

2006 Alzheimer's Association Grant Portfolio

—Organized by trends in research

Biology of Disease-Related Molecules

1. Processing of amyloid precursor protein (APP)

- **Carmela R. Abraham, Ph.D.**
Boston University
Boston, Massachusetts
The Significance of APP Dimerization in Alzheimer's Disease
Investigator Initiated Research Grant—\$240,000 over three years
What are the normal and disease-related properties of two-unit APP molecules?
- **David R. Schubert, Ph.D.**
Salk Institute for Biological Studies
La Jolla, California
A Novel Mouse Model for Alzheimer's Disease
Investigator-Initiated Research Grant—\$240,000 over three years
What can a new Alzheimer mouse model reveal about the role of a newly identified protein in APP processing?
- **Scott A. Small, M.D.**
Columbia University Medical Center
New York, New York
Retromer-Mutant Mice as a Model of Late-Onset Alzheimer's Disease
Investigator-Initiated Research Grant—\$236,772 over three years
What can a new mouse model reveal about cellular malfunctions that may contribute to increased APP processing?

2. Properties of beta-amyloid and tau

- **Paul H. Axelsen, M.D.**
University of Pennsylvania
Philadelphia, Pennsylvania
The Structure of Neurotoxic Intermediate Forms of Beta-Amyloid Proteins
Zenith Fellows Award—\$250,000 over two years
What can structural analysis of small beta-amyloid clusters reveal about how beta-amyloid molecules assemble themselves?
- **Vincent Cryns, M.D.**
Northwestern University
Feinberg School of Medicine
Chicago, Illinois
Role of Caspase Cleavage of Tau in Neurodegeneration
Investigator-Initiated Research Grant—\$240,000 over three years
How does a beta-amyloid-induced molecular event contribute to abnormal tau assembly?
- **Karen Duff, Ph.D.**
Nathan S. Kline Institute for Psychiatric Research
Orangeburg, New York
p25/cdk5 in Alzheimer's Disease Pathogenesis
Zenith Fellows Award—\$250,000 over two years
How do specialized proteins exert influence on an enzyme involved in beta-amyloid production?
- **Mathias Jucker, Ph.D.**
Hertie-Institute for Clinical Brain Research
Tübingen, Germany
Exogenous Induction of Cerebral Amyloidogenesis
Zenith Fellows Award—\$250,000 over two years
Does beta-amyloid have properties that perpetuate the production and accumulation of more beta-amyloid?

- **William L. Klein, Ph.D.**
Northwestern University
Evanston, Illinois
Synaptic Targeting by ADDLs as a Basis for Specific Neurodegeneration in Alzheimer's Disease
Investigator-Initiated Research Grant—\$240,000 over three years
What mechanism causes small beta-amyloid clusters to target certain cells in the brain?
- **Harry LeVine III, Ph.D.**
University of Kentucky Research Foundation
Lexington, Kentucky
Chaperone-Mediated Protein Refolding Dysfunction in Alzheimer's Disease
Investigator Initiated Research Grant—\$237,057 over three years
How do certain proteins direct the “folding” and “refolding” of Alzheimer-related proteins?
- **Stephen C. Meredith, M.D., Ph.D.**
University of Chicago
Chicago, Illinois
Structure of Mutant Beta-Amyloid Fibrils Examined by Solid-State NMR
Investigator-Initiated Research Grant—\$240,000 over three years
What structural properties of beta-amyloid fibrils lead to differences in beta-amyloid deposition in the brain?
- **Christopher C. J. Miller, Ph.D.**
Institute of Psychiatry
London, England
The XI1alpha Adaptor Protein, Copper Metabolism and Alzheimer's Disease
Investigator-Initiated Research Grant—\$235,919 over three years
How does a protein related to copper metabolism affect beta-amyloid production and other pathological processes?
- **Nikolaos K. Robakis, Ph.D.**
Mount Sinai School of Medicine
New York, New York
Involvement of the Presenilin 1/PI3K/GSK-3 Signaling in Neuronal Apoptosis and Beta-Amyloid
Investigator-Initiated Research Grant—\$240,000 over three years
How do molecular events related to the presenilin 1 protein contribute to beta-amyloid production and cell death?
- **Sangram S. Sisodia, Ph.D.**
University of Chicago
Chicago, Illinois
Purification and Structural Analysis of the Presenilin-1/Gamma-Secretase Complex
Investigator-Initiated Research Grant—\$239,868 over three years
What can a novel experimental system reveal about the structural properties of gamma-secretase?
- **Riqiang Yan, Ph.D.**
Cleveland Clinic Foundation
Cleveland, Ohio
Retiulon Proteins in the Formation of Neuritic Plaques
Investigator Initiated Research Grant—\$240,000 over three years
How does the assembly of a particular protein into larger structures affect the production of beta-amyloid?

- **Chunjiang Yu, Ph.D.**
University of Illinois
Chicago, Illinois
ApoE Isoform Effect on Intraneuronal Abeta Accumulation
New Investigator Research Grant—\$100,000 over two years
By what mechanism does apolipoprotein E-e4 contribute to the assembly of beta-amyloid structures inside neurons?
 - **Neal J. Zondlo, Ph.D.**
University of Delaware
Newark, Delaware
Conformational Targeting of Tau and Secretase
New Investigator Research Grant—\$100,000 over two years
What structural properties of abnormal tau and beta-amyloid-related molecules enable them to self-assemble?
- 3. Normal functions of disease-related molecules**
- **Ilya B. Bezprozvanny, Ph.D.**
University of Texas Southwestern Medical Center
Dallas, Texas
*Presenilins and Calcium Signaling:
Implications for Alzheimer's Disease*
Investigator-Initiated Research Grant—\$240,000 over three years
Do genetic mutations associated with inherited Alzheimer's disrupt transport and storage of calcium in nerve cells?
 - **Rashid Deane, Ph.D.**
University of Rochester
Rochester, New York
Regulation of Amyloid-Beta Brain Efflux by Copper
Investigator-Initiated Research Grant—\$199,990 over two years
How does copper affect the mechanisms by which beta-amyloid is cleared from the brain?
 - **Angele Parent, Ph.D.**
University of Chicago
Chicago, Illinois
Role of Cell Adhesion Molecules in Presenilin Animal Models
Investigator Initiated Research Grant—\$240,000 over three years
What role does presenilin play in mediating proteins involved in cell-to-cell communication?
 - **Sophie Restituito, Ph.D.**
New York University
New York, New York
Synaptic Functions of Gamma-Secretase
New Investigator Research Grant—\$99,998 over two years
How does gamma-secretase affect the properties and function of synapses?
 - **Alice M. Wyrwicz, Ph.D.**
Evanston Northwestern Healthcare Research Institute
Evanston, Illinois
*Effect of ApoE Isoform on Hippocampal
Microstructure and Function*
Investigator Initiated Research Grant—\$240,000 over three years
How do the different forms of apolipoprotein E affect the structure and function of a region of the brain important for learning and memory?
 - **Hui Zheng, Ph.D.**
Baylor College of Medicine
Houston, Texas
Regulation of the High-Affinity Choline Transporter by APP
Investigator-Initiated Research Grant—\$240,000 over three years
How does APP regulate the placement of proteins involved in cell-to-cell communication in the brain?

Disease Mechanisms

1. Beta-amyloid and neurodegeneration

- **James E. Hall, Ph.D.**
University of California
Irvine, California
A Proposed Mechanism for Amyloid Toxicity
Investigator Initiated Research Grant—\$225,934 over three years
What impact does amyloid toxicity have on cell membrane stability and function?
- **Rakez Kaye, Ph.D.**
University of California
Irvine, California
*Amyloids as Toxins:
Probing Common Structural and Functional Properties*
New Investigator Research Grant—\$100,000 over two years
Do pore-like beta-amyloid structures have a toxic effect on neurons?
- **Radosveta Koldamova, M.D., Ph.D.**
University of Pittsburgh
Pittsburgh, Pennsylvania
LXR Receptors and Alzheimer's Disease
Investigator Initiated Research Grant—\$239,999 over three years
How do cholesterol-related proteins affect beta-amyloid pathology?
- **James Lee, Ph.D.**
University of Missouri
Columbia, Missouri
Effects of Beta-Amyloid Peptide on Adhesion Mechanics of Cerebral Endothelium
New Investigator Research Grant—\$100,000 over two years
What effect does beta-amyloid have on mechanisms that protect blood vessels in the brain?
- **Jordi Magrane, Ph.D.**
Weill Medical College of Cornell University
New York, New York
Synaptic Damage from Intraneuronal Abeta Accumulation
New Investigator Research Grant—\$99,990 over two years
What can a new experimental system reveal about how beta-amyloid affects the function or maintenance of neurons?
- **Dale E. Bredesen, M.D.**
Buck Institute for Age Research
Novato, California
A Role for the Intracytoplasmic Cleavage of APP in Alzheimer's Disease
Investigator-Initiated Research Grant—\$239,978 over three years
What role does a recently identified molecule play in mediating beta-amyloid toxicity or inhibiting protective factors in neurons?
- **Robert J. Vassar, Ph.D.**
Northwestern University
Feinberg School of Medicine
Chicago, Illinois
The Role of Intraneuronal Abeta in Alzheimer's Disease Pathophysiology
Investigator-Initiated Research Grant—\$239,995 over three years
What role do beta-amyloid assemblies inside neurons play in Alzheimer's disease pathology?

2. Tau, neurofibrillary tangles and neurodegeneration

- **Peter W. Baas, Ph.D.**
Drexel University
Philadelphia, Pennsylvania
Abnormal Microtubule Severing in Alzheimer's Disease
Investigator-Initiated Research Grant—\$240,000 over three years
How do changes in tau properties contribute to disease-related damage to cells?
- **Jada Lewis, Ph.D.**
Mayo Clinic
Jacksonville, Florida
Neuronal Death and Functional Recovery in a Conditional Model of Tauopathy
Investigator-Initiated Research Grant—\$239,902 over three years
How do neurofibrillary tangles contribute to cell death, and can cells recover from such damage?

3. Immune response, inflammation and oxidative stress

- **Katrin Andreasson, M.D.**
Stanford University
Stanford, California
Function of PGE₂ Receptors in the Development of Alzheimer's Disease
Investigator-Initiated Research Grant—\$240,000 over three years
How does an inflammation-related protein mediate inflammatory activity and beta-amyloid accumulation in Alzheimer's disease?
- **Suman Jayadev, M.D.**
University of Washington
Seattle, Washington
Presenilins and Microglia in Alzheimer's Disease
New Investigator Research Grant—\$100,000 over two years
How do presenilins interact with immune-system cells in the brain that facilitate inflammation?
- **Michael R. Nichols, Ph.D.**
University of Missouri
St. Louis, Missouri
Amyloid-Beta Fibrils: A Trigger for the Innate Immune Response
New Investigator Research Grant—\$100,000 over two years
Do certain beta-amyloid structures initiate harmful immune-system responses?
- **Lawrence M. Sayre, Ph.D.**
Case Western Reserve University
Cleveland, Ohio
Lipid Oxidation in Alzheimer's Disease: Mechanisms of Toxicity and Potential Intervention
Investigator Initiated Research Grant—\$239,973 over three years
What byproducts of oxidative stress are responsible for damage in Alzheimer's disease?

4. Other disease mechanisms

- **A. Claudio Cuello, D.Sc.**
McGill University
Montreal, Québec, Canada
Altered Nerve Growth Factor Maturation and Degradation in Alzheimer's Disease
Investigator-Initiated Research Grant—\$237,916 over three years
How do alterations in neuroprotective proteins contribute to neuron damage and loss in Alzheimer's disease?
- **Gerald A. Dienel, Ph.D.**
University of Arkansas for Medical Sciences
Little Rock, Arkansas
Astrocytic Metabolite Trafficking and Brain Imaging in Alzheimer Mouse Model
Investigator-Initiated Research Grant—\$239,875 over three years
How are energy production processes in the brain altered in Alzheimer's disease?
- **Karl Herrup, Ph.D.**
University Hospitals of Cleveland
Cleveland, Ohio
Alzheimer's Neuropathology Seen Through the Lens of Cell Cycle Processes
Zenith Fellows Award—\$250,000 over two years
What cellular events provoke abnormal cell division and subsequent cell death in Alzheimer's disease?
- **Raymond J. Kelleher III, M.D., Ph.D.**
Massachusetts General Hospital
Boston, Massachusetts
A Knock-In Mouse Model of Presenilin-Linked Frontotemporal Dementia
Investigator-Initiated Research Grant—\$240,000 over three years
What does a mouse model of frontotemporal dementia reveal about the role of aberrant presenilin proteins on cell loss and memory function?
- **David J. Libon, Ph.D.**
University of Medicine and Dentistry of New Jersey
School of Osteopathic Medicine
Stratford, New Jersey
The Effect of Leukoaraiosis in Alzheimer's Disease
Investigator-Initiated Research Grant—\$194,292 over two years
How do abnormal areas of white matter correspond with specific functional deficits of people with Alzheimer's disease?
- **Kenneth Mackie, M.D.**
Indiana University
Indianapolis, Indiana
Endocannabinoid Control of Neurotransmitter Release in Alzheimer's Disease
Investigator-Initiated Research Grant—\$239,548 over three years
How does Alzheimer's disease affect the function and distribution of a certain protein involved in cell-to-cell communication?
- **Murali Prakriya, Ph.D.**
Northwestern University
Chicago, Illinois
Aberrant Calcium Signaling Mechanisms in Alzheimer's Disease
New Investigator Research Grant—\$100,000 over two years
How do Alzheimer-related gene mutations affect the calcium balance in neurons?

Protective Mechanisms in the Brain

- **Bing Gong, M.D.**
Columbia University Medical Center
New York, New York
Role of Ubiquitin-C-Terminal Hydrolase L1 in Alzheimer's Disease
New Investigator Research Grant—\$100,000 over two years
What is the potential benefit of a protein involved in the clearance of beta-amyloid from the brain?
- **Jeff Keller, Ph.D.**
University of Kentucky Research Foundation
Lexington, Kentucky
HDAC Inhibitors and Protein Synthesis in Experimental Models of Alzheimer's Disease
Investigator-Initiated Research Grant—\$230,910 over three years
Do certain enzymes boost production of proteins that ameliorate the toxic effect of beta-amyloid?
- **Francesca-Fang Liao, Ph.D.**
Burnham Institute for Medical Research
La Jolla, California
sAPP and p25/CDK5 in Neurogenesis and Neuronal Death
Investigator-Initiated Research Grant—\$240,000 over three years
How does a certain form of APP suppress the formation of neurofibrillary tangles?
- **Richard T. Robertson, Ph.D.**
University of California
Irvine, California
Neurotrophin-3: Maintenance of Cholinergic Circuitry
Investigator Initiated Research Grant—\$240,000 over three years
What effect does a potentially protective brain protein have on cells normally damaged in Alzheimer's disease?
- **Dominique Toran-Allerand, M.D.**
Columbia University Medical Center
New York, New York
Estrogen and Neurogenesis in Aging and Alzheimer's Disease
Investigator Initiated Research Grant—\$240,000 over three years
Does a certain form of estrogen promote new neuron growth in the brains of older mice or mice with an Alzheimer-like disorder?
- **William Van Nostrand, Ph.D.**
Research Foundation of SUNY
State University of New York
Stony Brook, New York
Inhibition of A-Beta Fibrillogenesis by Myelin Basic Protein
Investigator-Initiated Research Grant—\$219,000 over three years
Can a certain brain protein prevent the assembly of beta-amyloid structures?
- **Douglas G. Walker, Ph.D.**
Sun Health Research Institute
Sun City, Arizona
CD200 as a Therapeutic Target for Alzheimer's Disease
Investigator-Initiated Research Grant—\$239,079 over three years
Can a naturally occurring anti-inflammatory agent in the brain be enhanced to inhibit inflammation in Alzheimer-like mice?
- **Guo Wei, M.D. Ph.D.**
Johns Hopkins University
Baltimore, Maryland
Role of Prostaglandin Receptor EP2 in Alzheimer's Disease
New Investigator Research Grant—\$100,000 over two years
How might a specific protein protect neurons from stroke and Alzheimer pathology?

Risk factors

1. Genetic risk factors

- **Jonathan L. Haines, Ph.D.**
Vanderbilt University Medical Center
Nashville, Tennessee
Identifying the Chromosome 10 Risk Gene for Alzheimer's Disease
Investigator Initiated Research Grant—\$239,886 over three years
Can a gene or genes associated with Alzheimer's disease risk be identified on chromosome 10?
- **Jean-Charles Lambert, Ph.D.**
Institute Pasteur de Lille
Lille, France
Enzymes of the Urea Cycle as Candidate Genes for Alzheimer's Disease
Investigator-Initiated Research Grant—\$239,961 over three years
Does a form of a gene associated with waste detoxification in the body affect the risk of Alzheimer's disease?

2. Lifestyle factors and modifiable risk factors

- **Michal Schnaider-Beeri, Ph.D.**
Mount Sinai School of Medicine
New York, New York
Effects of Glycoxidation on Cognition
New Investigator Research Grant—\$100,000 over two years
Are factors related to diabetes associated with the development of Alzheimer's disease or age-related declines in memory function?
- **Monique Breteler, M.D., Ph.D.**
Erasmus University Medical Center
Rotterdam, Netherlands
Metabolic Syndrome, Insulin Metabolism and the Risk of Alzheimer's Disease
Investigator Initiated Research Grant—\$240,000 over three years
What biological factors explain the association between diabetes and the risk of Alzheimer's disease?
- **Ramon Diaz-Arrastia, M.D., Ph.D.**
University of Texas
Southwestern Medical School
Dallas, Texas
Elevated Homocysteine as a Risk Factor for Progression from MCI to Alzheimer's Disease
Zenith Fellows Award—\$250,000 over two years
Do elevated levels of homocysteine in the blood increase the risk of mild cognitive impairment progressing to Alzheimer's disease?
- **Spiridon Papapetropoulos, M.D., Ph.D.**
University of Miami
Miami, Florida
Cyanobacterial Toxin (BMAA) in Brain Tissue and Hair of Alzheimer's Disease Patients
New Investigator Research Grant—\$60,000 over one year
Can a certain amino acid derived from some diets be detected in Alzheimer's brains, and is it a risk factor for developing Alzheimer's?

Drug Development and Treatments

1. Anti-amyloid therapies

- **Antonino Cattaneo, Ph.D.**
European Brain Research Institute
Rome, Italy
Recombinant Antibodies Against Beta-Amyloid Oligomers: In Vivo Targeting and Delivery
Investigator-Initiated Research Grant—\$240,000 over three years
Can specialized antibodies that target small beta-amyloid clusters effectively treat Alzheimer-like mice?
- **Matthew P. DeLisa, B.S.**
Cornell University
Ithaca, New York
Natural Product-Like Compounds That Inhibit Intracellular Abeta Aggregation
New Investigator Research Grant—\$100,000 over two years
Can compounds derived from naturally occurring chemicals inhibit the formation of beta-amyloid-based structures?
- **Joanna L. Jankowsky, Ph.D.**
California Institute of Technology
Pasadena, California
Combination Therapy for the Treatment of Alzheimer's Disease
New Investigator Research Grant—\$99,924 over two years
Can a combination therapy prevent the formation of beta-amyloid and remove amyloid plaques in Alzheimer-like mice?
- **Lee-Way Jin, M.D., Ph.D.**
University of California at Davis
Sacramento, California
The Use of Novel Amyloid Binding Ligands for Anti-Amyloid Therapies
Investigator-Initiated Research Grant—\$240,000 over three years
Do molecules that bind to beta-amyloid have a therapeutic effect in Alzheimer-like mice?
- **Hong-Duck Kim, Ph.D.**
University of Illinois at Chicago
Peoria, Illinois
A-Beta Vaccines Using Recombinant Viruses
New Investigator Research Grant—\$100,000 over two years
What therapeutic effect does a virus-delivered, anti-beta-amyloid “vaccine” have on Alzheimer-like mice?
- **Daniel A. Kirschner, Ph.D.**
Boston College
Chestnut Hill, Massachusetts
Quantitative Assessment of Potential Amyloid Inhibitors
Investigator Initiated Research Grant—\$240,000 over three years
Can specialized assessment tools identify molecules that effectively perturb the assembly of beta-amyloid structures?
- **Susan W. Liebman, Ph.D.**
University of Illinois
Chicago, Illinois
Modeling Alzheimer's Disease in Yeast
Investigator-Initiated Research Grant—\$121,556 over three years
Can molecules that block the aggregation of beta-amyloid be identified using a yeast cell-based screening method?
- **Phillippe Marambaud, Ph.D.**
Feinstein Institute for Medical Research
Manhasset, New York
Anti-Amyloidogenic Properties of Resveratrol and Its Analogues
New Investigator Research Grant—\$99,419 over two years
Can a chemical found in red grapes and wine inhibit the assembly of beta-amyloid structures in Alzheimer-like mice?

- **Roger N. Rosenberg, M.D.**
University of Texas Southwestern Medical Center
Dallas, Texas
Gene Vaccination for Therapy and Prevention of Alzheimer's Disease
Investigator-Initiated Research Grant—\$240,000 over three years
Is a vaccine based on the gene that codes production of beta-amyloid safer than the one based on the protein fragment itself?
- **Thomas Wisniewski, M.D.**
New York University
New York, New York
Mucosal Immunization Therapy in Alzheimer's Disease in Mice
Investigator-Initiated Research Grant—\$240,000 over three years
What effect does a newly developed anti-beta-amyloid “vaccine” have on Alzheimer-like mice?

2. Other therapeutic strategies

- **Nelson Arispe, Ph.D.**
Henry M. Jackson Foundation for the Advancement of Military Medicine
Bethesda, Maryland
Blocking the Beta-Amyloid Ion Channels Protects the Cell
Zenith Fellows Award—\$249,852 over two years
Can synthetic compounds block beta-amyloid-induced leakage of electrically charged chemicals from neurons in Alzheimer-like mice?
- **Craig S. Atwood, Ph.D.**
University of Wisconsin
Madison, Wisconsin
Leuprolide Acetate in the Treatment of Alzheimer's Disease
Zenith Fellows Award—\$250,000 over two years
By what mechanism might a currently available drug protect cells from Alzheimer pathology?
- **Chad Dickey, Ph.D.**
Mayo Clinic
Jacksonville, Florida
Tau Therapeutic Strategies for Alzheimer's Disease
New Investigator Research Grant—\$100,000 over two years
Can drugs targeting a tau-regulating protein disrupt abnormal changes to tau in Alzheimer-like mice?
- **Gary Landreth, Ph.D.**
Case Western Reserve University
Cleveland, Ohio
Mechanisms of Statin-Mediated Regulation of APP Metabolism
Investigator Initiated Research Grant—\$240,000 over three years
How do cholesterol-lowering drugs affect the function of APP in neurons in cell cultures?
- **Cynthia A. Lemere, Ph.D.**
Brigham and Women's Hospital
Boston, Massachusetts
Protective Effects of Chronic L-NBP Treatment in an Alzheimer's Disease Mouse Model
Investigator Initiated Research Grant—\$240,000 over three years
What is the therapeutic effect of a compound based on the Chinese celery seed in Alzheimer-like mice?

3. Clinical trials

- **Deborah E. Barnes, Ph.D.**
University of California
San Francisco, California
Computer-Based Training in Older Adults With Memory Complaints
Investigator Initiated Research Grant—\$240,000 over three years
Does computer-based training improve cognitive skills in adults with memory impairments?
- **Lon S. Schneider, M.D.**
University of Southern California
Los Angeles, California
Development of the Cochrane Fully-Coded Trials Register for Dementia
Senator Mark Hatfield Award for Clinical Research in Alzheimer's Disease—\$233,649 over three years
What improvements can be made in the scope and accessibility of a database of clinical trials for dementia treatment and prevention?

Diagnosis, Assessment and Disease Monitoring

1. Brain imaging and biomarkers

- **Konstantinos Arfanakis, Ph.D.**
Illinois Institute of Technology
Chicago, Illinois
A Diffusion Tensor MRI Technique for Early Diagnosis of Alzheimer's Disease
New Investigator Research Grant—\$99,945 over two years
Can an imaging technique detect tissue damage resulting from neurofibrillary tangles?
- **Steven M. Greenberg, M.D., Ph.D.**
Massachusetts General Hospital
Boston, Massachusetts
PET Imaging of Cerebral Amyloid Angiopathy With Pittsburgh Compound B
Investigator-Initiated Research Grant—\$239,938 over three years
Can an imaging method be used to assess beta-amyloid deposits in blood vessel walls in the brain?
- **Khalid Iqbal, Ph.D.**
Research Foundation for Mental Hygiene
New York State Institute for Basic Research
New York, New York
Biomarkers of Neurofibrillary Pathology
Investigator-Initiated Research Grant—\$240,000 over three years
Can measures of tau and beta-amyloid levels in cerebrospinal fluid be used to diagnose Alzheimer's disease?
- **Lisa Mosconi, Ph.D.**
New York University School of Medicine
New York, New York
Dynamic Brain Imaging Predicts Cognitive Decline in Normal Aging
New Investigator Research Grant—\$100,000 over two years
Can maps of brain deterioration reveal patterns of onset and rate of deterioration associated with Alzheimer's disease?
- **Gregory V. Simpson, Ph.D.**
University of California
San Francisco, California
Novel Tools for Assessing Dynamic Brain Networks and Cognition in Dementia
Everyday Technologies for Alzheimer Care—\$194,568 over two years
Can new computer software improve analysis of complex brain-function data?

- **Reisa Sperling, M.D.**
Brigham and Women's Hospital
Boston, Massachusetts
Impact of Amyloid Burden on Memory-Related fMRI Activation
Investigator-Initiated Research Grant—\$235,129 over three years
Can amyloid imaging and functional imaging technologies be used to correlate amyloid burden and memory impairment?
- **Jun Zhang, Ph.D.**
University of Kentucky Research Foundation
Lexington, Kentucky
Diffusion Tensor MRI Analysis for Early Detection of Alzheimer's Disease
New Investigator Research Grant—\$100,000 over two years
Can detection of structural changes in the brain white matter serve as an Alzheimer diagnostic tool?

2. Other diagnostic tools and issues

- **Jose R. Carrion-Baralt, Ph.D.**
Mount Sinai School of Medicine
New York, New York
Normative Neuropsychological Data in Nondemented Puerto Rican Nonagenarians
New Investigator Research Grant—\$95,700 over two years
Can valid baseline scores for Spanish-speaking Puerto Ricans be established for standard neuropsychological tests?
- **David W. Eby, Ph.D.**
University of Michigan
Ann Arbor, Michigan
Fitness to Drive in Early-Stage Dementia: An Instrumented Vehicle Study
Investigator-Initiated Research Grant—\$239,811 over three years
Can an in-vehicle monitoring device help in the assessment of driving abilities of people with dementia?
- **James E. Galvin, M.D.**
Washington University
St. Louis, Missouri
Factors Predicting Physicians' Intention to Evaluate Patients for Dementia
Investigator-Initiated Research Grant—\$239,999 over three years
What factors influence a physician's choice to evaluate patients for cognitive impairment and dementia?
- **Tod Machover, B.M., M.M.**
Massachusetts Institute of Technology
Cambridge, Massachusetts
Creative Music Technologies for Alzheimer Assessment and Treatment
Everyday Technologies for Alzheimer Care—\$199,988 over three years
Can a musical task assessment tool be used to screen for cognitive impairment in older adults?
- **Albert Rizzo, Ph.D.**
University of Southern California
Los Angeles, California
Virtual Reality Visuospatial Assessment as a Predictor of Mild Dementia of the Alzheimer's Type
Everyday Technologies for Alzheimer Care—\$199,988 over three years
Can a virtual reality tool be used to assess visuospatial perception in people with mild Alzheimer's disease?

Care, Support and Community Services

1. Residential and nursing home care

- **Margaret P. Calkins, Ph.D.**
IDEAS Institute
Kirtland, Ohio
Environmental Modifications to Improve Continence in Homes, Assisted-Living Units and Nursing Homes
Investigator-Initiated Research Grant—\$237,491 over three years
What changes in bathroom design may help people with dementia improve urinary control and toilet use?
 - **Mary Lynn Piven, Ph.D.**
University of North Carolina
Chapel Hill, North Carolina
Developing a Measure of Emotional Care in Nursing Homes
New Investigator Research Grant—\$99,973 over two years
Can a valid assessment tool be developed to measure quality of emotional care for people with dementia in nursing homes?
 - **Christie L. Teigland, Ph.D.**
Foundation for Long Term Care
Albany, New York
New Quality of Life Measures to Improve Dementia Care in Nursing Homes
Investigator-Initiated Research Grant—\$239,644 over three years
Can quality-of-life measures for people with dementia be successfully implemented into nursing home care?
- ### 2. At-home care and caregiver support
- **David Craig, M.D.**
Belfast City Hospital
Belfast, Northern Ireland
Cell Phone Video Streaming in Alzheimer's Disease
Everyday Technologies for Alzheimer Care—
\$196,094 over three years
Can cell phone videostreaming help people with dementia function more independently?
 - **Maureen K. O'Connor, Psy.D.**
Boston University
Bedford, Massachusetts
Self-Efficacy Enhancement and Caregiver Intervention Effectiveness
New Investigator Research Grant—\$99,955 over two years
Can interventions for improving self-perceived abilities result in lower caregiver stress?
 - **Laura P. Sands, Ph.D.**
Purdue University
West Lafayette, Indiana
Evaluating Community-Based, Long-Term Care for Medicaid Patients
Investigator-Initiated Research Grant—\$239,961 over three years
How does a lack of services and respite care—resulting from Medicaid spending caps—affect overall healthcare utilization?
 - **Kathleen Smyth, Ph.D.**
Case Western Reserve University
Cleveland, Ohio
Using Personal Computers to Extend Impact of a Caregiving Intervention
Investigator-Initiated Research Grant—\$240,000 over three years
Can a computer-based intervention sustain or enhance the long-term benefits of a caregiver training program?

3. Other care issues

- **Richard H. Fortinsky, Ph.D.**
University of Connecticut Health Center
Farmington, Connecticut
Information- and Help-Seeking Experiences Among Hispanic Family Caregivers
Investigator-Initiated Research Grant—\$239,931 over three years
How do culture-specific values and beliefs affect help-seeking choices by Hispanic caregivers of people with dementia?
- **J. Neil Henderson, Ph.D.**
University of Oklahoma
Oklahoma City, Oklahoma
Dementia Among American Indians: Culture, Caregiving and Services
Investigator-Initiated Research Grant—\$239,995 over three years
How do culture-specific beliefs and values affect choices of American Indians in caregiving practices and use of community services?
- **Madelyn A. Iris, Ph.D.**
Council for Jewish Elderly
Chicago, Illinois
Beliefs About Alzheimer's Disease, Dementia and Aging: Cultural and Social Factors
Investigator-Initiated Research Grant—\$199,938 over two years
What cultural and social factors represent barriers to the recognition and treatment of Alzheimer's disease among Hispanics, African Americans and refugees of the former Soviet Union?
- **Judith J. McCann, D.N.Sc.**
Rush University Medical Center
Chicago, Illinois
Why Don't People With Alzheimer's Disease Use More Community Services?
Investigator-Initiated Research Grant—\$239,772 over three years
What factors create barriers to community service use among caregivers of people with Alzheimer's disease?