

2007 Alzheimer's Association Grant Portfolio

—Organized by trends in research

Biology of disease-related molecules

1. Production of beta-amyloid

- **David Paul Cistola, M.D., Ph.D.**
East Carolina University
Greenville, North Carolina
Structural Studies of the APP Transmembrane Domain
Investigator-Initiated Research Grant—\$240,000 over three years
What structural features of APP and related proteins promote the production of beta-amyloid?
 - **Madepalli Krishnappa Lakshmana, Ph.D.**
University of California
San Diego, California
Role of Novel LRP-Binding Proteins on the Amyloidogenic Processing of APP
New Investigator Research Grant—\$100,000 over two years
How do certain protein interactions promote the production of beta-amyloid?
 - **Yi Wen, Ph.D.**
Columbia University Medical Center
New York, New York
Regulation of APP Processing by Src Family Tyrosine Protein Kinase
New Investigator Research Grant—\$99,993 over two years
How do certain proteins promote the production of beta-amyloid?
 - **Jesse Wiley, Ph.D.**
University of Washington
Seattle, Washington
APP Binding-Partner Modulation of Gamma-Secretase-Mediated Proteolysis
New Investigator Research Grant—\$100,000 over two years
How do certain proteins partner with APP to promote or inhibit beta-amyloid production?
- ### 2. Normal function of disease-related proteins
- **Vivian Budnik, Ph.D.**
University of Massachusetts Medical School
Worcester, Massachusetts
Genetic Strategies to Elucidate APP Function During Synapse Formation
Investigator-Initiated Research Grant—\$240,000 over three years
Does APP normally play a role in the development and regulation of cell-to-cell signaling in the brain?
 - **Daniela Puzzo, M.D., Ph.D.**
University of Catania
Catania, Italy
Functional Role of Beta-Amyloid in Synaptic Plasticity and Memory
New Investigator Research Grant—\$99,880 over two years
What role does beta-amyloid play in healthy memory formation?

Alzheimer's disease pathology

1. Properties and toxicity of abnormal protein structures

- **Gal Bitan, Ph.D.**
University of California
Los Angeles, California
Investigation of Beta-Amyloid Protein Oligomerization and Neurotoxicity
Investigator-Initiated Research Grant—\$240,000 over three years
What structural features of beta-amyloid promote aggregation and determine its toxicity?
- **Gail V. W. Johnson, Ph.D.**
University of Rochester
Rochester, New York
Tau Oligomerization and Aggregation Analysis: A Novel Approach
Investigator-Initiated Research Grant—\$239,991 over three years
What type of tau protein structure has a toxic effect on brain cells?
- **Christopher D. Link, Ph.D.**
University of Colorado
Boulder, Colorado
Structure/Function Analysis of in Vivo Beta-Amyloid Peptide Toxicity
Zenith Fellows Award—\$249,968 over two years
What are the structural features and underlying mechanisms of the most toxic forms of beta-amyloid?
- **Melissa Ann Moss, Ph.D.**
University of South Carolina Research Foundation
Columbia, South Carolina
Characterization of Membrane Compositions That Promote Beta-Amyloid Assembly
New Investigator Research Grant—\$100,000 over two years
How do changes in cell membrane composition promote the assembly of toxic beta-amyloid structures?
- **Veronika A. Szalai, Ph.D.**
University of Maryland
Baltimore, Maryland
Neurotoxicity and Structure of Copper-Containing Beta-Amyloid
Investigator-Initiated Research Grant—\$239,988 over three years
What role do copper-containing beta-amyloid structures play in Alzheimer pathology?

2. Synaptic dysfunction: Loss of cell-to-cell communication

- **Shernaz Xerxes Bamji, Ph.D.**
University of British Columbia
Vancouver, British Columbia, Canada
Beta-Catenin Stabilization in the Synaptic Pathology of Alzheimer's Disease
New Investigator Research Grant—\$99,252 over two years
How does a certain protein disrupt cell-to-cell communication in Alzheimer's disease?
- **Gerard J. Byrne, M.B.B.S., Ph.D.**
University of Queensland
Herston, Australia
Synaptic Dysfunction in Alzheimer's Disease
Investigator-Initiated Research Grant—\$238,013 over three years
Do brain cells develop new but disordered connections to compensate for the loss of cell-to-cell communication in Alzheimer's disease?

- **Katherine Conant, M.D.**
Johns Hopkins University
Baltimore, Maryland
MMPs and Synaptic Injury in Alzheimer's Disease
Investigator-Initiated Research Grant—\$240,000 over three years
What role does a certain protein play in the disruption of cell-to-cell communication?
 - **Gunnar K. Gouras, M.D.**
Weill Medical College of Cornell University
New York, New York
Mechanism of Beta-Amyloid-Induced Synaptic Dysfunction
Zenith Fellows Award—\$250,000 over two years
What is the mechanism by which beta-amyloid induces dysfunction in cell-to-cell communication?
 - **Henry W. Querfurth, M.D., Ph.D.**
Caritas St. Elizabeth's Medical Center
Boston, Massachusetts
Intraneuronal Beta-Amyloid and Synaptic Plasticity in the Prefrontal Cortex
Investigator-Initiated Research Grant—\$236,000 over three years
How does beta-amyloid inside neurons affect cell-to-cell communication?
 - **Keith Vosseller, Ph.D.**
Drexel University
Philadelphia, Pennsylvania
Post-Translational Synaptic Proteomics and Function in Alzheimer's Disease
New Investigator Research Grant—\$100,000 over two years
How do changes in certain chemical properties of cells affect cell-to-cell communication in Alzheimer's disease?
- 3. Factors contributing to cell death**
- **Hyung-gon Lee, Ph.D.**
Case Western Reserve University
Cleveland, Ohio
A Novel Transgenic Model for Alzheimer's Disease
New Investigator Research Grant—\$100,000
What can a new mouse model reveal about a protein that may induce cell death in Alzheimer's disease?
 - **Michael K. Lee, Ph.D.**
Johns Hopkins University
Baltimore, Maryland
Beta-Amyloid and Monoaminergic Neurodegeneration in Alzheimer's Disease Transgenic Mice
Investigator-Initiated Research Grant—\$240,000 over three years
How does beta-amyloid induce the death of specialized cells in the brain stem?
 - **Zaibo Li, Ph.D., M.D.**
University of Rochester
Rochester, New York
Beta-Amyloid Elicits Its Neurotoxicity by Activating Fyn/c-Cbl Pathway
New Investigator Research Grant—\$99,738 over two years
How does beta-amyloid activate a chain of events leading to cell death?
 - **Qiulan Ma, M.D., Ph.D.**
Sepulveda Research Corporation
North Hills, California
Mechanisms of PTEN Signaling Defects in Alzheimer's Disease
New Investigator Research Grant—\$99,980 over two years
How does beta-amyloid disrupt the function of a protein that promotes cell survival?
 - **Kalipada Pahan, Ph.D.**
Rush University Medical Center
Chicago, Illinois
Neutral Sphingomyelinase in Beta-Amyloid-Induced Neuronal Death
Investigator-Initiated Research Grant—\$239,662 over three years
How does beta-amyloid initiate a sequence of events leading to cell death?
 - **Jie Shen, Ph.D.**
Brigham and Women's Hospital
Boston, Massachusetts
Mechanisms of Neurodegeneration Caused by Loss of Presenilin Function
Investigator-Initiated Research Grant—\$240,000 over three years
How does loss of function in an Alzheimer-related protein contribute to cell death?
- 4. Disruption of normal brain cell functions and properties**
- **Ottavia Arancio, M.D.**
Columbia University
New York, New York
CBP Involvement in Alzheimer's Disease and Its Potential Therapeutic Value
Zenith Fellows Award—\$250,000 over two years
How does Alzheimer pathology affect the function of proteins that help maintain a brain cell's DNA?
 - **George S. Bloom, Ph.D.**
University of Virginia
Charlottesville, Virginia
Signaling From Beta-Amyloid Through Tau in Alzheimer's Disease
Investigator-Initiated Research Grant—\$240,000 over three years
Do beta-amyloid-tau interactions disrupt important structural features of brain cells?
 - **Miguel A. Gama Sosa, Ph.D.**
Mount Sinai School of Medicine
Bronx, New York
Presenilin-1 and Signaling Through the HIF Pathway
Investigator-Initiated Research Grant—\$240,000 over three years
How does an Alzheimer-related protein affect molecular signals regulating cell growth and metabolism?
 - **Robia G. Pautler, Ph.D.**
Baylor College of Medicine
Houston, Texas
Neuroimaging Assessment of the Role of GM2 in Alzheimer's Disease
New Investigator Research Grant—\$99,400 over two years
How does a certain molecule affect nutrient transport in brain cells in Alzheimer's disease?
 - **George Perry, Ph.D.**
Case Western Reserve University
Cleveland, Ohio
Mitochondrial Abnormalities in Alzheimer's Disease
Zenith Fellows Award—\$260,000 over two years
How do Alzheimer-related proteins disrupt the function of a brain cell's energy-producing structures?
 - **Xiongwei Zhu, Ph.D.**
Case Western Reserve University
Cleveland, Ohio
Role of DLP1 in Mitochondrial Dysfunction in Alzheimer's Disease
Investigator-Initiated Research Grant—\$240,000 over three years
How are cells' energy-producing structures altered in Alzheimer's disease?

5. Cell vulnerability and loss of neuroprotective factors

- **Margaret Fahnstock, Ph.D.**
McMaster University
Hamilton, Ontario, Canada
Mechanism of Decreased BDNF in Alzheimer's Disease Brain
Investigator-Initiated Research Grant—\$240,000 over three years
What is the cause and result of a decline in a neuroprotective protein in Alzheimer's disease?
- **Changiz Geula, Ph.D.**
Northwestern University
Feinberg School of Medicine
Chicago, Illinois
Calbindin, Aging and Vulnerability of Cholinergic Neurons to Degeneration
Zenith Fellows Award—\$249,998 over two years
What function does a protein play in regulating cellular calcium levels and protecting brain cells from damage?
- **Stephen D. Ginsberg, Ph.D.**
Nathan S. Kline Institute for Psychiatric Research
Orangeburg, New York
Profiling Vulnerable Hippocampal Populations in Mild Cognitive Impairment and Alzheimer's Disease
Investigator-Initiated Research Grant—\$240,000 over three years
What features of cells targeted in Alzheimer's disease make them vulnerable to damage?
- **Rena Li, M.D., Ph.D.**
Sun Health Research Institute
Sun City, Arizona
Studies on Estrogen and DNA Repair in an APP Transgenic Mouse Model
Investigator-Initiated Research Grant—\$239,966 over three years
What role does abnormal estrogen repair of DNA play in Alzheimer pathology?
- **Karl H. Weisgraber, Ph.D.**
The J. David Gladstone Institutes
San Francisco, California
Association of ApoE4 With Alzheimer's Disease: A New Paradigm
Zenith Fellows Award—\$250,000 over two years
By what mechanism does a certain form of a protein make brain cells more vulnerable to Alzheimer's disease?

6. Vascular damage in Alzheimer's disease

- **Anastasios Georgakopoulos, Ph.D.**
Mount Sinai School of Medicine
New York, New York
Role of Presenilin-1/Gamma-Secretase in EphB-Induced Angiogenesis
Investigator-Initiated Research Grant—\$240,000 over three years
What effect do Alzheimer-related proteins have on a protein critical for blood vessel development in the brain?
- **Chia-Yi Kuan, M.D., Ph.D.**
Cincinnati Children's Hospital Medical Center
Cincinnati, Ohio
Vascular Effects of Beta-Amyloid Peptide via Rac GTPase in Ischemia-Hypoxia
New Investigator Research Grant—\$99,990 over two years
How do toxic beta-amyloid structures contribute to vascular damage in the Alzheimer brain?

- **John Graham Sled, Ph.D.**
Hospital for Sick Children
Toronto, Ontario, Canada
Relating Vascular Pathology to Memory Deficits in APP Overexpressing Mice
Investigator-Initiated Research Grant—\$198,390 over three years
How does abnormal blood-flow regulation contribute to Alzheimer's disease pathology?

7. Other factors in Alzheimer pathology

- **Lisa L. Barnes, Ph.D.**
Rush University Medical Center
Chicago, Illinois
Stress, Inflammatory Markers and Cognitive Decline in Older Adults
Investigator-Initiated Research Grant—\$239,992 over three years
Do stress and inflammation account for observed differences in cognitive decline among older blacks and whites?
- **Carol A. Colton, Ph.D.**
Duke University Medical Center
Durham, North Carolina
The Role of Nitric Oxide in the Pathology of Alzheimer's Disease
Investigator-Initiated Research Grant—\$240,000 over three years
What role does a chemical compound play in linking two key features of Alzheimer pathology?
- **Elaine Karen Hebda-Bauer, Ph.D.**
University of Michigan
Ann Arbor, Michigan
How Overexpression of a Stress Gene Modifies Alzheimer's Disease Pathology
Investigator-Initiated Research Grant—\$239,957 over three years
How does stress affect the timing of Alzheimer's disease onset and rate of disease progression?
- **Michelle M. Nicolle, Ph.D.**
Wake Forest University Health Sciences
Winston-Salem, North Carolina
Muscarinic Receptor Signaling and Cognitive Impairment in Alzheimer's Disease
Investigator-Initiated Research Grant—\$239,952 over three years
Does loss of function in a particular protein lead to specific types of cognitive impairment in Alzheimer's disease?
- **Domenico Praticò, M.D.**
Temple University
Philadelphia, Pennsylvania
The Functional Role of Lipoxygenase in Normal Aging and Alzheimer's Disease
Zenith Fellows Award—\$250,000 over two years
What role does a certain protein play in cellular damage from toxic oxygen molecules?
- **Gemma Casadesus Smith, Ph.D.**
Case Western Reserve University
Cleveland, Ohio
Aging-Accelerated Mice to Study Mild Cognitive Impairment/Early Alzheimer's Disease Event Chronology and Therapy
New Investigator Research Grant—\$100,000 over two years
What can we learn about the timing of events in Alzheimer pathology in genetically altered mice that rapidly age?

Natural defenses vs. Alzheimer pathology

- **Kelly Dineley, Ph.D.**
University of Texas Medical Branch
Galveston, Texas
Alpha7 nAChR Protects Against Beta-Amyloid Toxicity in Vivo
Investigator-Initiated Research Grant—\$239,581 over three years
What role does a cell-surface protein play in protecting cells against beta-amyloid?
- **Pedro Fernandez-Funez, Ph.D.**
University of Texas Medical Branch
Galveston, Texas
New Genetic Suppressors of Beta-Amyloid Neurotoxicity
New Investigator Research Grant—\$100,000 over two years
Can certain genes inhibit the assembly of toxic beta-amyloid structures in an animal model?
- **Malcolm A. Leissring, Ph.D.**
Scripps Research Institute
Jupiter, Florida
Genetic Modulation of Beta-Amyloid Catabolism
Investigator-Initiated Research Grant—\$240,000 over three years
What proteins are involved in the degradation and removal of beta-amyloid from the brain?
- **Efrat Levy, Ph.D.**
Nathan S. Kline Institute for Psychiatric Research
Orangeburg, New York
Cystatin C-Derived Peptides as Inhibitors of Beta-Amyloid Aggregation
Investigator-Initiated Research Grant—\$240,000 over three years
What features of a naturally occurring protein enables it to inhibit the assembly of beta-amyloid into toxic structures?
- **Chien-liang Glenn Lin, Ph.D.**
Ohio State University Research Foundation
Columbus, Ohio
Glial Glutamate Transporter EAAT2 as a Potential Therapeutic Target
Investigator-Initiated Research Grant—\$240,000 over three years
Can a naturally occurring “clean-up” molecule be overactivated to clear beta-amyloid from the brains of Alzheimer-like mice?
- **Charles R. Sanders, Ph.D.**
Vanderbilt University Medical Center
Nashville, Tennessee
Modulation of Beta-Amyloid Production by CD147
Investigator-Initiated Research Grant—\$240,000 over three years
How does a naturally occurring human protein inhibit the production of beta-amyloid?
- **Meharvan Singh, Ph.D.**
University of North Texas Health Science Center
Fort Worth, Texas
Progesterone-Regulated Neurotrophin Synthesis and Release in Neuroprotection
Investigator-Initiated Research Grant—\$240,000 over three years
What neuroprotective function does a certain female hormone exhibit in cultured nerve cells?
- **Bart van Berckel, M.D.**
VU University Medical Centre
Amsterdam, Netherlands
Assessment of Blood-Brain Barrier Integrity in Alzheimer's Disease
New Investigator Research Grant—\$100,000 over two years
How does the function of a certain protein affect the clearance of beta-amyloid from the brain?

- **Huaxi Xu, Ph.D.**
Burnham Institute for Medical Research
La Jolla, California
Characterizing a Novel Gene That Inhibits GSK3 Activity and Beta-Amyloid Generation
Zenith Fellows Award—\$250,000 over two years
How might the activation of a certain gene inhibit critical processes in Alzheimer pathology?

Dementia risk factors

1. Genetic risk factors

- **Deborah Blacker, M.D., Sc.D.**
Massachusetts General Hospital
Charlestown, Massachusetts
Cross Sectional and Longitudinal Analysis of Alzheimer's Disease Quantitative Phenotypes
Investigator-Initiated Research Grant—\$237,893 over three years
Can neuropsychological test data help narrow the search for genes related to Alzheimer's disease risk?
- **Jeremy M. Silverman, Ph.D.**
Mount Sinai School of Medicine
New York, New York
A Longitudinal Study of Successful Cognitive Aging Phenotypes in Costa Rica
Investigator-Initiated Research Grant—\$240,000 over three years
What does follow-up data in a population reveal about inherited factors associated with successful cognitive aging?
- **Weixiong Zhang, Ph.D.**
Washington University
St. Louis, Missouri
Initial Steps Toward Elucidating Gene Expression Regulation of Late-Onset Alzheimer's Disease
New Investigator Research Grant—\$100,000 over two years
Can the identification of errors in gene activation lead to the discovery of genetic risk factors for Alzheimer's disease?

2. Other risk factors

- **Orly Lazarov, Ph.D.**
University of Illinois
Chicago, Illinois
The Effect of Environmental Enrichment on FAD-Linked Pathology
New Investigator Research Grant—\$100,000 over two years
What impact does environmental enrichment have on the onset or progression of disease in Alzheimer-like mice?
- **Yong Shen, M.D., Ph.D.**
Sun Health Research Institute
Sun City, Arizona
Elevated BACE1 as a Risk Factor for Progression From MCI to Alzheimer's Disease
Zenith Fellows Award—\$250,000 over two years
Can measures of an Alzheimer-related protein in the cerebrospinal fluid be used to predict progression from MCI to Alzheimer's disease?
- **Zhongcong Xie, M.D., Ph.D.**
Massachusetts General Hospital
Charlestown, Massachusetts
Inhalation of Anesthetic Isoflurane and Alzheimer's Disease Neuropathogenesis
Investigator-Initiated Research Grant—\$240,000 over three years
Does a common anesthetic contribute to the development of Alzheimer pathology?

Other neurodegenerative disorders

- **Alison M. Goate, D.Phil.**
Washington University
St. Louis, Missouri
Molecular Mechanisms of Neurodegeneration in FTL-D
Investigator-Initiated Research Grant—\$239,143 over three years
How does an abnormal protein contribute to the loss of cells in a form of frontotemporal lobar degeneration?
- **Edmund C. Jenkins, Ph.D.**
Research Foundation for Mental Hygiene
Staten Island, New York
Telomere Shortening in Older Individuals With Down Syndrome and Dementia
Investigator-Initiated Research Grant—\$239,939 over three years
How do abnormal chromosome features contribute to dementia in people with Down Syndrome?
- **Benjamin Wolozin, M.D., Ph.D.**
Boston University
Boston, Massachusetts
LRKK2 Interactions With Pathways Linked to Protein Folding and Degradation
Investigator-Initiated Research Grant—\$239,999 over three years
What mechanism causes a certain protein to lose its protective properties in Parkinson's disease?

Diagnosis and disease monitoring

1. Brain imaging and biomarkers

- **Bradford Dickerson, M.D.**
Massachusetts General Hospital
Charlestown, Massachusetts
Ultra-high-Resolution MRI of Medial Temporal Lobe in MCI: A Pilot Study
New Investigator Research Grant—\$100,000 over two years
Can an imaging technique reveal minute brain changes indicative of MCI?
- **Jorge A. Ghiso, Ph.D.**
New York University School of Medicine
New York, New York
Signature Markers of Beta-Amyloid Degradation
Investigator-Initiated Research Grant—\$240,000 over three years
Can remnants of beta-amyloid degradation serve as markers of disease progression?
- **Po-Haong Lu, Psy.D.**
University of California
Los Angeles, California
Mapping Prospective Changes in Brain and Cognition in Aging and Disease
New Investigator Research Grant—\$100,000 over two years
Can a brain mapping technique be used to correlate physiological brain changes and declines in cognition?
- **Gil Dan Rabinovici, M.D.**
University of California
San Francisco, California
Amyloid PET Imaging in the Differential Diagnosis of Alzheimer's Disease and Frontotemporal Lobar Degeneration
New Investigator Research Grant—\$100,000 over two years
Can a PET brain imaging procedure distinguish between Alzheimer's disease and frontotemporal dementia?

- **Christopher Hans van Dyck, M.D.**
Yale University
New Haven, Connecticut
Amyloid Binding in Subjects at Risk for Alzheimer's Disease
Investigator-Initiated Research Grant—\$239,967 over three years
Can a brain imaging technique reveal beta-amyloid in the brains of people with a genetic risk for Alzheimer's disease?

2. Other diagnostic studies

- **Gregory A. Jicha, M.D., Ph.D.**
University of Kentucky Research Foundation
Lexington, Kentucky
Telemedicine Assessment of Cognition in Rural Kentucky: The TACK Study
New Investigator Research Grant—\$99,675 over two years
Can a telemedicine resource be used to diagnose and assist people with dementia in isolated rural settings?
 - **Voyko Kavcic, Ph.D.**
University of Rochester
Rochester, New York
Multimodal Approach for Early Detection of Alzheimer's Disease
Senator Mark Hatfield Award for Clinical Research
—\$241,511 over three years
Can measures of impairment in memory, attention and visual perception—combined with imaging techniques—improve early detection of Alzheimer's disease?
 - **Scott Roberts, Ph.D.**
University of Michigan
Ann Arbor, Michigan
Communicating Diagnostic and Risk Information to People With Mild Cognitive Impairment
Investigator-Initiated Research Grant—\$239,985 over three years
What is the best method for informing people and family members about a diagnosis of mild cognitive impairment?
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- ## Drug development and clinical interventions
- ### 1. Anti-amyloid therapies
- **Ashley I. Bush, M.D., Ph.D.**
Mental Health Research Institute of Victoria
Parkville, Australia
Modulation of Toxic Beta-Amyloid Species by Novel Therapeutics
Investigator-Initiated Research Grant—\$235,188 over three years
Can a metal-binding compound promote clearance of beta-amyloid from the brains of Alzheimer-like mice?
 - **Ken-ichiro Fukuchi, M.D., Ph.D.**
University of Illinois
Peoria, Illinois
Vectored Vaccines for Alzheimer's Disease
Investigator-Initiated Research Grant—\$240,000 over three years
Can a novel Alzheimer "vaccine" safely and effectively treat Alzheimer-like mice?
 - **Anahit Ghochikyan, Ph.D.**
Institute for Molecular Medicine
Huntington Beach, California
Testing of Alzheimer's Disease DNA Vaccine: Protective Vaccination Versus Therapeutic
Investigator-Initiated Research Grant—\$239,220 over three years
Can a new type of Alzheimer "vaccine" safely and effectively treat Alzheimer-like mice?

- **Marcia Gordon, Ph.D.**
University of South Florida
Tampa, Florida
Cell-Based Therapies Using Transgenic Mice
Investigator-Initiated Research Grant—\$240,000 over three years
Can certain blood cells be used to deliver an anti-amyloid therapy to the brains of Alzheimer-like mice?
- **Xudong Huang, Ph.D.**
Brigham and Women's Hospital
Boston, Massachusetts
A Novel Metal-Complexing Antioxidant Targeting Alzheimer Amyloid
Investigator-Initiated Research Grant—\$240,000 over three years
Can a novel treatment inhibit beta-amyloid accumulation and cell damage in Alzheimer-like mice?
- **Christopher P. Jaromic, Ph.D.**
Ohio State University
Columbus, Ohio
High-Resolution NMR Studies of Beta-Amyloid-Congo Red Interaction
New Investigator Research Grant—\$100,000 over two years
What properties of a compound may enable it to serve as an anti-amyloid treatment for Alzheimer's?
- **Paul M. Mathews, Ph.D.**
New York University School of Medicine
Orangeburg, New York
Neuroprotection Following Modulation of Endogenous Beta-Amyloid in Mice
Investigator-Initiated Research Grant—\$240,000 over three years
Does a beta-amyloid "vaccine" inhibit neurodegeneration in Alzheimer-like mice or Down syndrome-like mice?
- **Stephen A. O'Barr, Ph.D.**
Western University of Health Sciences
Pomona, California
CHP+Zn and T4 Treatment Decreases Beta-Amyloid Levels and Improves Cognition in Vivo
New Investigator Research Grant—\$100,000 over two years
Can a treatment induce a naturally occurring hormone and enzyme to reduce beta-amyloid levels in the brain?
- **Giulio Maria Pasinetti, M.D., Ph.D.**
Mount Sinai School of Medicine
New York, New York
Anti-Hypertensive Drugs That Prevent Alzheimer's Disease Beta-Amyloid Pathology
Investigator-Initiated Research Grant—\$240,000 over three years
Can currently available high blood-pressure medications modify Alzheimer-like pathology and symptoms in mice?
- **Raymond Scott Turner, M.D., Ph.D.**
University of Michigan
Ann Arbor, Michigan
Drug-Protein Complexes as Inhibitors of Beta-Amyloid Aggregation
Investigator-Initiated Research Grant—\$240,000 over three years
Can drug-like molecules inhibit the assembly of toxic beta-amyloid structures in cell cultures?
- **Michael Vitek, Ph.D.**
Duke University Medical Center
Durham, North Carolina
Novel Therapeutic Reduces Beta-Amyloid Deposition and Alzheimer Pathology
Investigator-Initiated Research Grant—\$240,000 over three years
Can a novel therapy inhibit the assembly of toxic beta-amyloid structures in Alzheimer-like mice?

2. Other therapies

- **Isabelle Aubert, Ph.D.**
Sunnybrook Health Sciences Centre
Toronto, Ontario, Canada
Novel Approaches to Generate Cholinergic Neurons From Progenitor Cells
Investigator-Initiated Research Grant—\$240,000 over three years
Can cells be generated to replace those lost to an Alzheimer-like pathology in mice?
- **Michel Baudry, Ph.D.**
University of Southern California
Los Angeles, California
SOD/Catalase Mimetics for the Treatment of Alzheimer's Disease
Investigator-Initiated Research Grant—\$240,000 over three years
Can a compound that mimics natural molecular scavengers inhibit toxic molecules that damage cells in Alzheimer's disease?
- **Sang-Pil Lee, Ph.D.**
University of Kansas Medical Center Research Institute
Kansas City, Kansas
Quantitative in Vivo Measure of an Alzheimer's Disease Drug Treatment in Transgenic Mice
New Investigator Research Grant—\$100,000 over two years
Does a potential treatment prevent or slow the development of tau pathology in Alzheimer-like mice?
- **Craig Lindsley, Ph.D.**
Vanderbilt University Medical Center
Nashville, Tennessee
Novel Approaches for the Treatment of Alzheimer's Disease
Investigator-Initiated Research Grant—\$239,933 over three years
Can a re-engineered drug-like molecule improve the function and survival of specialized cells affected by Alzheimer's disease?
- **Gang Liu, Ph.D.**
University of Utah
Salt Lake City, Utah
Developing Nanoparticulated Iron Chelators to Deplete Brain Excess Metals
Investigator-Initiated Research Grant—\$240,000 over three years
Can a novel agent clear build-up of toxic metals from the brains of Alzheimer-like mice?
- **Leonard Petrucelli, Ph.D.**
Mayo Clinic Jacksonville
Jacksonville, Florida
CHIP, Molecular Chaperones and Tau Biology
Investigator-Initiated Research Grant—\$240,000 over three years
Can a therapy assist in correcting or eliminating malformed, toxic tau proteins in Alzheimer-like mice?
- **Steven Scott Schreiber, M.D.**
University of California
Irvine, California
Efficacy of Nicotinamide for the Treatment of Alzheimer's Disease
Investigator-Initiated Research Grant—\$239,947 over three years
Can a treatment improve memory and learning function in people with mild to moderate Alzheimer's disease?

3. Cognitive training and behavioral interventions

- **Melanie Chandler Greenaway, Ph.D.**
Emory University
Atlanta, Georgia
A Memory Compensation Intervention in Mild Cognitive Impairment
New Investigator Research Grant—\$99,544 over two years
Can a memory compensation intervention improve the functional abilities and mood of people with MCI?
- **Amy Jak, Ph.D.**
Veterans Medical Research Foundation
San Diego, California
Activity Levels, Cognition and Temporal Lobe Integrity in At-Risk Adults
New Investigator Research Grant—\$100,000 over two years
How do physical and cognitively stimulating activities affect brain volume, blood flow to the brain and cognitive performance?
- **Elena Festa Martino, Ph.D.**
Brown University
Providence, Rhode Island
Efficacy of qEEG Neurocognitive Training in Early-Stage Alzheimer's Disease
Investigator-Initiated Research Grant—\$239,362 over three years
Can a cognitive training technique improve memory and other cognitive function in people with Alzheimer's?
- **Patricia Pohl, Ph.D.**
University of Kansas Medical Center Research Institute
Kansas City, Kansas
Effects of Delivery Mode of Cognitive Intervention in Early Alzheimer's Disease
Investigator-Initiated Research Grant—\$240,000 over three years
Does an intensive, personalized cognitive training program improve cognitive function in people with mild Alzheimer's disease?
- **Margaret A. Perkinson, Ph.D.**
Saint Louis University
St. Louis, Missouri
Family-Assisted Exercise Programs in a Dementia Care Facility
Investigator-Initiated Research Grant—\$199,949 over three years
Can a family-assisted exercise program improve balance, strength, flexibility and general well-being among people with dementia?
- **Greg A. Sachs, M.D.**
Indiana University
Indianapolis, Indiana
Alzheimer's Disease and Access to Palliative Care
Investigator-Initiated Research Grant—\$193,027 over three years
What models of end-of-life palliative care may benefit people with Alzheimer's disease?
- **Richard Schulz, Ph.D.**
University of Pittsburgh
Pittsburgh, Pennsylvania
Measuring Suffering in Persons With Alzheimer's Disease
Investigator-Initiated Research Grant—\$239,749 over three years
How can suffering in people with Alzheimer's disease be measured and characterized?
- **Joseph Thomas, Ph.D.**
Purdue University
West Lafayette, Indiana
Medication Use and Functioning in Patients With Dementia
Investigator-Initiated Research Grant—\$237,054 over three years
How does general medication use affect the functioning of people with dementia?

3. Technology-assisted care

- **Heather Carnahan, Ph.D.**
Toronto Rehabilitation Institute
Toronto, Ontario, Canada
The Application of a Tactile Way-Finding Belt to Facilitate Navigation
Everyday Technologies for Alzheimer Care Research Grant—\$155,408 over two years
Can a way-finding belt improve the ability of people with dementia to navigate routes indoors and outdoors?
- **Jesse Hoey, Ph.D.**
University of Dundee
Dundee, Scotland
Development of an Automated System to Facilitate Creative Expression
Everyday Technologies for Alzheimer Care Research Grant—\$199,650 over two years
Can an automated system promote and facilitate creative activities for people with dementia?
- **Harry W. Tyrer, Ph.D.**
University of Missouri
Columbia, Missouri
A Smart Carpet: Technology for Persons With Alzheimer's Disease
Everyday Technologies for Alzheimer Care Research Grant—\$200,049 over two years
Can a pressure-sensitive carpet improve monitoring of people with dementia at risk for falls or unsafe behaviors?

Care, support and social-behavioral factors

1. Nursing home care

- **Gregory W. Arling, Ph.D.**
Indiana University
Indianapolis, Indiana
Developing Comprehensive Dementia-Specific Nursing Home Quality Indicators
Investigator-Initiated Research Grant—\$238,464 over three years
What measures of quality of care in nursing homes are relevant for person with dementia?
- **Rosalie A. Kane, Ph.D.**
University of Minnesota
Minneapolis, Minnesota
Small-House Nursing Homes and Alzheimer's Disease
Investigator-Initiated Research Grant—\$239,992 over three years
How well do 10-resident, house-style nursing homes serve people with Alzheimer's disease?

2. Care interventions and quality of life

- **Laura N. Gitlin, Ph.D.**
Thomas Jefferson University
Philadelphia, Pennsylvania
Health-Related Quality of Life in Individuals With Dementia Living at Home
Investigator-Initiated Research Grant—\$240,000 over three years
What modifiable factors can be identified and addressed to improve the quality of life for people with dementia who live at home?

- **Philip Yap, M.R.C.P.**
Alexandra Hospital
Singapore
Continence Management for Dementia Patients Through Wetness Alert Diaper
Everyday Technologies for Alzheimer Care Research Grant
—\$106,500 over two years
Can a wetness-alert diaper improve continence management and care for people with dementia?

4. Caregiver support

- **Lazelle E. Benefield, Ph.D.**
University of Oklahoma Health Sciences Center
Oklahoma City, Oklahoma
Distance Family Care Coordination of Home-Dwelling Persons With Dementia
Investigator-Initiated Research Grant—\$193,864 over three years
What are the needs of long-distance family caregivers representing a broad spectrum of ethnicities?
- **Rhonda J. V. Montgomery, Ph.D.**
University of Wisconsin
Milwaukee, Wisconsin
Assessing a Protocol to Strategically Support Family Caregivers
Investigator-Initiated Research Grant—\$239,999 over three years
Does a care management protocol result in appropriate support and services for dementia caregivers?
- **Carey Wexler Sherman, Ph.D.**
University of Michigan
Ann Arbor, Michigan
Alzheimer Caregiving in the Context of Late-Life Remarriage
New Investigator Research Grant—\$99,826 over two years
What are the characteristics, needs and concerns of caregiver spouses who remarried late in life?
- **Kristen H. Sorocco, Ph.D.**
University of Oklahoma Health Sciences Center
Oklahoma City, Oklahoma
Evaluation of an Internet-Based Caregiver Support System in Rural Settings
New Investigator Research Grant—\$96,004 over two years
Does an Internet-based program provide appropriate services and support for dementia caregivers in rural settings?

5. Other social-behavioral factors

- **Jennifer Hagerty Lingler, Ph.D.**
University of Pittsburgh
Pittsburgh, Pennsylvania
Making Sense of Mild Cognitive Impairment: An Investigation of Patient and Family Perspectives
New Investigator Research Grant—\$100,000 over two years
How do individuals with mild cognitive impairment and family members perceive the disease and respond to treatment options?
- **Karen A. Roberto, Ph.D.**
Virginia Polytechnic Institute and State University
Blacksburg, Virginia
Understanding Mild Cognitive Impairment: Family Dynamics and Diversity
Investigator-Initiated Research Grant—\$240,000 over three years
What are the needs and challenges facing people with MCI and their families?

Resources for the research community

- **June Kinoshita, B.A.**
Alzheimer Research Forum Foundation
Boston, Massachusetts
SWAN: A Community Knowledge Base for Alzheimer's Disease Research
Investigator-Initiated Research Grant—\$239,568 over three years
How can a Web application tool be used to keep the scientific community informed about current advances in dementia research?