

## **Gopal Thinakaran, Ph.D.**

Professor, Department of Molecular Medicine  
Associate Director of Research, Neuroscience Institute  
Associate Dean for Neuroscience Research  
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[Pubmed Link](#)

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[www.thinakaranlab.org](http://www.thinakaranlab.org)

For over twenty years I have been directing an active and highly collaborative research group investigating cellular and molecular mechanisms of Alzheimer's disease pathogenesis. Our goal is to gain insights from cutting-edge cell biology investigations and translate our discoveries to advance therapeutic strategies that can reduce cerebral amyloid burden and mitigate cognitive deficits in Alzheimer's disease. A primary focus of our research is the neuronal mechanisms responsible for amyloid pathology and Alzheimer's disease-related axonal transport defects. Here, we study APP metabolism, neuronal trafficking of APP and BACE1, and axonal transport dysfunction. The second focus of our research is to characterize the biological pathways and pathogenic mechanisms regulated by the second most common late-onset Alzheimer's disease risk factor, BIN1. Recently, we began to investigate molecular mechanisms underlying the interaction of amylin with A $\beta$  pathology in order to explore the molecular link between type-2 diabetes and AD. My group uses an integrated approach that combines hypothesis-driven mutagenesis, biochemical and pathological characterization, detailed subcellular localization, advanced live-cell imaging, superresolution microscopy, electrophysiology, and mouse behavior analysis to accomplish our goals. Cultured primary hippocampal neurons and oligodendrocytes, established cell lines, transgenic mice, and conditional knockout mice serve as experimental models in our investigation. We have made significant contributions to the Alzheimer's disease field and have been quite successful in terms of our funding and publications (142 publications; ~12,700 times cited; h-index 54). More importantly, I have been fortunate to mentor several post-doctoral fellows and students. Many have moved on to successful careers in academic research and medicine. Over the years, I have gained substantial administrative and leadership experience by serving on key Committees within the University of Chicago Biological Sciences Division, and by participation in several Federal, Private, and Public Advisory Committees.

### **Academic Career**

1992 – 1995	Postdoctoral Fellow, Department of Pathology, The Johns Hopkins University School of Medicine
1995 – 1996	Research Associate, Division of Neuropathology, JHU SOM
1996 – 1997	Instructor, Department of Pathology, JHU SOM
1997 – 1999	Assistant Professor, Department of Pathology, The Johns Hopkins University School of Medicine

1999 – 2002	Assistant Professor, Department of Neurobiology, Pharmacology and Physiology, The University of Chicago
2003 – 2010	Associate Professor, Departments of Neurobiology, Neurology, and Pathology, The University of Chicago
2010 – 2019	Professor, Departments of Neurobiology, Neurology, and Pathology, The University of Chicago
Aug 2019 –	Professor, Department of Molecular Medicine, USF Health Morsani College of Medicine, The University of South Florida Associate Director of Research, Neuroscience Institute Associate Dean for Neuroscience Research

## EDUCATION

B.Sc. 1982 – 1985	Madurai Kamaraj University, Madurai, INDIA
M.Sc. 1985 – 1987	Biotechnology, Madurai Kamaraj University, Madurai, INDIA
Ph.D. 1988 – 1992	Molecular Biology and Genetics, University of Guelph, Guelph, Ontario, CANADA

## HONORS AND AWARDS

1985	National Merit Scholarship, India
1985 – 1987	Ministry of Biotechnology Graduate Fellowship, India
1993 – 1996	Post-doctoral Fellowship, The Adler Foundation
2001	Ruth Salta Junior Investigator Achievement Award (American Health Assistance Foundation)
2002	Zenith Fellows Award (Alzheimer's Association)
2008	<i>Plenary Lecture</i> at the 11 <sup>th</sup> International Conference on Alzheimer's Disease and Related Disorders

## MEMBERSHIPS ON FEDERAL & PRIVATE PUBLIC ADVISORY COMMITTEES

### Professional Societies and Organizations

1994 – present	Member, the Society for Neuroscience
2008 & 2009	Member of the International Conference on Alzheimer's Disease Scientific Program Committee
2014 – 2016	Ambassador, Public Policy and Advocacy, Alzheimer's Association, Greater Illinois Chapter

### Scientific Advisory Boards

2010 – present	External Scientific Advisory Committee, The Johns Hopkins Alzheimer's Disease Research Center
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**National Institute of Health (CSR) Review Panels**

1999, 2000, 2003, 2006	<i>Ad hoc</i> member of the National Institutes of Health, Center for
2008, 2009, 2011, 2015 - present	Scientific Review (MDCN, CDIN, BDCN, ZRG1 AARR, TRA, ZAG1, NIA Program Project grants)
2011 – 2017	Permanent Member of NIH CSR - Chronic Dysfunction and Integrative Neurodegeneration (CDIN) Study Section

**Review Boards of Alzheimer's Disease Research Centers (ADRC)**

2004	<i>Ad hoc</i> Reviewer of Pilot applications, Washington University Alzheimer's Disease Research Center
2008, 2010 – present	<i>Ad hoc</i> Reviewer of Pilot and Project grants, The Johns Hopkins Alzheimer's Disease Research Center
2014 – present	<i>Ad hoc</i> Reviewer of Pilot and Project grants, University of California, San Diego Alzheimer's Disease Research Center

**Review Boards of Foundations - International**

1999 – present	Reviewer for Medical Research Council (MRC), Neurosciences Program, London, <u>U.K.</u>
2008 – present	<i>Ad hoc</i> Reviewer for Stichting voor Alzheimer Onderzoek - Fondation pour la Recherche sur la Maladie D'Alzheimer, <u>Belgium</u>
2009 – present	Italian Telethon Foundation, <u>Italy</u> , External Reviewer
2010 – present	Reviewer, National Medical Research Council, <u>Singapore</u>
2011	<i>Ad hoc</i> Reviewer Neurological Foundation of <u>New Zealand</u>
2012	Reviewer, L'Agence Nationale de la Recherche, <u>France</u>
2013	Reviewer, Swiss National Science Foundation, <u>Switzerland</u>
2014	Site Visit Review Panel, Methusalem Research Program at Katholieke Universiteit Leuven, <u>Belgium</u>
2014	<i>Ad hoc</i> Reviewer, Austrian Science Fund, <u>Austria</u>
2014 – present	<i>Ad hoc</i> Reviewer, Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO, <u>Belgium</u>
2015	<i>Ad hoc</i> Reviewer, European funding for Alzheimer's diseases - AFI ( <u>Germany</u> ) / ISAO ( <u>The Netherlands</u> ) / LECMA ( <u>France</u> )

**Review Boards of Foundations - Domestic**

1999 – present	Member of the Initial Review Board of the Medical and Scientific Advisory council, Alzheimer's Association
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2006, 2009 – present	Scientific Review Committee member, BrightFocus Foundation (formerly American Health Assistance Foundation), Alzheimer's Disease Research
2006	<i>Ad hoc</i> Reviewer for Larry L. Hillblom Foundation research grants
2008	<i>Ad hoc</i> Reviewer National Science Foundation

### **Journal editorial board**

2001 – 2006, 2008 – 2013	Editorial Board of the <i>Journal of Biological Chemistry</i>
2008	<i>Co-editor of JBC Thematic Minireview Series</i> on The molecular basis of Alzheimer disease
2003 – present	Editorial Board of <i>Neurodegenerative Diseases</i>
2006 – 2010	Editorial Board of <i>Molecular Neurodegeneration</i>
2010 – present	Review Editor of <i>Frontiers in Alzheimer's Disease</i>
2010 – present	Editorial Advisory Board <i>Current Alzheimer Research</i>
2011 – present	Associate Editor <i>Molecular Neurodegeneration</i>
2018 – present	Associate Editor <i>Genes and Diseases</i>

### **UNIVERSITY OF CHICAGO DIVISION OF BIOLOGICAL SCIENCES LEADERSHIP**

2005 – 2014	<b>Chair</b> , Institutional Biosafety Committee (IBC)
2010 – 2015	<b>Co-chair</b> , Committee on Reappointment of Assistant Professors
2012 – 2015	Biological Sciences Division Faculty Advisory Committee elected member

### **DIVISIONAL ACTIVITIES**

2003 – 2004	Department of Psychiatry Chair search committee
2008 – 2009	Neurology faculty search committee
2001 – 2005	Member of the Institutional Biosafety Committee
2006 – present	Integrated Microscopy Faculty Advisory Committee
2007 – present	<i>Ex officio</i> Member, Select Agent Institutional Biosafety Committee
2007, '08, '09	<i>Ad hoc</i> reviewer, Committee on Appointments and Promotions (COAP)
2008 – 2010	Member, Committee on Reappointment of Assistant Professors (COROAP)
2012 – present	UC IBC DURC (Dual Use Research of Concern) Task Force member
2012 – present	BSD Undergraduate Student Honors Faculty Council
2012 – 2015	BSD Graduate Program Review Committee
2012 – 2017	Institute for Translational Medicine, <i>Clinical and Translational Science Awards</i> Scientific Advisory Panel

**DEPARTMENTAL ACTIVITIES**

1999 – 2000	Pharmacology faculty search committee
2000 – 2001	Neurobiology faculty search committee
2002	Physiology faculty search committee
2009 – 2010	Neurology faculty search committee

**GRADUATE STUDENT COMMITTEE ACTIVITIES**

1999 & 2000	Annual NPP cluster retreat planning committee
2000, '01, '03, '10	NPP Cluster Student Admissions Committee
2005 – 2008	Subcommittee on Graduate Students, Committee on Neurobiology
2006, 2007	Organizer, Committee on Cell Physiology Seminar Series
2008 – 2011	Curriculum Review Committee for Committee on Neurobiology
2012	Chair, Neuroscience Cluster Student Admissions Committee
2015 –	Medical Scientist Training Program / Interdisciplinary Scientist Training Program Curriculum Committee
2017 – present	Member, Neuroscience Cluster Student Admissions Committee

**RESEARCH FELLOW SUPERVISION****Past Trainees**

- 1998 - 2000 Dr. Carlos A. Saura, Ph.D. (University of Barcelona, Barcelona, Spain). Professor, Department of Biochemistry and Molecular Biology, Institut de Neurociències, Universitat Autònoma de Barcelona, Barcelona, SPAIN.
- 1999 - 2001 Dr. Naoyuki Sato, M.D., Ph.D. (Osaka University Medical School, Osaka, Japan). Chair of the Department, Molecular Basis of Dementia, National Center for Geriatrics and Gerontology, Aichi, Japan.
- 1999 - 2003 Dr. Jae-Yoon Leem, Ph.D. (University of Tokyo, Japan). Dr. Leem is presently an Assistant Professor at Woosuk University, Jeonbuk, Korea.
- 2000 - 2002 Dr. Shrijay Vijayan, Ph.D. Associate Director, Office of Research Affairs, Rush University Medical Center, Chicago.
- 2001 - 2004 Dr. LaShaunda King, Ph.D. (University of Illinois in Chicago). Section Head - Beauty Technology Development, Procter & Gamble.
- 2001 - 2005 Dr. Daisuke Ito, M.D., Ph.D. (Keio University School of Medicine, Japan). Associate Professor, Department of Neurology, Keio University School of Medicine, Japan.
- 2003 - 2006 Dr. Li Liu, Ph.D. (University of Kuopio, Finland). Dr. Liu is presently a Research Associate at the New York University School of Medicine.
- 2006 - 2007 Dr. Jun Shi, MD. Ph.D. (Third Military Medical University, China). Presently a research Associate, Northwestern University Feinberg School of Medicine, Chicago.
- 2003 - 2008 Dr. Haipeng Cheng, Ph.D. (Fudan University, Shanghai, China). Presently a biomedical consultant for investment bankers.
- 2006 - 2010 Dr. Xavier Meckler, Ph.D. (University Victor Segalen Bordeaux 2, Bordeaux, France). Presently a Research Fellow at Institut de Pharmacologie Moléculaire et Cellulaire, INSERM, Valbonne, France.
- 2005 - 2011 Dr. Ping Gong, Ph.D. (Illinois State University, Normal, IL). Presently a Senior Research Associate at Baylor College of Medicine.
- 2009 - 2012 Dr. Nobumasa Takasugi, Ph.D. (University of Tokyo, Japan); recipient of research fellowships from Japan Foundation of Aging and Health and the Uehara Memorial Foundation. Presently an Associate Professor in Graduate School of Medicine, Okayama University, Okayama, Japan.
- 2002 - 2014 Dr. Vetrivel Subramaniam, Ph.D. (Madurai Kamaraj University, Madurai, India). Recipient of an Alzheimer's Disease Research Fund of Illinois Department of Public Health fellowship, Abbott Post-doctoral Fellowship, and New Investigator Awards from the Alzheimer's Association. Presently Technical Evaluator Scientist, FoodChainID.
- 2009 - 2015 Dr. Virginie Buggia-Prévot, Ph.D. (Institute of Molecular and Cellular Pharmacology CNRS/UNSA, France). Recipient of an Alzheimer's Disease

Research Fund of Illinois Department of Public Health fellowship, and BrightFocus Foundation Fellowship. Best Poster Award, Brain Research Foundation Chicago 14th Annual Neuroscience Day, January 2014. Presently Research Scientist Head, Neuroscience Target Discovery and Validation at MD Anderson Belfer Neurodegeneration Consortium, Dallas, TX.

2014 - 2018 Dr. Pierre De Rossi, Ph.D. (Lyon Neuroscience Research Center, University Claude Bernard Lyon1, Lyon, France).

**Recipient of:** Alzheimer's Disease Research Fund of Illinois Department of Public Health fellowship, Alzheimer's Association Research Grant Award, BrightFocus Foundation Fellowship Award.

2016 - 2019 Robert Andrew, Ph.D. (University of Manchester, Manchester, UK). Best Poster Award, Brain Research Foundation 17th Annual Neuroscience Day, April 2017.

**Recipient of:** Alzheimer's Disease Research Fund of Illinois Department of Public Health fellowship.

### Current Trainees

2018 - Ponnusamy Moorthi, Ph.D. (Bharathidasan University, Tiruchirappalli, India).

2018 - Nan Xia, Ph.D. (Thomas Jefferson University, Philadelphia).

2018 - Shuai Wong, Ph.D. (Shanghai Jiao Tong University, Shanghai, China).

2018 - Melike Yuksel, Ph.D. (Hacettepe University, Ankara, Turkey).

**Recipient of:** TUBITAK ((Turkish Scientific Research Council) fellowship.

2019 - Ari Sudwarts, Ph.D. (Queen Mary, University of London, London, UK).

2020 Daniel Moreira, Ph.D. (Federal University of ABC, Sao Bernardo do Campo, BRAZIL; University of Coimbra, Coimbra, PORTUGAL)

## TEACHING AND STUDENT SUPERVISION

### Graduate Student Supervision

2001 - 2006 Jim Bowen, Ph.D. Committee on Neurobiology.

- Graduate Student Poster Award – Brain Research Foundation Chicago 5th Annual Neuroscience Day, December 2005

2007 - 2011 Will Zeiger, MD. Ph.D. Committee on Molecular Medicine.

- Graduate Student Poster Award – Brain Research Foundation Chicago 8th Annual Neuroscience Day, December 2008
- Best Overall Talk – Molecular Biosciences Cluster Retreat – April 2008
- Best Pathology Department Teaching Assistant – 2007-2008

- Ruth L. Kirschstein National Research Service Award – 2010-2013
- The Leon O. Jacobson Basic Science Prize for the Most Meritorious Basic Science Research performed by an MD PhD student, 2013

- 2010 - 2015 Celia G. Fernandez, Ph.D. Committee on Neurobiology
- Graduate Student Poster Award – Brain Research Foundation Chicago 13th Annual Neuroscience Day, January 2013
  - Recipient of an Alzheimer's Disease Research Fund of Illinois Department of Public Health fellowship
  - Graduate Student Poster Award – Brain Research Foundation Chicago 14th Annual Neuroscience Day, January 2014
- 2012 - 2015 Margaret Lefkow, M.S. Committee on Neurobiology
- 2020 - Joe McMillan, Ph.D. Graduate Student, University of South Florida

### **International Graduate Student Internship**

- May 2010 – Sept 2010 Adele Drihem, B.Sc., Candidate for Masters program in Bioengineering, Ecole Nationale Supérieure de Physique de Strasbourg, The University of Strasbourg, France
- Jan 2011 – Aug 2011 Auréliane Elie, B.Sc., Candidate for Masters program Engineer in Biotechnology, Ecole Supérieure de Biotechnologie de Strasbourg, France
- Jul 2012 – Sept 2012 Emeline M. Francois, B.Sc., Candidate for Masters program Engineer in Biotechnology, EBI Ecole, Cergy-Pontoise, France
- June 2013 – July 2013 Sophie-Clémentine Schweitzer, B.Sc., Candidate for Masters program Engineer in Biotechnology, EBI Ecole, Cergy-Pontoise, France
- Apr 2014 – June 2014 Alexandra Botté, B.Sc., Candidate for Masters program Biologie Intégrative et Physiologie, Université Pierre et Marie Curie, Paris, France
- July 2015 - Aug 2015 Amenys Bentabak, B.Sc., Candidate for Masters program Engineer in Biotechnology, EBI Ecole, Cergy-Pontoise, France.
- Aug 2015 - Jan 2016 Marie Poirot, B.Sc., Candidate for Masters program Biological Engineering, French National Higher Engineering School of Agronomy, Agrocampus-Ouest, Rennes, France.
- Jan 2016 - June 2016 Someya Salem, B.Sc., Candidate for Master's Degree Integrative Biology, specialization in Neuroscience, Université Pierre et Marie Curie, Paris, France



Sept 2016 - Jan 2017	Valentine de l'Estoile, B.Sc., Candidate for Masters program Biological Engineering, French National Higher Engineering School of Agronomy, Agrocampus-Ouest, Rennes, France.
Jan 2017 - June 2017	Tess Valin, B.Sc., Candidate for Masters program in Biology, Ecole Normale Supérieure de Lyon, Lyon, France.
May 2017 – Aug 2017	Andrea Isasi, B.Sc, Candidate for Masters Degree in Health and Biology, Université de Bordeaux, Bordeaux, France.
Sept 2017 – Jan 2018	Thomas Guerbette, B.Sc, Candidate for Masters degree in Biological Engineering, Agrocampus-Ouest, Rennes, France.
Sept 2017 – Jan 2018	Thomas LeMetayer, B.Sc, Candidate for Masters degree in Biological Engineering, Agrocampus-Ouest, Rennes, France.
Sept 2018 – Jan 2019	Juliette Salvi, B.SC, Candidate for Masters degree in Biological Engineering, Agrocampus-Ouest, Rennes, France.

### **Student Thesis Committees**

#### **Past**

Birgitte B. Simen, Department of Neurobiology, Pharmacology and Physiology  
Christian P. Wanamaker, Committee on Neurobiology  
Ryan Mastro, Committee on Neurobiology  
Laura Satkamp, Committee on Biochemistry and Molecular Biology  
Jen Lanning, Molecular Pathogenesis and Molecular Medicine  
Jim Knabb, Committee on Cancer Biology  
Se Hoon Choi, Committee on Neurobiology  
Constanza Cortes R, Committee on Cell Physiology  
Adam White, Department of Anatomy and Cell Biology, University of Illinois at Chicago  
Adam Cole, Molecular Pathogenesis and Molecular Medicine  
Eric Lin, Committee on Cell Physiology  
Margaret Distler, Molecular Pathogenesis and Molecular Medicine  
Katherine Hekman, Molecular Pathogenesis and Molecular Medicine  
Erin Mullarkey, Committee on Neurobiology  
Nancy Long Bartolotti, Dept. of Anatomy and Cell Biology University of Illinois at Chicago  
Alexander R. French, Graduate Program in Biophysical Sciences  
Gabriel Salzman, MD. Ph.D. candidate, Graduate Program in Biophysical Sciences  
Mary Rogers, Committee on Genetics, Genomics & Systems Biology

#### **Current**

Katherine Leon, Department of Biochemistry and Molecular Biology  
Eshaan Rao, Committee on Neurobiology  
Jay Pittman, Department of Biochemistry and Molecular Biology

Huan Xu, Committee on Neurobiology

### Undergraduate Student Training

Lia M. Spitzer, The Johns Hopkins University  
 Aash Bhat, Kalamazoo College (completed MD, Wayne State Univ SOM)  
 Nathapong Arunakul, The University of Chicago (completed MD, The University of Kansas)  
 Nicole Speed, University of Albany (Graduate student, Vanderbilt University)  
 Gina Monoco, Princeton University (MD. Ph.D. student, Loyola Univ. SOM)  
 Erin McQuinn, Vassar College (Research Technologist, Northwestern)  
 Sungho Lee, The University of Chicago (MD. Ph.D. student, Case Western)  
 Priyanka Kumar, The University of Chicago (MD student, University of Chicago)  
 Lima Lawrence, The University of Chicago (Alternate medicine MD program, Poland)  
 Elizabeth Weidman, The University of Chicago  
 Alexander Zook University of South Florida, The University of Chicago  
 Gang Huang, The University of Chicago  
 Yabtsega Moges, The University of Chicago  
 Joshua S. Wahlstrom, Kalamazoo College  
 Anne Clark-Raymond, The University of Chicago  
 Charles Guo, The University of Chicago  
 Yuwen Wu, The University of Chicago  
 Katherine Jacobsen, The University of Chicago  
 Carol Swetlik, The University of Chicago (2009 – 2011)  
 Shuvani Sanyal, The University of Chicago (Summer 2009)  
 Richmond Chua, The University of Chicago (Summer / Fall 2009)  
 Joel Saeedi, The University of Chicago (Summer/Fall 2010)  
 Divya (Mona) Achan, Concordia University (Summer / Fall 2010)  
 Helena Yu, The University of Chicago (Summer 2010)  
 Stephanie Avalos-Bock, The University of Chicago (Summer / Fall 2010)  
 Rachel A. Bishop, Brown University (2010 Summer funded by NIH neuroscience program)  
 Sonja Perl, The University of Chicago (Summer 2010)  
 Taha Ezzyat, The University of Chicago (Summer 2010)  
 Michael Miller, The University of Chicago (Summer 2011)  
 Chenab Navalkha, The University of Chicago (Summer 2011)  
 Ashley Green, The University of Chicago (Fall 2011 – Winter 2013)  
 Magdalena D. Ivanova, The University of Chicago (Summer 2012)  
 Kyle Michelson, The University of Chicago (Summer 2012–Winter 2013)  
 Christie Auyeung, The University of Chicago (Summer 2012– Spring 2013)

Nicholas Hernandez, University of South Florida (Summer 2012, 2013) The Leadership Alliance Summer Research Early Identification Program

Isabelle Boni, The University of Chicago (Winter 2012– 2013)

Debria S. Joe, Xavier University of Louisiana in New Orleans, Louisiana (Summer 2012)  
The Leadership Alliance Summer Research Early Identification Program

Shelly Thai, The Univ. of Chicago (Summer 2011 – 2013)

Ruben Lesnick, The Univ. of Chicago (Summer 2013 – Spring 2015)

Joshua Saucedo, The Univ. of Chicago (Summer 2013 – Fall 2015)

Michael Billips, The Univ. of Chicago (Fall 2013 - 2014)

Elizabeth K Woo, The Univ. of Chicago (Winter 2014 – Winter 2017) BSCD Fellow (2015)  
Katen Scholar (2016). Yale University MD. Ph.D. program

Bianca I. Demara, University of Arizona (Summer 2014) The Leadership Alliance Summer Research Early Identification Program

Rachel Wittenberg, The Univ. of Chicago (Winter 2015 - Fall 2015)

Elle Rathbun, The Univ. of Chicago (Spring 2015 - 2018)  
Honors Thesis / Neuroscience Honors Fellowship (Summer 2017)

Raza Lamb, The Univ. of Chicago (Summer 2016 - 2017)

Emilie Allaert, University of California Davis (Summer 2017)

Arnau Argemi Gonzalez, The Univ. of Chicago (Winter 2016 - 2018)

Pedro Del Cioppo Vasques, The Univ. of Chicago (Spring 2016 - present) Volunteer  
Neuroscience Research Internship (Summer 2017)

Aleks Recupero, The Univ. of Chicago (Winter 2017 - present) Honors candidate / BSCD  
Fellow (Summer 2017)

Haley Kowalski, The Univ. of Chicago (Fall 2017 - 2019) Honors Thesis

Martin Krause, The Univ. of Chicago (Fall 2017 – Spring 2018) Volunteer

Sofia Yunez, The Univ. of Chicago (Fall 2017 – Winter 2019) Volunteer

Jessica Psahoulas, The Univ. of Chicago (Winter 2018 - present) Honors candidate

### **High School Student Training**

Ruchi Aggarwal, Illinois Math and Science Academy, Aurora, IL (Summer 2010)

Mehal Shah, Illinois Math and Science Academy, Aurora, IL (Summer 2010)

Eleanor Kang, Choate Rosemary Hall, Wallingford, CT (Summer 2012)

Sammer Marzouk, The University of Chicago Lab School, IL (Fall 2016 – present)

**CLASSROOM TEACHING (till Aug 2019)**

- Winter      NURB 32100: *Cell and Molecular Biology of the Neuron*  
Graduate course - Committee on Neurobiology  
**Course director:** Gopal Thinakaran  
30 contact hours (Lectures on various topics)
- Winter      MPMM 30600: *Signal Transduction and Diseases*  
6 contact hours. Lectures on signaling in neurodegenerative diseases  
Course director: Nickolai Dulin
- Winter      Biomedical Sciences Cluster AllStars course  
1 contact hour. Lecture on Alzheimer's Disease
- Spring      BIOS 25126: *Animal Models of Human Disease* (undergraduate course)  
1 contact hour. Lecture on Alzheimer's Disease  
Course director: Kerith Luchins

**CURRENTLY ACTIVE SUPPORT**NATIONAL INSTITUTES OF HEALTH

RF1AG054223-01

"Cell autonomous and non-cell autonomous roles of the GWAS risk factor BIN1 in Alzheimer's disease neuropathology"

Principal Investigator: Gopal Thinakaran

Inclusive dates: 08/15/2016 - 06/30/2021

The goal of this application is to investigate the role of the adaptor protein BIN1 in the context of late onset Alzheimer's disease pathogenesis, using postmortem human samples and in transgenic mouse models for amyloidosis and tauopathy.

Funding: Direct costs: \$ 1,858,530 over 5 years

NATIONAL INSTITUTES OF HEALTH

1R01AG057290

" Programming amylin secretion to slow brain aging - an animal model"

Multiple PIs: Florin Despa (Univ of Kentucky) and Gopal Thinakaran

Inclusive dates: 09/15/2017 - 08/31/2022

The overarching goal of this proposal is to test our hypothesis that amylin dyshomeostasis in pancreatic islets and subsequent secretion of oligomerized amylin in the blood can affect the progression of AD and investigate molecular mechanisms underlying the interaction of amylin with A $\beta$  pathology.

Funding: Subaward Total Direct Costs: \$ 1,234,695 over 5 years

NATIONAL INSTITUTES OF HEALTH

RF1AG056061-01

"The role of elevated BIN1 expression in Alzheimer's disease"

Principal Investigator: Gopal Thinakaran

Inclusive dates: 03/01/2018 - 02/28/2023

The goal of this application is to develop novel insights into the elevated expression of BIN1 observed in patients with AD, and use BIN1 transgenic mice to test the contribution of the increased BIN1 levels to AD-related neuropathology and behavior abnormalities.

Funding: Direct costs: \$ 2,499,671 over 5 years

NATIONAL INSTITUTES OF HEALTH

RO1 AG056061

MPIs: Jubao Duan (NorthShore University HealthSystem) and Thinakaran

"Modeling Alzheimer's disease genetic variants in hiPSC"

Inclusive dates: 05/01/19 – 2/29/24

The goal of this proposal is to systematically identify functional noncoding Alzheimer's disease GWAS risk variants that affect chromatin accessibility and gene expression in order to characterize their functional effects on cellular phenotypes of isogenic hiPSC models.

Funding: Subaward Direct costs \$557,285 over 5 years

NATIONAL INSTITUTES OF HEALTH

1R01AG048793-01

“Alzheimer's Brain-Seeded Abeta Fibrils”

PI - Meredith (Thinakaran role: consultant)

Inclusive dates: 9/15/15 – 4/30/20

The goal of this proposal is to use solid-state NMR and other biophysical techniques to examine replicate fibrils made from seeding isotopically labeled  $\beta$ -amyloid solutions with Alzheimer Disease (human and mouse model) amyloid.

**COMPLETED RESEARCH SUPPORT**

(PI: Gopal Thinakaran, unless indicated otherwise)

**Federal grants**NATIONAL INSTITUTES OF HEALTH

5R01AG019070-011

3/15/2001 – 06/30/2017

Amyloidogenic processing of APP

Funding: Years 1-5 (2001-2006) Direct costs: \$1,125,000 over 5 years

Years 6-10 (2006-2011) Direct costs: \$987,326 over 5 years

Years 11-15 (2011-2016) Direct costs: \$1,103,125 over 5 years

NATIONAL INSTITUTES OF HEALTH

1R21AG051230-01

08/15/2015 – 05/31/2017

Regulation of BACE1 transcytosis in hippocampal neurons

Funding: Direct costs \$275,000

NATIONAL INSTITUTES OF HEALTH

1S10OD010649-01

06/14/2012 – 06/15/2013

“Multi-purpose Superresolution Microscope for Core Facility”

Funding: Total direct costs: \$510,596

NATIONAL INSTITUTES OF HEALTH

2R01AG021495

05/01/02 – 02/28/13

“Cell Biology of Presenilin 1 and Associated Proteins

Funding: Years 1-5 (2002-2007) Direct costs: \$1,115,848 over 5 years

Years 6-10 (2008-2013) Direct costs: \$1,104,999 over 5 years

NATIONAL INSTITUTES OF HEALTH

1R01NS055223

12/01/07 – 11/30/12

“Presenilins and cell adhesion molecules”

Principal Investigator: Angèle Parent; Role Co-investigator

Funding: Total direct costs: \$1,093,750 over 5 years

NATIONAL INSTITUTES OF HEALTH

1R21NS053853

03/01/06 – 2/29/08

"Mouse model for neuroprotection"

Funding: Total direct costs: \$243,585

**Foundation grants (completed support)****ALZHEIMER'S ASSOCIATION***In vivo* investigation of BIN1 as a risk factor in Tau pathology

On behalf of Dr. Pierre De Rossi

3/1/17 – 02/28/20

Direct costs \$159,091 over 3 years

**BRIGHTFOCUS FOUNDATION**

Investigation of BIN1 as a risk factor in Tau pathology in an inducible transgenic model

On behalf of Dr. Pierre De Rossi

7/1/17 – 06/30/19

Direct costs \$100,000 over 2 years

**CURE ALZHEIMER'S FUND**

BIN1 in Alzheimer's disease neuropathology

10/1/15 - 09/30/18

Direct costs \$300,000 over 3 years

**ILLINOIS DEPARTMENT OF PUBLIC HEALTH**

Role of BIN1 in Tau propagation

6/1/17 – 05/30/18

Direct costs \$35,000 On behalf of Dr. Robert Andrew

**BRIGHTFOCUS FOUNDATION**

7/1/14 – 03/30/17

Role of EHD proteins in Alzheimer's disease pathogenesis

Total Direct costs \$120,000 On behalf of Dr. Virginie Buggia-Prévot

**NATIONAL MULTIPLE SCLEROSIS SOCIETY ILLINOIS LOTTERY GRANT**

Deciphering the Role of BIN1 in Multiple Sclerosis

10/1/15 - 9/30/16

Total Direct costs \$100,000

**ILLINOIS DEPARTMENT OF PUBLIC HEALTH**

7/1/15 – 6/31/16

Synaptic Activity Regulation of Alzheimer's Disease Beta-Secretase

On behalf of Dr. Pierre De Rossi

Total Direct costs \$30,000

**ILLINOIS DEPARTMENT OF PUBLIC HEALTH**

7/1/14 – 6/30/15

Dysfunction of EHD family proteins in Alzheimer's disease

On behalf of Dr. Virginie Buggia-Prévot

Total Direct costs \$30,000

**CURE ALZHEIMER'S FUND**

9/01/12 – 12/31/14

"BACE1 transcytosis in Alzheimer's disease pathogenesis"

Total direct costs: \$ 200,000

**ALZHEIMER'S ASSOCIATION**

1/5/12 – 12/31/14

"Proteomic analysis of  $\gamma$ -secretase residing raft domains"

Total direct costs: \$100,000 On behalf of Dr. Kulandaivelu S. Vetrivel

**ILLINOIS DEPARTMENT OF PUBLIC HEALTH**

7/1/11 – 6/30/12

Illuminating BACE1 Trafficking in Hippocampal Neurons

Total direct costs: \$ 29,945	On behalf of Dr. V. Buggia-Prévot
AMERICAN HEALTH ASSISTANCE FOUNDATION	04/01/09 – 03/31/12
“Microdomain localization and trafficking of BACE1”	
Total direct costs: \$400,000	
ALZHEIMER’S ASSOCIATION	08/01/08 – 07/31/11
“Altering microdomain localization of $\gamma$ -secretase in transgenic mice”	
Total direct costs: \$240,000	
ALZHEIMER’S ASSOCIATION	1/5/08 – 12/31/10
"Exploring $\beta$ -secretase activity in Lipid Raft Microdomains"	
Total direct costs: \$100,000	On behalf of Dr. Kulandaivelu S. Vetrivel
ALZHEIMER’S ASSOCIATION	1/5/05 – 12/31/07
“The mechanisms of raft association and A $\beta$ production by PS1/ $\gamma$ -secretase”	
Total direct costs: \$240,000	
ALZHEIMER’S ASSOCIATION	1/5/05 – 12/31/07
"Exploring $\gamma$ -Secretase Function in Lipid Raft Membrane Microdomains"	
Total direct costs: \$100,000	On behalf of Dr. Kulandaivelu S. Vetrivel
AMERICAN HEALTH ASSISTANCE FOUNDATION	4/1/04 – 3/31/06
"Nicastrin Palmitoylation and Biology of Gamma Secretase"	
Total direct costs: \$300,000	
ILLINOIS DEPARTMENT OF PUBLIC HEALTH	7/1/04 – 6/30/05
“The Role of Alzheimer’s Disease Associated Presenilin in Synaptic Structure and Function”	
Total direct costs: \$ 35,000	On behalf of Dr. Li Liu
ILLINOIS DEPARTMENT OF PUBLIC HEALTH	7/1/04 – 6/30/05
“The Mechanism and Role of Lipid Raft Association/Residence of PS1/ $\gamma$ -secretase Complex in APP processing”	
Total direct costs: \$ 35,000	On behalf of Dr. Kulandaivelu S Vetrivel
ALZHEIMER’S ASSOCIATION	7/1/02 – 6/30/04
“The role of presenilins in membrane protein biogenesis, assembly and trafficking”	
Total direct costs: \$ 250,000	
AMERICAN HEALTH ASSISTANCE FOUNDATION	4/1/01 – 3/31/03
"PS1-Nicastrin interaction and role in trafficking"	
Total direct costs: \$ 200,000	
ALZHEIMER’S ASSOCIATION	7/1/99 – 6/30/02



- “Modulation of  $\beta$ -amyloid production by Presenilins: domains and signaling pathways”  
Total direct costs: \$180,000
- ADLER FOUNDATION 6/1/01 – 5/30/02  
“The role of Presenilin 1 in membrane protein trafficking”  
Total direct costs: \$ 35,000
- BRAIN RESEARCH FOUNDATION, The University of Chicago 7/1/00 – 6/30/02  
“Cell Biology of familial early-onset Alzheimer’s disease”  
Total direct costs: \$ 50,000
- ADLER FOUNDATION 6/1/00 – 5/30/01  
“Analysis of Presenilin Transmembrane Domains”  
Total direct costs: \$35,000
- LOUIS BLOCK FUND FOR BASIC RESEARCH AND ADVANCED STUDY  
The University of Chicago 7/1/00 – 6/30/01  
“A role for NF- $\kappa$ B in Alzheimer’s disease  $\beta$ -amyloid production”  
Total direct costs: \$25,000
- HOWARD HUGHES MEDICAL INSTITUTE 7/7/99 – 6/30/00  
The University of Chicago’s Division of Biological Sciences under the Research Resource  
Program for Medical Schools of the Howard Hughes Medical Institute  
Total direct costs: \$15,000
- LOUIS BLOCK FUND FOR BASIC RESEARCH AND ADVANCED STUDY  
The University of Chicago 7/1/99 – 6/30/00  
“Expression Profiles of Multiple Genes in Models of Familial Alzheimer’s Disease”  
Total direct costs: \$24,836
- ADLER FOUNDATION 6/1/99 – 5/30/00;  
“PS1 Structure and Function: the Role of Hydrophilic “Loop” Domain”  
Total direct costs: \$30,000
- BRAIN RESEARCH FOUNDATION The University of Chicago 3/1/99 – 2/28/00  
“Differential gene expression in experimental models of Alzheimer’s disease”  
Total direct costs: \$14,000
- ADLER FOUNDATION 6/1/98 – 5/30/99  
“Differential Gene Expression in Models of Alzheimer’s Disease”  
Total direct costs: \$25,000
- INSTITUTIONAL RESEARCH GRANT 7/1/98 – 2/28/99  
The Johns Hopkins University School of Medicine  
“Differential gene expression in experimental models of Alzheimer’s disease”  
Total direct costs: \$15,000



**INVITED LECTURES (International conferences/lectures are in bold)**

- 1994 - U.S. Food & Drug Administration, Center for Biologics Evaluation & Research, Bethesda, MD.  
Douglas Hospital Research Center, **Univ. of Montréal**, Montréal, Canada.
- 1996 - 35<sup>th</sup> American College of Neuropsychopharmacology annual meeting, San Juan, Puerto Rico.
- 1997 - The Adler Foundation Symposium, The Salk Institute, La Jolla, CA.  
Keystone Symposia on Molecular and Cellular Biology, Tamarron, CO.  
Molecular Pathology Seminar Series, The Johns Hopkins University School of Medicine, Baltimore, MD.
- 1998 - **Center of Excellence Symposium**, Tokyo, Japan.  
Department of Pharmacology, University of Tokyo, Tokyo, Japan.  
**Eisai Tsukuba Research Laboratories**, Ibaraki, Japan.  
**RIKEN Brain Science Institute**, Saitama, Japan.  
New York Academy of Sciences, Sections of Neuroscience and Biomedical Sciences, New York, NY.  
**6<sup>th</sup> International Conference on Alzheimer's Disease and Related Disorders**, Amsterdam, The Netherlands.
- 1999 - Keystone Symposium on Molecular Mechanisms in Alzheimer's Disease, Taos, NM.  
**IBC's 8<sup>th</sup> Annual Alzheimer's Disease conference**, Boston, MA.  
**International Symposium on Dementia**, Kobe, Japan.
- 2000 - The Kennedy Research Center, The University of Chicago, Chicago, IL.  
Department of Molecular Cell Biology and Neuroscience, Rockefeller University, New York, NY.  
**The 7<sup>th</sup> International Conference on Alzheimer's Disease and Related Disorders**, Washington, DC.  
**Sankyo, Co., Ltd.** Lead Discovery Research Laboratories, Tokyo, Japan.  
**Center of Excellence Symposium on Alzheimer's Disease**, Tokyo, Japan.  
Keynote Speaker, Queenstown Molecular Biology Conference, Queenstown, New Zealand.
- 2001 - Molecular Pathology Seminar Series, The Johns Hopkins University School of Medicine, Baltimore, MD.  
Neuroscience Chapter of Chicago Annual Meeting, Chicago, IL.

- 2002 - Neurodegenerative Seminar Series, Center for Neurodegenerative Disease, Emory University School of Medicine, Atlanta, GA.  
Neurolunch Seminars, Dept of Biology, University of Southern California, Los Angeles, CA.  
Laura Chalk Lectures in Aging, **McGill Center for Studies in Aging**, Montréal, Canada.  
The Diseases of Aging Program Seminar Series, **Ottawa Health Research Institute**, Ottawa, Canada.  
**The 8<sup>th</sup> International Conference on Alzheimer's Disease and Related Disorders, Stockholm, Sweden.**  
Faber Institute for Neuroscience Research Seminar Series, Thomas Jefferson University, Philadelphia, PA.  
Seminar series, Department of Biomedical Sciences and the Neuroscience graduate program, Iowa State University, Ames, IA.  
Neurology Research Seminar Series, Washington University School of Medicine, St. Louis, MO.
- 2003 - “Basic and Applied Biology Relevant to Neurodegeneration”, Harvard Institutes of Medicine, Boston, MA.  
**The third EIBSEE meeting of the priority program** – cellular mechanisms of Alzheimer’s disease sponsored by the Deutsche Forschungsgemeinschaft, Eibsee, Germany.  
Graduate Student Seminar Series, Department of Pathobiology, University of Tennessee, Knoxville, TN.  
Neurogenetics, Inc. San Diego, CA.  
Molecular Biology and Genetics Seminar Series, **The University of Guelph**, Guelph, Canada.  
Alzheimer’s Disease Seminar Series, Northwestern University, Chicago, IL.
- 2004 - Program in Neuroscience Seminar Series, University of Massachusetts Medical School, Worcester, MA.  
Brain Research Foundation Seminar Series, University of Chicago, Chicago, IL.  
Molecular Cell Sciences program, Finch UHS/Chicago Medical Sch, Chicago, IL.  
Society for Neuroscience Minisymposium on *Regulation of Alzheimer’s disease Amyloidogenesis*, San Diego, CA.
- 2005 - Conference on Inclusion-Body Myositis (s-IBM): Frontiers of Research Potentially Relevant to Treatment, Los Angeles, CA.  
Biology of Aging seminar series, Baylor College of Medicine, Houston, TX.  
Neuroscience Institute Seminar Series, University of Tennessee Health Science, Memphis, TN.  
Chicago Neural Repair Club, Northwestern University, Chicago, IL.

- Annual meeting of the American Society for Neurochemistry symposium “*Progress on the molecular pathogenesis of hereditary neurodegenerative disorders*”, Madison, Wisconsin, WI.  
Department of Pathology, The University of Chicago, IL.
- 2006 - The Kennedy Research Center, The University of Chicago, Chicago, IL.  
Keystone Symposium on Lipid Rafts and Cell Function, Steamboat Springs, CO.  
Department of Pharmacal Sciences, Auburn University, Auburn, AL.  
New York Academy of Sciences 23rd Biochemical Pharmacology Discussion Group  
*Alzheimer’s Disease Symposium*, New York, NY.  
Department of Neurosciences, Lerner Research Institute, Cleveland Clinic, Cleveland, OH.  
American Neurological Association, 131<sup>st</sup> Annual Meeting, Symposium -  
*Neurobiology of Dementia*, Chicago, IL.
- 2007 - **2007 Indo-American Frontiers of Science Symposium - Stress in Neurodegeneration**, Irvine, CA.  
Department of Anatomy and Cell Biology Seminar series, University of Illinois at Chicago, Chicago, IL.  
Invited speaker at the Working Group Discussion on *The Cell Biology of Alzheimer’s Disease* at the 47th Annual Meeting of the American Society for Cell Biology in Washington, DC. Other participants: Kai Simons, Bill Balch, and Lennart Mucke.
- 2008 - AD Seminar Series, Northwestern University Feinberg School of Medicine, Chicago, IL, February 28, 2008.  
Invited speaker at the 2008 Keystone Symposium on *Alzheimer’s Disease*, Keystone, CO, March 24-29, 2008.  
Plenary Lecture “*Presenilins*” at the **11<sup>th</sup> International Conference on Alzheimer’s Disease and Related Disorders**, Chicago.
- 2009 - 40th Annual meeting of the American Society for Neurochemistry, Symposium - *Raft Conundrum: The role of Membrane Microdomains in the Cell Biology of Neural Cells*, Charleston, SC.  
**2009 International Conference on Molecular Neurodegeneration**, Symposium - *APP Processing:  $\beta$ - and  $\gamma$ -Secretases*, Xiamen, China.  
**22<sup>nd</sup> Biennial Joint Meeting of the International Society for Neurochemistry and the Asian Pacific Society for Neurochemistry**, Symposium - *Role(s) of lipid rafts in dementia*, Busan, Korea.  
Society for Neuroscience Nanosymposium on *Beta Secretase Function and Metabolism*, Chicago, IL.  
Neurodegenerative Diseases Series, University of Michigan, Ann Arbor, MI.

- 2010 - Department of Chemistry, University Of Miami, Miami, FL.  
Invited Symposium speaker at the **4th ISN Special Neurochemistry Conference**, *Membrane domains in CNS physiology and pathology*, Erice, Italy, May 22-26, 2010.  
Joint Neurology / Neuroscience Grand Rounds, University of Florida, Gainesville, FL, September 28, 2010.  
Molecular Pathology Seminar Series, The Johns Hopkins University School of Medicine, Baltimore, MD, October 20, 2010.  
Department of Biology seminar series, University of Iowa, Iowa City, IA, November 5, 2010.  
**XLVI Annual Meeting of Argentine Society for Research in Biochemistry and Molecular Biology**, “*Cell Biology - amyloidosis, protein misfolding diseases and hypoxia*” Symposium, Puerto Madryn, Argentina, November 30 - December 3, 2010.
- 2011 - Chicago Society for Neuroscience Chapter meeting, Symposium on Alzheimer’s disease, DePaul University, Lincoln Park Campus, Chicago, IL, March 24, 2011.  
Cell and Molecular Biology Departmental Seminar Series, Northwestern University Feinberg School of Medicine, Chicago, IL, March 29, 2011.  
Neuroscience Research Seminar, Amgen Inc., San Francisco, CA, April 7, 2011  
Department of Neuroscience, Mayo Clinic College of Medicine, Jacksonville, FL, April 26, 2011.  
**Second International Conference on Molecular Neurodegeneration**, Symposium speaker, Shanghai, China, September 22-24, 2011.  
41st annual meeting of the Society for Neuroscience meeting Nanosymposium on *Beta and Gamma Secretase, BACE, and Presenilin*, Washington, DC.
- 2012 - Annual Retreat of the Neuroscience Graduate Programs, The University of Chicago, Lake Geneva, WI, September 13-14, 2012.  
Neurology Grand Rounds, The University of Chicago, October 11, 2012.
- 2013 - Department of Neuroscience Seminar Series, UTMB School of Medicine, Galveston, TX, April 24, 2013.  
2013 FASEB SRC on Protein Lipidation, Signaling, and Membrane Domains, to be held on July 14 - 19, 2013 Saxtons River, Vermont, U.S.A.  
**2013 International Conference on Molecular Neurodegeneration**, Cannes, France, September 10-12, 2013.  
Division of Psychiatry Research, **University of Zurich**, Switzerland, October 3, 2013.  
**Kloster Seeon Meeting on BACE Proteases in Health and Disease**, Kloster Seeon, Bavaria, Germany, October 6-8, 2013.

- Department of Chemistry Seminar Series, Purdue University, West Lafayette, IN, October 25, 2013.
- Department of Pharmacology Seminar Series, Wayne State University School of Medicine, Detroit, MI, November 22, 2013.
- 2014 - The National Institute for Environmental Health Sciences (NIEHS) Center at The University of Texas Medical Branch (UTMB), Galveston, TX, March 31, 2014.
- Department of Pathology and Cell Biology, Columbia University, New York, NY, April 21, 2014.
- Department of Microbiology and Immunology, Albert Einstein College of Medicine, New York, NY, April 22, 2014.
- Pathobiology of Disease Seminar Series, Department of Pathology, The University of Chicago, Chicago, September 11, 2014.
- 14th Eibsee-Meeting "Cellular Mechanisms of Neurodegeneration"** Eibsee, Germany, November 5-7, 2014.
- 44th annual meeting of the Society for Neuroscience, Chair and Speaker - Minisymposium: Trafficking dysfunction in neurodegenerative diseases, Washington, DC, November 15-19, 2014.
- 2015 - Department of Neuroscience at Genentech, San Francisco, CA, April 21, 2015.
- Department of Medicinal Chemistry and Molecular Pharmacology, Purdue University, West Lafayette, IN, June 22, 2015.
- Fidelity Biosciences Research Initiative Alzheimer's Disease Workshop, Cape Cod, August 4 & 5, 2015.
- Quadri-Institutional Alzheimer Disease Research Seminar Series (sponsored jointly by The Rockefeller University, Weill Cornell Medical College, Memorial Sloan-Kettering Cancer Center and Icahn School of Medicine at Mount Sinai), November 17, 2015.
- 2016 - **EMBO Workshop: Actualizations in membrane trafficking in health and disease**, La Serena, Chile, September 4-9, 2016.
- Department of Neurology, Washington University School of Medicine, St. Louis, MO, September 19, 2016.
- 2nd Kloster Seeon Meeting on BACE Proteases in Health and Disease**, in Kloster Seeon, Bavaria, Germany, September 25-27, 2016.
- Departments of Medical & Molecular Genetics and Psychiatry, Indiana University School of Medicine, Indianapolis, IN, October 19, 2016.
- 2017 - Department of Neurology, Northwestern University Feinberg School of Medicine, Chicago, IL, February 17, 2017.
- USF Health Byrd Neuroscience Institute, Morsani College of Medicine, University of South Florida, Tampa, FL, May 9, 2017.

- Department of Neuroscience, Rosalind Franklin University of Medicine and Science, Chicago, IL, October 24, 2017.
- 2018 - **Winter Conference on Neural Plasticity.** Endosomal trafficking in the pathogenesis of Alzheimer's disease. Curacao, Netherlands Antilles, Caribbean. January 27 - February 2, 2018.
- Alzheimer's Center, Lewis Katz School of Medicine at Temple University, March 2, 2018.
- Lerner Research Institute, Dept of Neurosciences, Cleveland Clinic, Cleveland, OH. May 21, 2018.
- Fourth International Genes & Diseases Symposium.** Alzheimer's disease: from genes to disease mechanisms. Chongqing, China, October 25, 2018.
- 2019 - Lake Forest College Neuroscience Program. Alzheimer's disease: from genes to disease mechanisms. Chicago, IL. February 11, 2019.
- University of Rochester, Del Monte Institute for Neuroscience and Department of Neuroscience. Rochester, NY. February 28, 2019.
- Department of Physiology and Medicine, **National University of Singapore, Singapore.** April 29, 2019.
- USF Health Neuroscience Institute, Morsani College of Medicine, University of South Florida, Tampa, FL, September 5, 2019.
- Alzheimer's Disease Research Center and center for Neurodegenerative Disease Seminar Series, Emory University, Atlanta, GA. November 14, 2019.
- 2020 - **6th International Conference on Molecular Neurodegeneration (ICMN2020).** Glial and Vascular Contributions to Neurodegenerative Diseases. Bangkok, Thailand, May 21-23, 2020



**BIBLIOGRAPHY (in reverse chronologic order)****Current h-index 54, >12,700 times cited (Web of Science)****Original Peer Reviewed Articles**

102. De Rossi P, Nomura T, Andrew RJ, Masse NY, Sampathkumar V, Musial TF, Sudwarts A, Aleksandra J Recupero<sup>1</sup>, Thomas Le Metayer<sup>1</sup>, Hansen MT, Ha-Na Shim H-N, Sofia V Krause SV, Freedman DJ, Vytas P Bindokas VP, Narayanan Kasthuri N, Nicholson DA, Contractor A, Thinakaran G: Neuronal BIN1 regulates presynaptic neurotransmitter release and memory consolidation. *Cell Reports*, in press.
101. Zerweck J, Venkata BS, Pittman JM, Srivastava AK, Moore PC, Sachleben JR, Thinakaran G, and Meredith SC: A versatile method for producing labeled or unlabeled A $\beta$ 55, A $\beta$ 40, and other  $\beta$ -amyloid family peptides. *Protein Expr Purif.* 2019 162:72-82. doi: 10.1016/j.pep.2019.04.006.
100. Deyts C, Clutter M, Pierce N, Chakrabarty P, Ladd TB, Goddi A, Rosario AM, Cruz P, Vetrivel K, Wagner SL, Thinakaran G, Golde TE, and Parent AT: Membrane Targeted APP Intracellular Domain Preserves Memory in Alzheimer's Disease Mouse Models. *Cell Reports*, 2019. 27(5):1345-1355.e6. doi: 10.1016/j.celrep.2019.03.087.
99. Andrew RJ, De Rossi P, Nguyen P, Kowalski HR, Recupero AJ, Guerbette T, Krause SV, Rice RC, Laury-Kleintop L, Wagner SL, and Thinakaran G: Reduction of late-onset Alzheimer's disease risk-factor *BIN1* expression does not affect amyloid pathology in a mouse model of Alzheimer's disease. *J. Biol. Chem.* 2019. 294(12):4477-4487.
98. De Rossi P, Andrew RJ, Musial TF, Buggia-Prevot V, Xu G, Ponnusamy M, Ly H, Krause SV, Rice RC, de l'Estoile V, Valin T, Salem S, Despa F, Borchelt DR, Bindokas VP, Nicholson DA, and Thinakaran G: Aberrant accrual of BIN1 near Alzheimer's disease amyloid deposits in transgenic models. *Brain Pathology*, 2018. doi: 10.1111/bpa.12687.
97. Cui J, Zhang W, Huang E, Wang J, Liao J, Li R, Yu X, Zhao C, Zeng Z, Shu Y, Zhang R, Yan S, Lei J, Yang C, Wu K, Wu Y, Huang S, Ji X, Li A, Gong C, Yuan C, Linghuan Zhang L, Liu W, Huang B, Feng Y, An L, Zhang B, Dai Z, Yi Shen Y, Wenping Luo W, Wang X, Huang A, Luu HH, Reid RR, Wolf JM, Thinakaran G, Lee MJ, and He T-C: BMP9-induced osteoblastic differentiation requires functional Notch signaling in mesenchymal stem cells. *Laboratory Investigation*, 2018 doi: 10.1038/s41374-018-0087-7.
96. Chung JY, Phukan G, Vergote D, Mohamed A, Maulik M, Stahn M, Andrew R, Thinakaran G, Posse de Chaves EI, and Kar S: Endosomal-lysosomal Cholesterol Sequestration by U18666A Differentially Regulates APP Metabolism in Normal and APP Overexpressing Cells. *Mol Cell Biol.* 2018. 38(11). pii: e00529-17.
95. Andrew RJ, Fernandez CG, Stanley M, Jiang H, Nguyen P, Rice RC, Buggia-Prévot V, De Rossi P, Vetrivel KS, Lamb R, Argemi A, Allaert ES, Rathbun EM, Krause SV, Wagner SL, Parent AT, Holtzman DM, and Thinakaran G: Lack of BACE1 S-palmitoylation reduces amyloid burden and mitigates memory deficits in transgenic mouse models of Alzheimer's disease. *Proc. Natl. Acad. Sci. USA.* 2017. 114(45):E9665-E9674.

94. Maulik M, Vergote D, Phukan G, Chung J, Thinakaran G, and Kar S: The effects of extracellular serum concentration on APP processing in Npc1-deficient-APP overexpressing N2a cells. *Mol. Neurobiol.* 2017 Oct 19. doi: 10.1007/s12035-017-0799-5.
93. De Rossi P, Buggia-Prévoit V, Andrew RJ, Krause SV, Woo E, Nelson PT, Pytel P, and Thinakaran G: BIN1 localization is distinct from Tau tangles in Alzheimer's disease. *Matters*, 2017. 10.19185/matters.201611000018.
92. De Rossi P, Buggia-Prévoit V, Clayton BLL, Vasquez JB, van Sanford C, Andrew RJ, Lesnick R, Botté A, Deyts C, Salem S, Rao E, Rice RC, Parent A, Kar S, Popko B, Pytel P, Estus S, and Thinakaran G: Predominant expression of Alzheimer's disease-associated BIN1 in mature oligodendrocytes and localization to white matter tracts. *Mol. Neurodegener.* 2016, 11:59. DOI 10.1186/s13024-016-0124-1.
91. Sadleir KR, Kandalepas PC, Buggia-Prévoit V, Nicholson DA, Thinakaran G, and Vassar R: Presynaptic dystrophic neurites surrounding amyloid plaques are sites of microtubule disruption, BACE1 elevation, and increased A $\beta$  generation in Alzheimer's disease. *Acta Neuropathol.* 132: 235-256, 2016.
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- Hardy J, Thinakaran G and Rajendran L: A paired RNAi and RabGAP overexpression screen identifies Rab11 as a regulator of  $\beta$ -amyloid production. *Cell Reports* 5: 1536–1551, 2013.
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