of Sex and Apolipoprotein E (APOE) Genotype on Hippocampal Plasticity and Cognition</b> Liisa Galea, Ph.D., University of British Columbia, Canada; Centre for Addiction and Mental Health, Canada	\$170,200
<b>Elucidating the Protective Effects of APOE2 in the Presence of APOE4 Gene Allele in Animal Models</b> Na Zhao, M.D., Ph.D., Mayo Clinic, Jacksonville Yingxue Ren, Ph.D., Mayo Clinic, Jacksonville	\$201,250

ONGOING RESEARCH PROJECTS (CONTINUED)

Project/Researcher	Distribution Amount
<b>STUDIES OF THE IMMUNE RESPONSE IN ALZHEIMER'S DISEASE</b>	
<b>Neuroimmune Consortium: Examining the Impact of Peripherally Derived Human Macrophages in Alzheimer's Disease Pathogenesis</b> Mathew Blurton-Jones, Ph.D., University of California, Irvine	\$287,493
<b>Neuroimmune Consortium: Mechanisms Mediating Microglia Sensing of Peripheral Inflammation</b> Christopher K. Glass, M.D., Ph.D., University of California, San Diego	\$287,500
<b>Neuroimmune Consortium: Biomarker Tool Development</b> Jacob Hooker, Ph.D., Massachusetts General Hospital; Harvard Medical School	\$287,500
<b>Neuroimmune Consortium: Effects of Peripheral Inflammation on Myeloid Cell Function in Alzheimer's Disease</b> Beth Stevens, Ph.D., Boston Children's Hospital; Harvard Medical School; Broad Institute	\$344,085
<b>Prenatal Inflammation Effects on Blood-Brain Barrier Function and Alzheimer's Disease-Related Pathologies Across the Lifespan</b> Alexandre Bonnin, Ph.D., Children's Hospital Los Angeles; University of Southern California	\$201,250
<b>A New Model of Microglia Genetic Perturbation in Vivo to Screen All Risk Factors Associated with Alzheimer's Disease</b> Oleg Butovsky, Ph.D., Brigham and Women's Hospital; Harvard Medical School Vijay K. Kuchroo, D.V.M., Ph.D., Brigham and Women's Hospital; Harvard Medical School	\$431,250
<b>Microglial-Specific INPP5D Knockdown Modulates Behavior, Amyloidosis and Tauopathy in Alzheimer's Mouse Models</b> Samuel E. Gandy, M.D., Ph.D., Icahn School of Medicine at Mount Sinai Michelle E. Ehrlich, M.D., Icahn School of Medicine at Mount Sinai	\$217,327
<b>T-Cell Epigenetics in Alzheimer's Disease</b> David M. Gate, Ph.D., Northwestern University Feinberg School of Medicine	\$172,500
<b>Investigating MEF2C Transcription Factor as a Therapeutic Target to Reprogram Pathological Microglial States in Alzheimer's Disease</b> Alison M. Goate, D.Phil., Icahn School of Medicine at Mount Sinai Eduardo Marcora, Ph.D., Icahn School of Medicine at Mount Sinai	\$201,250
<b>Revealing New Genes and Pathways at the Intersection of Lipotoxic and Genetic Risk for Alzheimer's Disease</b> Anna Greka, M.D., Ph.D., Brigham and Women's Hospital; Harvard Medical School; Broad Institute Beth Stevens, Ph.D., Boston Children's Hospital; Harvard Medical School; Broad Institute	\$172,550
<b>Signaling Function of TREM2 Cleavage Products, Which Are Affected by Agonistic Antibodies to the Stalk Region</b> Christian Haass, Ph.D., German Center for Neurodegenerative Diseases (DZNE), Germany Kai Schlepckow, Ph.D., German Center for Neurodegenerative Diseases (DZNE), Germany	\$172,500
<b>Mechanisms of Astrocyte-Derived Lipid Toxicity in Alzheimer's Disease</b> Shane A. Liddelow, Ph.D., New York University	\$208,033
<b>Neuroimmune Connectome Perturbations in Alzheimer's Disease</b> Francisco J. Quintana, Ph.D., Brigham and Women's Hospital; Harvard Medical School; Broad Institute	\$201,250
<b>Human Brain CD33 Ligand, Receptor Protein Tyrosine Phosphatase Zeta (RPTPζ)S3L, Limits Microglial Phagocytosis and Contributes to Alzheimer's Disease Progression</b> Ronald L. Schnaar, Ph.D., The Johns Hopkins University Philip C. Wong, Ph.D., The Johns Hopkins University	\$201,250
<b>Understanding the Dynamic Lipid-Immunometabolome of Protective and Risk Alzheimer's Microglia</b> Rik van der Kant, Ph.D., Amsterdam University Medical Center, The Netherlands	\$201,250
<b>Elucidating the Role of Soluble Epoxide Hydrolase and Arachidonic Acid Metabolism in Neuroinflammation and Alzheimer's Disease</b> Hui Zheng, Ph.D., Baylor College of Medicine	\$167,637

ONGOING RESEARCH PROJECTS (CONTINUED)

Project/Researcher	Distribution Amount
<b>STUDIES OF ALTERNATIVE NEURODEGENERATIVE PATHWAYS</b>	
<b>Brain Entry and Exit Consortium: Central Nervous System Fluid Homeostasis and Waste Clearance in Alzheimer's Disease Characterized by MRI</b> Helene Benveniste, M.D., Ph.D., Yale School of Medicine David Xianfeng Gu, Ph.D., State University of New York at Stony Brook	<b>\$204,081</b>
<b>Brain Entry and Exit Consortium: A 3D In Vitro Neurovascular Human Brain Model with Meningeal Lymphatics for Elucidating Mechanisms Underlying Alzheimer's Disease</b> Se Hoon Choi, Ph.D., Massachusetts General Hospital; Harvard Medical School	<b>\$230,000</b>
<b>Brain Entry and Exit Consortium: Identifying the Blood-Brain Barrier Changes During Alzheimer's Disease</b> Richard Daneman, Ph.D., University of California, San Diego	<b>\$287,500</b>
<b>Brain Entry and Exit Consortium: Crosstalk of Central Nervous System Barriers and Clearance Routes in Homeostasis and Alzheimer's Disease</b> Jonathan Kipnis, Ph.D., Washington University School of Medicine in St. Louis	<b>\$345,000</b>
<b>Brain Entry and Exit Consortium: Biochemical and Functional Analysis of Cerebrospinal Fluid and Lymph Following Changes in Brain Fluid Dynamics</b> Laura Santambrogio, M.D., Ph.D., Weill Cornell Medicine	<b>\$287,500</b>
<b>Alzheimer's Disease Pathophysiology Alters the Level of Electrical and Chemical Synapse Coupling in the Network of GABAergic PV+ Interneurons Early in Disease Course</b> Srdjan D. Antic, M.D., University of Connecticut Health Center Riqiang Yan, Ph.D., University of Connecticut Health Center	<b>\$230,000</b>
<b>Disentangling the Role of Intracranial Arteriosclerosis in Alzheimer's Disease</b> Daniel Bos, M.D., Ph.D., Erasmus University Medical Center, The Netherlands Meike Vernooij, M.D., Ph.D., Erasmus University Medical Center, The Netherlands Frank J. Wolters, M.D., Ph.D., Erasmus University Medical Center, The Netherlands Geert Jan Biessels, M.D., Ph.D., University Medical Center Utrecht, The Netherlands Julia Neitzel, Ph.D., Harvard T.H. Chan School of Public Health	<b>\$167,207</b>
<b>Scaling the Divide in Alzheimer's Disease: An Integrated Molecular, Cellular and Network-Level Study</b> Marc Aurel Busche, M.D., Ph.D., University College London, England Samuel Harris, Ph.D., University College London, England	<b>\$191,624</b>
<b>Air Pollution and Alzheimer's Disease Risk Interact with Premature Aging of Neural Stem Cells and Apolipoprotein E Alleles</b> Caleb E. Finch, Ph.D., University of Southern California Michael A. Bonaguidi, Ph.D., University of Southern California	<b>\$301,069</b>
<b>In Vivo Models for Golgi Fragmentation and the Molecular Pathogenesis of Alzheimer's Disease</b> Samuel E. Gandy, M.D., Ph.D., Icahn School of Medicine at Mount Sinai	<b>\$230,000</b>
<b>Oligodendroglial Dynamics and Myelination in Alzheimer's Disease</b> Erin M. Gibson, Ph.D., Stanford University	<b>\$198,751</b>
<b>Understanding the Mechanism Underlying Vaccination for Alzheimer's Disease</b> Charles L. Greenblatt, M.D., Hebrew University of Jerusalem, Israel Ofer N. Gofrit, M.D., Ph.D., Hebrew University of Jerusalem, Israel Benjamin Y. Klein, M.D., Hebrew University of Jerusalem, Israel	<b>\$115,805</b>
<b>Deciphering and Restoring Computational Setpoints in Alzheimer's Disease Through Sleep-Enhanced Network Homeostasis</b> Keith B. Hengen, Ph.D., Washington University in St. Louis	<b>\$189,902</b>
<b>Morphological, Electrophysiological and Transcriptional Characterization of Single Neurons from Resilient and Susceptible Models of Human Alzheimer's Disease</b> Catherine Kaczorowski, Ph.D., University of Michigan Shannon Moore, Ph.D., University of Michigan	<b>\$201,250</b>
<b>Neuronal Mechanisms Driving Synapse Loss in Alzheimer's Disease</b> Martin Kampmann, Ph.D., University of California, San Francisco	<b>\$201,250</b>
<b>Circadian Perturbations of the Vasculome and Microglome in Alzheimer's Disease</b> Eng H. Lo, Ph.D., Massachusetts General Hospital; Harvard Medical School	<b>\$200,417</b>

ONGOING RESEARCH PROJECTS (CONTINUED)

Project/Researcher	Distribution Amount
<b>Circadian Desynchrony, Glial Dysfunction and Alzheimer's Disease Pathogenesis</b> Erik S. Musiek, M.D., Ph.D., Washington University School of Medicine in St. Louis	\$198,994
<b>Evaluating TMEM106B Accumulation in Alzheimer's Disease</b> Leonard Petrucelli, Ph.D., Mayo Clinic, Jacksonville Casey N. Cook, Ph.D., Mayo Clinic, Jacksonville	\$201,250
<b>Stress and Neurovascular-Immune Networks in Alzheimer's Disease</b> Scott J. Russo, Ph.D., Icahn School of Medicine at Mount Sinai Wolfram C. Poller, M.D., Icahn School of Medicine at Mount Sinai	\$172,500
<b>Functional Changes to Cerebrospinal Fluid Immune Cells Resulting from Bacillus Calmette-Guérin (BCG) Vaccination in Older Adults With and Without Alzheimer's Disease</b> Marc Weinberg, M.D., Ph.D., Massachusetts General Hospital; Harvard Medical School Steven E. Arnold, M.D., Massachusetts General Hospital; Harvard Medical School	\$258,750
<b>Targeting the Microbiome and Innate Immunity in Alzheimer's Disease</b> Howard L. Weiner, M.D., Brigham and Women's Hospital; Harvard Medical School Laura M. Cox, Ph.D., Brigham and Women's Hospital; Harvard Medical School	\$201,250
<b>A Multimodality Study on the Lipid Molecular Basis of Obesity and Its Roles in Regulating Alzheimer's Pathogenesis for Developing Potential Targeted Interventions</b> Stephen T.C. Wong, Ph.D., Houston Methodist Research Institute; Weill Cornell Medicine	\$201,199
<b>Noncoding Translation Feedback Loop in Alzheimer's Disease</b> Xuebing Wu, Ph.D., Columbia University	\$201,250
<b>DRUG DISCOVERY</b>	
DRUG SCREENING AND LEAD DRUG EVALUATION PROJECTS	
<b>Alzheimer's Disease Drug Discovery and Development Consortium: High-Throughput Drug Screening for Alzheimer's Disease Using Three-Dimensional Human Neural Culture Systems</b> Doo Yeon Kim, Ph.D., Massachusetts General Hospital; Harvard Medical School Luisa Quinti, Ph.D., Massachusetts General Hospital; Harvard Medical School	\$230,590
<b>Alzheimer's Disease Drug Discovery and Development Consortium: Blocking Synaptotoxicity in Alzheimer's Three-Dimensional Models</b> Weiming Xia, Ph.D., Boston University	\$197,500
<b>PRECLINICAL AND CLINICAL DRUG DEVELOPMENT</b>	
PRECLINICAL DRUG DEVELOPMENT	
<b>Development of Human cGAS Inhibitors to Treat Alzheimer's Disease</b> Li Gan, Ph.D., Weill Cornell Medicine Subhash Sinha, Ph.D., Weill Cornell Medicine	\$250,000
<b>Interrogating Levetiracetam's Impact on Amyloid Pathology and Presynaptic Proteostasis in Knock-In Mouse Models with Humanized Amyloid Beta</b> Jeffrey Savas, Ph.D., Northwestern University Feinberg School of Medicine	\$136,827
CLINICAL TRIAL DESIGN	
<b>Application of Machine Learning Methods in Alzheimer's Disease Clinical Trials</b> Ali Ezzati, M.D., University of California, Irvine Richard B. Lipton, M.D., Albert Einstein College of Medicine	\$100,000
<b>OTHER</b>	
SCIENTIFIC MEETINGS AND SUPPORT	
<b>General Scientific Support</b> Wilma Wasco, Ph.D., Massachusetts General Hospital; Harvard Medical School	\$95,594