# alzheimer's $\ref{eq:second}$ association<sup>®</sup>

# 2012 Alzheimer's Association Grants Portfolio

—Organized by categories in research

# **Biology of Disease-Related Molecules**

### Production and clearance of beta-amyloid

### Susanne Frykman, Ph.D.

Karolinska Institutet

### Stockholm, Sweden Synaptic Production of Beta-Amyloid Peptide and Targeted Inhibition Thereof

New Investigator Research Grant—\$99,000 over two years Can certain toxins inhibit beta-amyloid production in synaptic vesicles, and what other mechanisms are responsible for synaptic damage in Alzheimer's disease?

# Andreas M. Grabrucker, Ph.D.

University Hospital Ulm

Ulm, Germany

### Investigating the Physiological Role of Zinc Binding to Beta-Amyloid

New Investigator Research Grant—\$100,000 over two years How does zinc/APP binding affect APP function in laboratory cells and in mice genetically engineered to develop Alzheimer'slike symptoms?

# Claudio A. Hetz, Ph.D.

Institute of Biomedical Sciences, University of Chile Santiago, Chile

# Protective Role of the Transcription Factor XBP1 in Alzheimer's Disease

New Investigator Research Grant—\$100,000 over two years What mechanisms underlie XBP1's ability to regulate betaamyloid production and alleviate memory loss?

# Yueming Li, Ph.D.

Sloan-Kettering Institute for Cancer Research New York, New York

# *The Mechanisms of Action of Gamma-Secretase Modulators* Investigator-Initiated Research Grant—\$240,000 over three years

How can combinations of gamma-secretase modulators alter the production of different forms of beta-amyloid?

# Giovanni Meli, Ph.D.

European Brain Research Institute Rome, Italy

### Targeting Subcellular Beta-Amyloid Oligomers in Human Alzheimer's Primary Cells

New Investigator Research Grant—\$100,000 over two years How does antibody treatment prevent oligomer formation in subcellular regions?

# Kulandaivelu S. Vetrivel, Ph.D

The University of Chicago

Chicago, Illinois

Proteomic Analysis of Gamma-Secretase Residing in Raft Domains

New Investigator Research Grant—\$100,000 over two years How does gamma-secretase function when attached to lipid rafts, and what other proteins work with gamma-secretase when it is in this position?

### **Beta-amyloid toxicity**

### Dara Dickstein, Ph.D.

Mount Sinai School of Medicine New York, New York New Investigator Research Grant—\$99,979 over two years Assessing the Effect of Oligomeric Abeta on Neuronal and Synaptic Integrity

New Investigator Research Grant—\$99,979 over two years How does beta-amyloid in the different animal models cause synaptic damage and brain cell death?

# Lan Guo, Ph.D.

University of Kansas Center for Research

Lawrence, Kansas

CypD and Abeta-Impaired Axonal Mitochondrial Motility and Docking

New Investigator Research Grant—\$100,000 over two years How do cypD and beta-amyloid hinder mitochondrial movement and synaptic function?

# Muralidhar L. Hegde, Ph.D.

The University of Texas Medical Branch at Galveston Galveston, Texas

### Oxidized Amyloid Proteins Induce Genome Damage in Alzheimer's Disease

New Investigator Research Grant—\$100,000 over two years Where do beta-amyloid, tau and alpha-synuclein bind to brain cell DNA, and what DNA damage is caused by such binding?

# Tau and neurofibrillary tangles

# Jose F. Abisambra, Ph.D.

University of South Florida Tampa, Florida

# Mechanisms of Tau and ER Stress for Novel Alzheimer's Disease Therapeutics

New Investigator Research Grant to Promote Diversity— \$100,000 over two years

How does tau activate the stress response of the endoplasmic reticulum?

### Lars M. Ittner. M.D.

The University of Sydney Sydney, Australia

The Role of Tau in Excitotoxicity in Alzheimer's Disease New Investigator Research Grant-\$99,400 over two years How does tau-induced pathology occur in the brain, and what are the mechanisms that underlie the process?

### Gloria Lee, Ph.D.

University of Iowa Iowa City, Iowa Fyn in Tau-Induced Neurodegeneration Investigator-Initiated Research Grant-\$239,250 over three vears How does the enzyme Fyn contribute to the formation of neurofibrillary tangles?

### Miranda N. Reed, Ph.D.

West Virginia University Morgantown, West Virginia Effects of Risk Factors on Tau-Mediated Memory Deficits New Investigator Research Grant-\$97,493 over two years What are the effects of diabetes on tau phosphorylation?

### Other disease-related molecules and pathways

### Jungsu Kim, Ph.D.

Washington University in St. Louis St. Louis, Missouri

### **Regulation of LDLR as Alzheimer's Disease Therapeutics**

New Investigator Research Grant-\$100,000 over two years Does modifying the activity of proteins that reduce levels of low-density lipoprotein receptors affect apolipoprotein and betaamyloid levels in mice with Alzheimer's-like brain changes?

### Masashi Kitazawa, Ph.D.

University of California, Merced Merced, California

### Neuroinflammation-Induced Alterations of GLT-1 and Synaptotoxicity in Alzheimer's Disease

New Investigator Research Grant-\$100,000 over two years What mechanisms underlie the role of beta-amyloid and interleukin-1 in repressing the activity of the protein glutamate transporter-1?

# Thomas Kukar, Ph.D.,

Emory University

#### Atlanta, Georgia The Role of Progranulin in Alzheimer's Disease

New Investigator Research Grant—\$100,000 over two years How might progranulin activity become altered in old age or disease?

# Michael McMurray, Ph.D.

University of Colorado Denver, Colorado Mechanisms of Misfolding and Aggregation of Septin Proteins in Alzheimer's New Investigator Research Grant to Promote Diversity-\$99,998 over two years How is proper folding of septins maintained, and what mechanisms are responsible for misfolding and aggregation? 2012 Research Grants Portfolio - Organized by research category

### Kalipada Pahan, Ph.D.

Rush University Medical Center Chicago, Illinois Induction of BDNF and NT-3 by Cinnamon Metabolite Sodium Benzoate Investigator-Initiated Research Grant-\$239,910 over three vears How does sodium benzoate increase levels of BDNF and NT-3 in the brain?

### Junichi Shioi, Ph.D.

Mount Sinai School of Medicine

New York, New York

### Effect of EphB2/CTF2 Peptide on NMDAR Phosphorylation and Signaling

Investigator-Initiated Research Grant-\$240,000 over three years

How is the cellular signaling pathway involving gammasecretase affected by genetic mutations of the gamma-secretase gene?

### Disruption of brain cell functions/properties

# Stephen D. Ginsberg, Ph.D.

Nathan S. Kline Institute for Psychiatric Research Orangeburg, New York

### Effect of Caloric Restriction on Septohippocampal Neurons in Alzheimer's Disease

Investigator-Initiated Research Grant-\$240,000 over three vears

How does a restricted-calorie diet affect the activity of genes involved in the biochemical pathways of Alzheimer's-related degeneration?

# Daniel Llano, M.D., Ph.D.

University of Illinois, Urbana-Champaign Urbana, Illinois

### Diminished Cortical GABAergic Inhibition in a Mouse Model of Alzheimer's Disease

New Investigator Research Grant-\$100,000 over two years How do animals' corticocortical system and thalamocortical system become "desensitized" to the protective effects of GABA?

# Cristina Marchetti, Ph.D.

European Brain Research Institute Rome, Italy

# Learning From Epilepsy to Understand Alzheimer's Disease

New Investigator Research Grant-\$100,000 over two years How do changes in neuronal channel activity in the hippocampus lead to excitotoxicity, brain seizures and cognitive loss?

### Qitao Ran, Ph.D.

University of Texas Health Science Center at San Antonio San Antonio, Texas

Glutaredoxin 2, Mitochondrial Protein Glutathionylation and Alzheimer's Disease

Investigator-Initiated Research Grant—\$239,862 over three years

Do high glutaredoxin 2 levels prevent nerve cell damage caused by Alzheimer's genes, and can drugs to activate glutaredoxin 2 be viable treatments to prevent or slow the progression of Alzheimer's disease?

### Kaori Takehara-Nishiuchi, Ph.D.

University of Toronto

Toronto, Ontario, Canada

Physiological Basis of Memory Impairments in Rat Model of Early-Stage Alzheimer's Disease

New Investigator Research Grant—\$100,000 over two years How does the progression of degeneration affect the oscillatory activity associated with memory formation?

# **Dementia Risk Factors and Prevention**

### Owen T. Carmichael, Ph.D.

University of California, Davis Davis, California

# Imaging Biomarkers of Preclinical Cerebrovascular Disease

New Investigator Research Grant—\$100,000 over two years Are tiny hemorrhages, reduced brain blood flow, stroke-related lesions and narrowing of carotid arteries that lead to the brain potential biomarkers of preclinical CVD?

### Gemma Casadesus Smith, Ph.D.

Case Western Reserve University

Cleveland, Ohio

#### Modulation of Metabolic Processes to Prevent Alzheimer's Disease

Investigator-Initiated Research Grant—\$239,996 over three years

Do combination treatments of leptin plus amylin improve cognitive function more than either hormone acting alone?

### Angela Kamer, Ph.D.

New York University

New York, New York

*Infection/Inflammation and Cognitive Decline* New Investigator Research Grant—\$100,000 over two years Does periodontal inflammation exacerbate cognitive and neurological changes linked with dementia?

### Jennifer Weuve, Sc.D.

Rush University Medical Center Chicago, Illinois The Red Cell Distribution Width, a Potential Marker of

# Dementia Risk

New Investigator Research Grant—\$99,831 over two years Is increased RDW related to cognitive decline, risk of dementia and changes in brain structure?

### Zhongcong Xie, M.D., Ph.D.

Massachusetts General Hospital

Charlestown, Massachusetts

# Development of Safer Anesthesia for People with Alzheimer's Disease

Investigator-Initiated Research Grant—\$240,000 over three years How do isoflurane and desflurane affect amyloid plaque formation, brain structure and learning and memory?

# **Diagnosis and Detection of Alzheimer's Disease**

## Biomarkers

### Rebecca Amariglio, Ph.D.

Brigham & Women's Hospital

Boston, Massachusetts Subjective Cognitive Complaints: An Early Indicator of

### Alzheimer's Disease

New Investigator Research Grant—\$96,565 over two years What is the role of subjective cognitive complaints (SCCs) in Alzheimer's risk?

### Jed Meltzer, Ph.D.

Rotman Research Institute of Baycrest

Toronto, Canada

# Detection of Early Cortical Pathology Using MEG and Speech Analysis

New Investigator Research Grant—\$97,090 over two years What are the speech patterns of people with Alzheimer's disease and mild cognitive impairment (MCI) and conditions that precede clinical dementia?

### Rhonda K. Roby, Ph.D., M.P.H.

University of North Texas Health Science Center Fort Worth, Texas

### A Longitudinal Study of the Changes in mtDNA of People With Alzheimer's Disease

New Investigator Research Grant—\$100,000 over two years Do people with Alzheimer's disease have a higher than normal rate of mitochondrial DNA accumulation in their peripheral blood?

### Nicholas Seyfried, Ph.D.

Emory University

Atlanta, Georgia

### Early Changes in the Brain Proteome and Alzheimer's Disease Risk

New Investigator Research Grant—\$100,000 over two years What human synaptic proteins may be linked to early Alzheimer's?

# David A. Wolk, M.D.

University of Pennsylvania

Philadelphia, Pennsylvania

# Exploration of Memory Change in Preclinical Alzheimer's Disease

New Investigator Research Grant—\$99,840 over two years Which cognitive tests and biochemical markers are the most simple, reliable and inexpensive for detecting early signs of the Alzheimer's disease process?

### Imaging

# Gil Rabinovici, M.D.

University of California, San Francisco San Francisco, California

# Imaging and CSF Biomarkers in the Diagnosis of Early-Onset Dementia

Investigator-Initiated Research Grant—\$200,000 over three years

Can the use of CSF biomarkers and PET brain imaging distinguish between early-onset Alzheimer's disease and frontotemporal dementia?

### Technology

### Serguei Pakhomov, Ph.D.

Regents of the University of Minnesota—Twin Cities Minneapolis, Minnesota

# Automated Semantic Indices for Early Detection of Cognitive Changes

Development of New Cognitive Functional Instrumentation in Alzheimer's Disease—\$400,000 over two years

Can automatic speech recognition and computational linguistic technologies be reliable in detecting subtle early cognitive changes associated with risk of progressing to Alzheimer's disease?

### Steve R. Rapp, Ph.D.

Wake Forest University Health Sciences Winston-Salem, North Carolina

winston-Salem, North Carolina

### Validation of a Simulation-Based Assessment of Cognitive Functioning

Development of New Cognitive Functional Instrumentation in Alzheimer's Disease—\$362,821 over three years Can SIMBAC assess sensitivity to change, affirm its reliability and document its acceptability to older users?

### **Clinical tests**

### Maritza Dowling, Ph.D.

University of Wisconsin-Madison

Madison, Wisconsin Evaluating the Structural H

# *Evaluating the Structural Equivalence of Dementia Screening Tests*

New Investigator Research Grant to Promote Diversity— \$100,000 over two years

Can the MoCA test detect people who have reduced brain function and distinguish them from healthy people?

# **Clinical and Pre-Clinical Drug Development and Clinical Interventions**

### Drug therapies/treatments

# Michael G. Agadjanyan, Ph.D., D.Sc.

Institute for Molecular Medicine

Huntington Beach, California Immune Mechanisms Involved in Responses to Multiepitope Alzheimer's Disease Vaccine

Investigator-Initiated Research Grant—\$239,503 over three years

Can the immune system generate antibodies against betaamyloid that are more powerful and specific than those generated by conventional vaccines?

## Mathew M. Blurton-Jones, Ph.D.

University of California, Irvine Irvine, California *Testing the Therapeutic Efficacy of Neprilysin-Expressing Neural Stem Cells* New Investigator Research Grant—\$100,000 over two years How can neural stem cells be more effective at battling Alzheimer's pathologies?

### Boris Decourt, Ph.D.

Banner Sun Health Research Institute Sun City, Arizona Preclinical Testing of Lenalidomide as Anti-Amyloid Treatment for Alzheimer's Disease

New Investigator Research Grant—\$100,000 over two years Does lenalidomide have the ability to reduce TNG-alpha and beta-amyloid levels in Alzheimer's-like mice?

# Francisco J. Gil-Bea, Ph.D.

Foundation for Applied Medical Research Pamplona, Spain

Pharmacological Manipulation of BDNF as Therapeutic Challenge for Alzheimer's Disease

New Investigator Research Grant—\$100,000 over two years What mechanisms may increase BDNF levels in cells and living animals?

# Bing Gong, M.D., Ph. D.

Mount Sinai School of Medicine New York, New York *hFbx2/APP, a Novel Transgenic Mouse Model in the Study of* 

hFbx2/APP, a Novel Transgenic Mouse Model in the Study of BACE1 Degradation

Investigator-Initiated Research Grant—\$240,000 over three years

Does the destruction of BACE1 reduce amyloid plaque formation in the brain?

# Joshua Grill, Ph.D.

University of California, Los Angeles Los Angeles, California Barriers to Enrollment in Preclinical Alzheimer's Disease Clinical Trials

New Investigator Research Grant—\$100,000 over two years What are the barriers to Alzheimer's clinical trial recruitment?

### Henrieta Scholtzova, M.D., Ph.D.

New York University School of Medicine New York, New York

### Innate Immunity Stimulation as a Novel Therapeutic Approach in Alzheimer's Disease

Investigator-Initiated Research Grant—\$240,000 over three years Can stimulation of the immune system reduce these signs of disease and reduce the accumulation of amyloid plaque in brain blood vessels?

# David R. Schubert, Ph.D.

The Salk Institute for Biological Studies

La Jolla, Califronia

# The role of the unfolded protein response in preventing amyloid toxicity

Investigator-Initiated Research Grant—\$240,000 over three years Is CNB-100 a potential drug candidate for Alzheimer's disease?

### Vitaly Vasilevko, Ph.D.

University of California, Irvine Irvine, California

### Pyroglutamate Modified Abeta Species in Alzheimer's Disease: Target for Immunotherapy

New Investigator Research Grant—\$100,000 over two years Can a vaccine direct the immune system to recognize and remove pyroglutamate-modified beta-amyloid from the brain?

# Social/Behavioral and Cognitive/Functional

### Marie Boltz, Ph.D.

New York University New York, New York

### A Family-Nurse Partnership for Care of Hospitalized Persons With Dementia

New Investigator Research Grant—\$99,979 over two years How can the hospital environment be safer for people with dementia and more conducive to physical and mental activity?

### Gongping Liu, Ph.D.

Huazhong University of Science and Technology Wuhan, China

## Spatial Learning on Neurogenesis and Behavior in Alzheimer's-Like Models

New Investigator Research Grant—\$100,000 over two years What are the benefits of neuronal growth in rats injected with beta-amyloid?

# Chris Nugent, Ph.D.

University of Ulster Newtownabbey, United Kingdom TAUT: Technology Adoption and Prediction Tool for

### Everyday Technologies

Everyday Technologies for Alzheimer's Care—\$199,790 over three years

What are factors and predictors for successful technology uptake in patients suffering from memory impairment?

# Dallas P. Seitz, M.D.

Queen's University at Kingston Kingston, Ontario, Canada A Volunteer-Led Intervention to Reduce Behavioral Symptoms

of Dementia New Investigator Research Grant—\$100,000 over two years

What are the benefits of tailored therapy treatments based on each participant's needs and interests?

# Maggie Syme, Ph.D.

San Diego State University Research Foundation San Diego, California

## Examining Sexual Consent Capacity in Cognitively Compromised Older Adults

New Investigator Research Grant—\$99,998 over two years How do different institutions perceive the issue of sexual consent and sexual activity among people with dementia?

### Eric Wan, Ph.D.

Portland State University Portland, Oregon

# A Passive Tag-Free Approach to Localization and Activity Monitoring

Everyday Technologies for Alzheimer's Care—\$199,469 over 2 years

What are the benefits of a passive tag-free tracking system that uses radio frequency (RF) signals?

# Jennifer L. Whitwell, Ph.D.

Mayo Clinic

Rochester, Minnesota

### Amyloid-Related Imaging Abnormalities (Microbleeds) in Atypical Alzheimer's Disease

New Investigator Research Grant—\$100,000 over two years Are microbleeds associated with levels of cognitive decline, amounts of amyloid plaque or other structural changes in the brain?

# Pathology and Genetics of Alzheimer's Disease

# Production and clearance of beta-amyloid

# Guojun Bu, Ph.D.

Mayo Clinic Jacksonville Jacksonville, Florida *LRP1 and HSPG in Cerebrovascular Clearance of ABeta* Investigator-Initiated Research Grant—\$240,000 over three years

How do changes in LRP1 and HSPG levels affect the clearance of beta-amyloid in animal models?

### Abhinav Diwan, M.D.

Washington University in St. Louis

Saint Louis, Missouri

### Enhancing Lysosome Biogenesis to Prevent Amyloid Plaque Pathogenesis

New Investigator Research Grant—\$100,000 over two years What is the role of the transcription factor TFEB in moderating beta-amyloid production?

# Nicholas Fitz, Ph.D.

University of Pittsburgh Pittsburgh, Pennsylvania

Effect of RXR Agonist on Alzheimer's Phenotype in APP Mice Expressing APOE-e3 and e4

New Investigator Research Grant—\$100,000 over two years How does bexarotene treatment affect brain beta-amyloid levels and cognition?

# Yuri Zilberter, Ph.D.

Institut de Neuroscience des Systèmes (UMR1106), INSERM Marseille, France

### Energy Substrates as a Tool for Treatment of Hyperexcitability in Alzheimer's Disease

Neuronal Hyperexcitability in Seizures and Alzheimer's Disease Research Grant—\$396,969 over three years How are nutrients able to reduce hyperexcitability caused by

beta-amyloid, and does this effect involve only nerve cells or are other supporting cells in the brain also required?

### **Beta-amyloid toxicity**

### Silvia Fossati, Ph.D.

New York University School of Medicine New York, New York

### Death Receptors as Mediators of Amyloid-Induced Cerebrovascular Dysfunction

New Investigator Research Grant—\$100,000 over two years How does the interaction of beta-amyloid oligomers and death receptors lead to blood vessel cell apoptosis?

### Michael Gitcho, Ph.D.

University of Wisconsin-Madison Madison, Wisconsin

# Age-Dependent Increases of Phosphorylated TDP-43 in APP Mice

New Investigator Research Grant—\$100,000 over two years What are the effects of amyloid deposition on phosphorylated TDP-43 brain changes in Alzheimer's disease?

# Jeroen J.M. Hoozemans, Ph.D.

VU University Medical Center Amsterdam Amsterdam, Netherlands Age-Dependent Toll-Like Receptor Signalling in the Alzheimer's Brain

New Investigator Research Grant—\$99,857 over two years Can the protein called interleukin-1 receptor–associated kinase-4 prevent inflammation without hindering amyloid clearance?

# Shaomin Li, M.D., Ph.D

Brigham and Women's Hospital Boston, Massachusetts Abeta Increases Glutamatergic Excitation and Induces Epileptiform Activity

New Investigator Research Grant—\$100,000 over two years What is the link between excitotoxicity and seizures, and what molecular mechanisms may underlie this association?

# Rodrigo Morales, Ph.D.

University of Texas Health Science Center Houston, Texas *Transmissibility of Amyloid-Beta Deposition by Blood and Different Routes* Mentored New Investigator Research Grant to Promote Diversity—\$150,000 over two years How does amyloid plaque formation in one region of the blood or brain trigger more extensive plaque formation in the brain?

# Lindsay C. Reese, Ph.D.

Oregon Health & Science University Portland, Oregon

The Role of Amyloid Deposition in Blood-Brain Barrier Dysfunction in Alzheimer's Disease

U.S.–U.K. Young Investigator Exchange Fellowship—\$259,998 over three years

What is the role of impaired blood flow and amyloid deposition in blood-brain-barrier damage?

# Jokubas Ziburkus, Ph.D.

University of Houston Houston, Texas Inhibitory Neuron and Circuit Dysfunctions in Alzheimer's Disease Model

New Investigator Research Grant—\$100,000 over two years Are beta-amyloid levels related to neuron function in the hippocampus, and what are the ion channels responsible for defective activity of inhibitory neurons?

# Tau and neurofibrillary tangles

### Kim Green, Ph.D.

University of California, Irvine

# Irvine, California

### Role of Microglia in Alzheimer's and in Abeta and Tau Immunotherapy

New Investigator Research Grant—\$100,000 over two years How are microglia involved in the development of plaques and tangles, and how can they help the immune system combat these protein aggregates?

# Daniel C. Lee, Ph.D.

University of South Florida Tampa, Florida *Impact of Arginase-1 Deficiency on Tau and Amyloid Pathogenesis* Mentored New Investigator Research Grant to Promote

Diversity—\$149,774 over two years What is the role of the glial cell arginase-1 in the formation of amyloid plaques and neurofibrillary tangles?

### Other disease-related molecules and pathways

### David W. Colby, Ph.D.

University of Delaware

Newark, Delaware

### Generation of Diverse Neural Culture Models of Alzheimer's Disease by Cell Reprogramming

New Investigator Research Grant—\$100,000 over two years Which exact set of transcription factors is required to produce basal forebrain cholinergic neuron, and can engineered cells exhibit the abnormalities characteristic of Alzheimer's?

### Andrew Sharp, Ph.D.

Mount Sinai School of Medicine New York, New York **DNA Methylation Profiling of Alzheimer's Disease Brains** New Investigator Research Grant—\$98,670 over two years What specific genes and genetic regions are abnormally methylated in Alzheimer's?

### Disruption of brain cell functions/properties

### Robia Pautler, Ph.D.

Baylor College of Medicine Houston, Texas

### The Impact of Catalase Overexpression on Alzheimer's Pathology

Investigator-Initiated Research Grant—\$200,000 over three years

Do increased levels of catalase in nerve cells of the brain prevent the development of Alzheimer's-like disease characteristics

### Helen E. Scharfman, Ph.D.

Nathan S. Kline Institute for Psychiatric Research Orangeburg, New York *Circuit-Based Strategies in Alzheimer's Disease and Epilepsy* Neuronal Hyperexcitability in Seizures and Alzheimer's Disease

Research Grant--\$339,956 over three years Can anticonvulsant drugs reduce or prevent hyperexcitability that precedes neurodegeneration in the perforant path and hippocampus?

### Neal Sondheimer, M.D., Ph.D.

The Children's Hospital of Philadelphia Philadelphia, Pennsylvania *Alzheimer's Disease and the Destabilization of the* 

*Mitochondrial Genome* New Investigator Research Grant—\$99,549 over two years Are changes in mitochondrial DNA responsible for initiating Alzheimer's disease?

### Saeid Taheri, Ph.D.

Medical University of South Carolina Charleston, South Carolina Monitoring Effect of Hypertension on the BBB in APP Mice Model of Alzheimer's Disease

New Investigator Research Grant—\$99,988 over two years What are the effects of high blood pressure on the blood brain barrier and how does it affect the development of Alzheimer'slike disease in the brain?

### Synaptic dysfunction

### Mikako Sakurai, Ph.D

Columbia University

New York, New York

# Functional Analysis of Neurons Derived From Alzheimer's Patient iPSCs

New Investigator Research Grant—\$100,000 over two years What role does excitotoxicity play in dementia-related synaptic decline?