

2009 Alzheimer's Association Grants Portfolio

—Organized by trends in research

Biology of disease-related molecules

1. Production of beta-amyloid

- **Zhefeng Guo, Ph.D.**
University of California, Los Angeles
Los Angeles, California
EPR Studies of the Early Events in A β Aggregation
2009 New Investigator Research Grant—\$80,000 over 2 years
What is the structure of beta-amyloid during the formation of oligomers?
- **Denise Cortis Park, Ph.D.**
University of Texas at Dallas
Dallas, Texas
Amyloid Deposition, Aging and Neurocognitive Function
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
How does amyloid deposition relate to brain function and cognitive function during aging?
- **Daniela Puzzo, M.D., Ph.D.**
University of Catania
Catania, Italy
Amyloid-Beta is Necessary for Hippocampal Synaptic Plasticity and Memory
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
What is the role of low levels of beta-amyloid in the brain?
- **Leon Reijmers, Ph.D.**
Tufts University
Boston, Massachusetts
Imaging of Memory Circuits in the Presence of Soluble Amyloid-Beta
2009 New Investigator Research Grant—\$80,000 over 2 years
How does beta-amyloid affect the ability of nerve cells to store memories?
- **Stephen M. Strittmatter, M.D., Ph.D.**
Yale University
New Haven, Connecticut
Neuronal Receptor Mediating the Disease-Causing Effects of A β Oligomers
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
Do animals lacking a candidate receptor for beta-amyloid oligomers experience fewer Alzheimer-like effects in the brain?
- **William E. Van Nostrand, Ph.D.**
Stony Brook University
Stony Brook, New York
Molecular Seeding of Cerebral Amyloid Angiopathy in Novel Transgenic Mice
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
How do the two forms of beta-amyloid interact to produce amyloid deposits in the blood vessels of the brain, and how do such deposits lead to cognitive impairment and brain hemorrhage?

- **Jun Ming Wang, Ph.D.**
University of Mississippi Medical Center
Jackson, Mississippi
ER-Isoform-Specific Estrogen Therapy in ApoE/Alzheimer Mice
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
What are the biochemical mechanisms by which estrogen may influence the expression of ApoE and beta-amyloid?

- **Yang Xiang, Ph.D.**
University of Illinois at Urbana-Champaign
Urbana, Illinois
Beta-Amyloid Increases AMPAR-Mediated Synaptic Activity via b2AR Activation
2009 New Investigator Research Grant—\$80,000 over 2 years
What are the effects of beta-amyloid on AMPA receptor activity?

2. Tau phosphorylation

- **Alejandra del-Carmen Alonso, Ph.D.**
College of Staten Island, City College of New York
New York, New York
Tau-Induced Neurodegeneration
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
Does hyperphosphorylation of tau cause neurodegeneration during Alzheimer's disease?
- **Eva Yunghua Chi, Ph.D.**
University of New Mexico Health Science Center
Albuquerque, New Mexico
Lipid Membrane-Mediated Tau Aggregation and Toxicity
2009 New Investigator Research Grant—\$80,000 over 2 years
How does tau interact with the cell membrane, and how does that interaction affect the aggregation of tau and the integrity of the cell membrane?
- **Jianzhi Wang, M.D.**
Huazhong University of Science and Technology
Wuhan, China
Identification of a New Mechanism for Alzheimer-like Neurodegeneration
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
Does tau phosphorylation protect nerve cells from death when the cells are exposed to conditions normally causing death?

- **Donna Wilcock, Ph.D.**
Duke University Medical Center
Durham, North Carolina
A Study to Validate Tau as a Therapeutic Target for Alzheimer's Disease
2009 New Investigator Research Grant—\$80,000 over 2 years
Is neurodegeneration prevented or slowed by drugs that reduce the hyperphosphorylation of tau?

3. Normal function of disease-related proteins

- **Hiroyasu Furukawa, Ph.D.**
Cold Spring Harbor Laboratory
Cold Spring Harbor, New York
Structural Insight into Allosteric Inhibition of NMDA Receptors
2009 New Investigator Research Grant—\$80,000 over 2 years
How do allosteric inhibitors bind to the NMDA receptor?
- **Kenneth Norman, Ph.D.**
Albany Medical College
Albany, New York
Functional Analysis of SEL-12/Presenilin on Calcium Release in C. elegans
2009 New Investigator Research Grant—\$80,000 over 2 years
How do presenilin proteins regulate calcium signaling in the cells of *C. elegans*?
- **Jack T. Rogers, Ph.D.**
Massachusetts General Hospital
Charlestown, Massachusetts
Post-Transcriptional Control of Alzheimer's APP and Brain Iron Homeostasis
2009 Zenith Fellows Award—\$447,300 over 3 years
Does iron-regulatory protein-1, the molecule that controls the proper storage of iron in the brain, also help regulate the production of both APP and beta-amyloid?
- **Yong Shen, M.D., Ph.D.**
Sun Health Research Institute
Sun City, Arizona
Abnormal APP Processing in Living Cortical Neurons from Alzheimer Brains
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
Does cellular activity affect the expression of enzymes involved in cutting APP, especially an enzyme known as BACE1?
- **Linda J. Van Eldik, Ph.D.**
Northwestern University, Chicago Campus
Chicago, Illinois
Pro-Inflammatory Cytokine Overproduction: A Contributor to Pathophysiology
2009 Zenith Fellows Award—\$450,000 over 2 years
How is p38alpha MAPK involved in brain disease?
- **Luciano D'Adamio, M.D.**
Albert Einstein College of Medicine of Yeshiva University
New York, New York
BRI2 and Alzheimer Therapy
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
Is it possible for BRI2 fragments to bind to APP and inhibit the cutting of APP into beta-amyloid?
- **Spiros Efthimiopoulos, Ph.D.**
National and Kapodistrian University of Athens
Athens, Greece
The Interrelationship of Ca2+ Homeostasis and APP/Homer Interaction
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
How do APP and homer proteins interact and affect Ca2+ homeostasis, and how do Ca2+ levels inside the cell affect APP-homer interactions?
- **Angela Ho, Ph.D.**
Boston University
Boston, Massachusetts
Physiological Function of APP Proteins in the Adult Mammalian Brain
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
How does the removal of the APP gene affect brain anatomy, biochemistry and function?
- **Bradley T. Hyman, M.D., Ph.D.**
Massachusetts General Hospital
Charlestown, Massachusetts
Untangling Tangles in Alzheimer's Disease
2009 Zenith Fellows Award—\$449,778 over 3 years
Can carboxy-terminus HSP70 interacting protein (CHIP), which has been shown to inhibit the production of abnormal tau, prevent certain neuronal damage that is thought to be caused by tau?
- **Joanna Pankiewicz, M.D., Ph.D.**
New York University School of Medicine
New York, New York
Passive Immunization for Prion Infections
2009 New Investigator Research Grant—\$80,000 over 2 years
What antibodies and immunization procedures are aimed at preventing prion infection of the brain?
- **Sameer B. Shah, Ph.D.**
University of Maryland-College Park
College Park, Maryland
Mechanical Determinants of Axonal Transport and Amyloid Processing
2009 New Investigator Research Grant—\$80,000 over 2 years
How do changes in the osmotic and fluid pressures in the brain affect the shape and function of nerve cells?

Alzheimer's disease pathology

1. Properties and toxicity of abnormal protein structures

- **Catherine Collins, Ph.D.**
University of Michigan
Ann Arbor, Michigan
The Role of JNK Signaling in APP Transport and Function
2009 New Investigator Research Grant—\$80,000 over 2 years
Does JNK signaling control the transport of APP, or does excess APP cause activation of the JNK1 pathway, leading to cell death?

2. Mediators of beta-amyloid toxicity

- **Vijay Rangachari, Ph.D.**
The University of Southern Mississippi
Hattiesburg, Mississippi
Understanding the Role of Granulin in Alzheimer's Disease
2009 New Investigator Research Grant—\$80,000 over 2 years
How do granulins affect the ability of beta-amyloid to form clusters?

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

- **Mauro Fa, Ph.D.**
Columbia University Medical Center
New York, New York
LTP and Memory Impairment by Prolonged Exposure to Picomolar Beta-Amyloid
2009 New Investigator Research Grant—\$80,000 over 2 years
How do the structure and function of synapses change when they are exposed to very low concentrations of beta-amyloid for prolonged periods?
- **William L. Klein, Ph.D.**
Northwestern University
Evanston, Illinois
Therapeutic Protection Against Synapse-Targeting Abeta Oligomers
2009 Zenith Fellows Award—\$450,000 over 3 years
Is it possible for compounds to block the attachment of oligomers to certain synaptic binding sites?
- **Vitaly Klyachko, Ph.D.**
Washington University in St. Louis
St. Louis, Missouri
Dissecting the Mechanisms of Synaptic Dysfunction in Alzheimer's Disease
2009 New Investigator Research Grant—\$80,000 over 2 years
What happens in the processing and recycling of synaptic vesicles?
- **Walter J. Lukiw, Ph.D.**
Louisiana State University Health Science Center-New Orleans
New Orleans, Louisiana
MicroRNA-Mediated Neurotrophic and Synaptic Networks in Alzheimer's Disease
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
Is microRNA-125b a key signal leading to the dysfunction of synapses in Alzheimer's disease

4. Disruption of brain cell functions/properties

- **Ottavio Arancio, M.D., Ph.D.**
Columbia University
New York, New York
Dysregulation of Histone Acetylation in Alzheimer's Disease
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
Are impairments in histone acetylation or deacetylation involved in the memory impairment caused by beta-amyloid?
- **Chad A. Dickey, Ph.D.**
University of South Florida
Tampa, Florida
Chemical Inhibition of Hsp70 as a Therapeutic Strategy for Alzheimer's Disease
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
What are the cellular effects of Hsp70 inhibitors and stimulators?
- **Hyoun-gon Lee, Ph.D.**
Case Western Reserve University
Cleveland, Ohio
Effect and Mechanism of Cell Cycle Re-entry in Neurodegeneration
2009 New Investigator Research Grant—\$80,000 over 2 years
How do nerve cells return to the cell division cycle, and what is the role of that process in neurodegeneration?

5. Genetics

- **Allal Boutajangout, Ph.D.**
New York University School of Medicine
New York, New York
Influence of Presenilin Mutation on Tau Pathology
2009 Mentored New Investigator Research Grant to Promote Diversity—\$150,000 over 3 years
How does the PS1 mutation affect cognitive function and brain pathology at different times?
- **Hiroshi Mori, Ph.D.**
Osaka City University Medical School
Osaka, Japan
Therapeutic Medication Using the Oligomer Abeta With the New AbetaE22Delta
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
How does the AbetaE22delta mutation affect the cognitive function and behavior of animals, as well as the biochemical and electrical properties of their nerve cells?
- **Lisa Mosconi, Ph.D.**
New York University School of Medicine
New York, New York
Maternal History of Alzheimer's Predisposes Children to Brain Hypometabolism
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
Is late-onset Alzheimer's disease associated with genetic changes related to metabolism, some of which are passed to descendants through the mother's genes?

6. Cardiovascular factors in Alzheimer's disease

- **Inga Kadish, Ph.D.**
University of Alabama at Birmingham
Birmingham, Alabama
Long-term Hypertension Contributes to the Development of Alzheimer's Disease
2009 New Investigator Research Grant—\$80,000 over 2 years
Does high blood pressure in Alzheimer-like mice cause decreases in brain blood flow and worsening of cognitive function and brain pathology?
- **Li Liu, Ph.D.**
Columbia University
New York, New York
Chronic Cerebral Hypoperfusion and Alzheimer's Disease Pathogenesis
2009 New Investigator Research Grant—\$80,000 over 2 years
Does brain hypoperfusion cause the development of Alzheimer pathology?

7. Other factors in Alzheimer pathology

- **Barbara B. Bendlin, Ph.D.**
University of Wisconsin-Madison
Madison, Wisconsin
White Matter Alterations in Middle-Aged Adults at Risk for Alzheimer's Disease
2009 New Investigator Research Grant—\$80,000 over 2 years
How much does metabolic syndrome or the APOE-e4 gene variant affect brain white matter and brain blood flow?

- **Dean M. Hartley, Ph.D.**
Rush University Medical Center
Chicago, Illinois
Hyperexcited Neuro-Networks Drive the Progression of Alzheimer's Disease
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
Does disease pathology cause an abnormal increase in brain activity (hyperexcitability) in the neocortex?
- **Anna Krichevsky, Ph.D.**
Brigham and Women's Hospital, Inc.
Boston, Massachusetts
MicroRNA Regulation of Early Events in Alzheimer's Disease
2009 New Investigator Research Grant—\$80,000 over 2 years
How do microRNAs function, and how do they contribute to the development of Alzheimer's disease?
- **John J. Lawrence, Ph.D.**
The University of Montana
Missoula, Montana
Acetylcholine and Somatostatin Interactions in Alzheimer's Disease Models
2009 New Investigator Research Grant—\$80,000 over 2 years
How is the activity of somatostatin-containing nerve cells affected by signals from acetylcholine-containing cells, and what happens when those signals are lost?
- **Stefan Leutgeb, Ph.D.**
University of California, San Diego
La Jolla, California
Neuronal Activity in the Entorhinal-Hippocampal Circuitry in Early Stages
2009 New Investigator Research Grant—\$80,000 over 2 years
What are the electrical properties of pyramidal cells in the entorhinal cortex?
- **Elena Leznik, Ph.D.**
Columbia University Medical Center
New York, New York
Role of SUMOylation in Alzheimer's Disease
2009 New Investigator Research Grant—\$80,000 over 2 years
Can stimulation of SUMOylation reverse some of the detrimental effects of Alzheimer-like pathology on brain plasticity and memory?
- **Juan C. Troncoso, M.D.**
Johns Hopkins University
Baltimore, Maryland
Molecular Mechanisms Underlying Neuronal Hypertrophy in Asymptomatic AD
2009 Investigator-Initiated Research Grant—\$200,000 over three years
What factors in the brain counteract the detrimental effects of Alzheimer's disease?

Dementia risk factors

- **Amy B. Manning-Bog, Ph.D.**
Stanford Research Institute International
Menlo Park, California
The Role of DJ-1 in Cognitive Impairment
2009 New Investigator Research Grant—\$80,000 over 2 years
What is the role of DJ-1, and how does its absence lead to a brain condition exhibiting features of both Parkinson's disease and Alzheimer's disease?
 - **Jessie Theuns, Ph.D.**
VIB
Antwerpen, Belgium
Molecular Genetics of Lewy Body Dementia
2009 New Investigator Research Grant—\$80,000 over 2 years
Are specific genes and gene mutations responsible for Lewy body dementia and Parkinson-like dementia?
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- ## Diagnosis and disease monitoring
- ### 1. Biomarkers
- **Ren-Hua Chung, Ph.D.**
Stanford Research Institute International
Menlo Park, California
A Novel Statistical Method Using Case-Control and Family Data
2009 New Investigator Research Grant—\$80,000 over 2 years
Will a statistical method known as the Association in the Presence of Linkage allow researchers to analyze genetic variations from multiple datasets with complex data about family history and case-control studies?
 - **Lidia Glodzik, M.D., Ph.D.**
New York University School of Medicine
New York, New York
Perfusion Abnormalities in Healthy Subjects at Risk for Alzheimer's Disease
2009 New Investigator Research Grant—\$80,000 over 2 years
Do high-risk individuals have reduced blood flow specific to the hippocampus?
 - **Lea T. Grinberg, M.D., Ph.D.**
University of California—San Francisco
San Francisco, California
Multi-ethnic Neuropathological Comparison of Alzheimer's Disease: Focus on Control Cases
2009 New Investigator Research Grant—\$80,000 over 2 years
Are there differences in brain lesions between those of African ancestry and those of southern European and Asian ancestry?
 - **Margaret A. Pericak-Vance, Ph.D.**
University of Miami School of Medicine
Miami, Florida
Identification of Rare Variants in Alzheimer's Disease
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
What genetic variations are associated with an increased risk for the disease, and how strongly does each variation affect an individual's risk?

2. Brain imaging

- **Abedelnasser Abulrob, Ph.D.**
University of Ottawa
Ottawa, Ontario, Canada
Development of Agents and Imaging Modalities for Early Detection of Alzheimer's Disease
2009 Molecular Imaging in Alzheimer's Disease Grant—\$373,225 over 3 years
Can dyes be delivered to the brain that can detect small clusters of beta-amyloid inside nerve cells?
- **Brian M. Austen, Ph.D.**
St. George's Hospital Medical School
London, United Kingdom
Brain Penetration of an MRI Contrast Reagent that Binds Beta-Amyloid
2009 Molecular Imaging in Alzheimer's Disease Grant—\$399,767 over 3 years
Can modified dyes label beta-amyloid in the brain after the dye is injected into the blood stream?
- **Brian J. Bacskai, Ph.D.**
Massachusetts General Hospital
Charlestown, Massachusetts
In Vivo Imaging of BBB Integrity to Enable CNS Probe Delivery
2009 Molecular Imaging in Alzheimer's Disease Grant—\$388,362 over 2 years
How does aging and the onset of Alzheimer pathology change the permeability of the blood-brain barrier (BBB) to several fluorescent dyes?
- **Sean Deoni, Ph.D.**
Brown University
Providence, Rhode Island
Investigation of Myelin Loss Associated with Alzheimer's Disease
2009 New Investigator Research Grant—\$80,000 over 2 years
Can magnetic resonance imaging be effective in measuring myelin damage in persons at different stages of Alzheimer's disease?
- **Bradford Dickerson, M.D.**
Massachusetts General Hospital
Charlestown, Massachusetts
Quantitative Neuroanatomic Biomarkers for Dementia Differential Diagnosis
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
How can magnetic resonance imaging reliably and accurately diagnose Alzheimer's disease and distinguish it from other neurodegenerative disorders?
- **Karunya Kandimalla, Ph.D.**
Florida Agricultural and Mechanical University
Tallahassee, Florida
Multifunctional Nanoprobe to Diagnose and Treat Cerebral Amyloid Angiopathy
2009 New Investigator Research Grant—\$80,000 over 2 years
How well does a nanoparticle label plaques for detection using magnetic resonance imaging?
- **Jin Ryoung Kim, Ph.D.**
Polytechnic Institute of New York University
New York, New York
Design of a Molecular Probe for Rapid In Situ Amyloid Aggregation Detection
2009 New Investigator Research Grant—\$80,000 over 2 years
How will biochemical probes, or dyes, that selectively recognize each of the different aggregate forms of beta-amyloid be developed?
- **Richard D. King, M.D., Ph.D.**
University of Utah—Salt Lake City
Salt Lake City, Utah
Complexity Measures of the Cerebral Cortex in Neurodegenerative Disease
2009 New Investigator Research Grant to Promote Diversity—\$80,000 over 2 years
How can a measure called fractal dimension be used to identify brain structure changes in neurodegenerative disease?
- **Michele L. Ries, Ph.D.**
University of Wisconsin-Madison
Madison, Wisconsin
Multimodal Neuroimaging of Apathy in Amnesic Mild Cognitive Impairment
2009 New Investigator Research Grant—\$80,000 over 2 years
How can magnetic resonance imaging and positron emission tomography be used to analyze the structure and function of the medial frontal cortex in people with amnesic MCI and apathy?
- **Christina Wierenga, Ph.D.**
Veterans Medical Research Foundation
San Diego, California
Impact of APOE on Cerebral Perfusion and BOLD Response to Word Retrieval
2009 New Investigator Research Grant—\$80,000 over 2 years
What are the best ways to measure BOLD responses in persons with suspected Alzheimer's disease?

3. Other risk factors

- **Valarie Fleming, Ph.D.**
Texas State University—San Marcos
San Marcos, Texas
Early Detection of Mild Cognitive Impairment: Cognitive-Communicative Change
2009 New Investigator Research Grant to Promote Diversity—\$80,000 over 2 years
Does performance on spoken communication tasks differentiate individuals with MCI from those with normal cognition?
- **Ingmar Skoog, Ph.D., M.D.**
Sahlgrenska Academy at University of Gothenburg
Mölnådal, Sweden
Dementia Among 85-Year-Olds Examined in 1986–87 and 2009
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
Are there secular trends in the prevalence of dementia and its subtypes, as well as in the influence of genetic and other risk factors on dementia?

- **Meike W. Vernooij, M.D.**
Erasmus Medical Center
Rotterdam, The Netherlands
Microstructural White Matter Changes and Risk of Cognitive Decline
2009 New Investigator Research Grant—\$80,000 over 2 years
What risk factors are associated with structural changes in brain white matter, and are such changes associated with declines in cognitive function?

4. Other technologies/diagnostic tools

- **John Houde, Ph.D.**
The Regents of the University of California, San Francisco
San Francisco, California
System for Assessing Speech Feedback Processing in Alzheimer's Disease
2009 Everyday Technologies for Alzheimer Care Grant—\$160,000 over 3 years
How does an automated tool objectively measure cortical functioning in speech to increase the chances of detecting early, subclinical signs of Alzheimer's disease?
- **Cheryl A. Luis, Ph.D.**
The Roskamp Institute
Sarasota, Florida
Development of a Novel Screening Approach for MCI/Early Alzheimer's Disease
2009 New Investigator Research Grant—\$80,000 over 2 years
What is best combination of tests, and the best cutoff values for each measurement, to provide optimal sensitivity and specificity for detection of MCI and early Alzheimer's disease?

Drug development and clinical interventions

1. Drug therapies

- **Paul E. Gold, Ph.D.**
University of Illinois at Urbana-Champaign
Champaign, Illinois
Glucose, K-ATP Channels and Memory in Mouse Models of Alzheimer's Disease and Down Syndrome
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
Can drugs that mimic the effect of glucose on the K-ATP channel enhance memory performance in mice?
- **Ling Li, D.V.M., Ph.D.**
The University of Alabama at Birmingham
Birmingham, Alabama
Modulation of Incretins as a Novel Treatment for Alzheimer's Disease
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
What are the effects of incretin treatment on brain function and biochemistry in Alzheimer-like mice?
- **P. Hemachandra Reddy, Ph.D.**
Oregon Health and Science University
Beaverton, Oregon
Neuroprotection and Alzheimer's Disease
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
Can drugs that preserve mitochondrial function in cultured nerve cells protect brain function in mice with Alzheimer-like pathology?

- **Mark A. Smith, Ph.D.**
Case Western Reserve University
Cleveland, Ohio
Xanthine Oxidase in Alzheimer's: Mechanistic and Therapeutic Opportunities
2009 Investigator-Initiated Research Grant—\$200,000 over three years
Do inhibitors of xanthine oxidase warrant further study as potential treatments to slow or halt the progression of Alzheimer's disease?

2. Nutritional therapies

- **Nikolaos Scarmeas, M.D.**
Columbia University
New York, New York
Mediterranean Diet and Alzheimer's Disease in the Mediterranean Region
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
Does close adherence to the Mediterranean diet lower a person's risk of Alzheimer's disease?

3. Clinical trial design

- **Marilyn S. Albert, Ph.D.**
Johns Hopkins University School of Medicine
Baltimore, Maryland
Placebo Data Analysis in Alzheimer's Disease and MCI Clinical Trials: Phase II
The Senator Mark Hatfield Award for Clinical Research in Alzheimer's Disease—\$200,000 over 3 years
How can the design of future clinical trials be improved?

- **Olivia Okereke, M.D.**
Brigham and Women's Hospital, Inc.
Boston, Massachusetts
Planning Large-Scale Alzheimer's Disease QUESTIONNAIRE-AIDED Studies (PLAQUES)
2009 New Investigator Research Grant—\$80,000 over 2 years
Is there a low-cost, efficient method for diagnosing MCI and dementias that will be directly applicable to large-scale trials and longitudinal studies?

4. Clinical interventions

- **Cynthia Stonnington, M.D.**
Mayo Clinic Arizona
Scottsdale, Arizona
Does Zumba Improve Cognition in Healthy APOE4 Epsilon4 Carriers and Noncarriers?
2009 New Investigator Research Grant—\$80,000 over 2 years
Is physical exercise good for helping elderly persons maintain cognitive function?

Care, support and social-behavioral factors

1. Nursing homes, assisted living residences and dementia care units

- **Elizabeth Galik, Ph.D., C.R.N.P.**
University of Maryland, Baltimore
Baltimore, Maryland
Testing a Function-Focused Nursing Intervention for Residents with Dementia
2009 New Investigator Research Grant—\$80,000 over 2 years
Does resident exposure to the Res-Care-CI Intervention result in maintenance or improvement of physical function and activity as well as mood and behavior?

2. Care interventions and quality of life

- **Linda L. Buettner, Ph.D.**
The University of North Carolina at Greensboro
Greensboro, North Carolina
Mentally Stimulating Activities to Treat Apathy in Early Stage Alzheimer's Disease
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
Can a mentally stimulating activity intervention program reduce symptoms of apathy and improve functional outcomes?
- **Jimmy Choi, Psy.D.**
Research Foundation for Mental Hygiene, Inc. at New York State Psychiatric Institute, Columbia University
New York, New York
Motivational Cognitive Rehabilitation in Mild Cognitive Impairment
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
Could a cognitive therapy and motivational training tool slow cognitive decline in persons with MCI?
- **Lindy Maxted Clemson, Ph.D.**
The University of Sydney
Sydney, Australia
Using Personal and Environmental Resources to Reduce the Risk of Falls
2009 New Investigator Research Grant—\$80,000 over 2 years
What environmental and behavioral risk factors are associated with a high risk of falling?

3. Technology-assisted care

- **Debra Lieberman, Ph.D.**
The Regents of the University of California—Santa Barbara
Santa Barbara, California
Lifestyle Improvement Game to Delay the Onset of Alzheimer's and Support Treatment
2009 Everyday Technologies for Alzheimer Care Grant—\$160,000 over 3 years
How do the Facebook social network and online resources motivate people to improve their lifestyles?

- **Louise Nygård, Ph.D.**
Karolinska Institutet
Stockholm, Sweden
Design and Support Based on Knowing the Challenge of Skills and Technology
2009 Everyday Technologies for Alzheimer Care Grant—\$160,000 over 3 years
Which strategies are effective in helping people with mild cognitive impairment and Alzheimer's disease learn how to use new or customized technology aimed at improving quality of life?

- **Kalpana Padala, M.D.**
Board of Regents of the University of Nebraska
University of Nebraska Medical Center
Omaha, Nebraska
Wii-Fit for Improving Activity, Gait and Balance in Alzheimer's Disease
2009 New Investigator Research Grant—\$80,000 over 2 years
Can Wii-Fit improve balance, gait and activities of daily living compared with a walking exercise program?

4. Caregiver support

- **Marie Savundranayagam, Ph.D.**
University of Wisconsin—Milwaukee
Milwaukee, Wisconsin
Caregiver Communication Strategies: Implications for Relational Outcomes
2009 New Investigator Research Grant—\$80,000 over 2 years
How can communication strategies be used by caregivers to resolve communication breakdowns?

5. Cultural values and beliefs

- **Yu-Ping Chang, Ph.D.**
The Research Foundation of State University of New York on behalf of the University at Buffalo (SUNY at Buffalo)
Buffalo, New York
Medication Use for Dementia in Chinese-American Families
2009 New Investigator Research Grant—\$80,000 over 2 years
How are multiple medication regimens associated with dementia and what are the culture-specific variables influencing medication use among Chinese immigrants?
- **Margo-Lea Hurwicz, Ph.D.**
Curators of the University of Missouri on Behalf of the University of Missouri—St. Louis
St. Louis, Missouri
Developing a Culturally Appropriate Measure of Alzheimer's Knowledge
2009 Investigator-Initiated Research Grant—\$200,000 over 3 years
How do people from different cultural backgrounds interpret and respond to late-life illness?
- **Sharon E. McKenzie, Ph.D.**
New York University School of Medicine
Brooklyn, New York
Cognitive Health and Perceived Needs Among Minority Older Adults
2009 Mentored New Investigator Research Grant to Promote Diversity—\$120,000 over 3 years
What are the perspectives, attitudes, values and cultural experiences of African- and Black Caribbean-Americans faced with Alzheimer's and MCI, and what are their reasons for underuse of health services and for low levels of research participation?