Gopal Thinakaran, Ph.D.

Professor, Department of Molecular Medicine
CEO Byrd Alzheimer's Center and Research Institute
Associate Dean for Neuroscience Research
USF Health Morsani College of Medicine
4001 E. Fletcher Ave | ALZ504
Tampa, FL 33613

Phone: (813) 974-9214 Email: thinakaran@usf.edu

Pubmed Link Google scholar Link www.thinakaranlab.org

For over twenty-five years, I have directed an active and highly collaborative research group investigating mechanisms regulating Alzheimer's disease (AD) pathogenesis and neuronal dysfunction. After twenty years at the University of Chicago, I moved to the University of South Florida three years ago to become the Associate Dean of Neuroscience Research and the CEO of the Byrd Alzheimer's Center and Research Institute. Our research aims to gain insights from cutting-edge cell biology investigations and translate our discoveries to advance therapeutic strategies that can reduce the cerebral amyloid burden and mitigate cognitive deficits in AD. My lab has made outstanding contributions to our understanding of amyloid precursor protein trafficking and the biology of BACE1 and γ-secretase, the two enzymes that sequentially cleave APP to generate Aβ. In the past several years, we have characterized late-onset AD risk factors identified by GWAS efforts using cell-type-specific conditional knock-out and transgenic mice. Recently, we published key findings on the characterization of BIN1 as a risk factor in AD pathophysiology and microglial BIN1 function in neuroinflammation. Our study describing BIN1 regulation of region-specific tau pathogenesis and neurodegeneration in the PS19 model highlights BIN1's role in promoting hippocampal tau pathophysiology. My lab uses an integrated approach that combines molecular neuropathology analyses, biochemical characterization, detailed subcellular localization, advanced microscopy and live-cell imaging, RNAseq and spatial transcriptomics, electrophysiology, and behavioral tests to accomplish our goals. Cultured primary hippocampal neurons, microglia, oligodendrocytes, established cell lines, hiPSC lines, transgenic mice, and conditional knock-out mice serve as experimental models in our investigation. We have made significant contributions to the AD field and have been quite successful in terms of our funding and publications (154 publications; >16,342 times cited; h-index 60). More importantly, I have been fortunate to mentor over 25 post-doctoral fellows and graduate students. Many have moved on to establish 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 and USF Morsani College of Medicine and participating in several Federal, Private, and Public Advisory Committees.

Academic Career

1992 – 1995	Post-doctoral 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 – present	Professor, Department of Molecular Medicine, USF Health Morsani College of Medicine, The University of South Florida
Aug 2019 – Dec 2020	Associate Director of Research, Neuroscience Institute
Aug 2019 – present	Associate Dean for Neuroscience Research
Jan 2021 – present	CEO Byrd Alzheimer's Center and Research Institute
Sept 2022 – Aug 2023	Interim Director of Center of Excellence for Aging and Brain Repair (CEABR)

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	*Plenary Lecture* at the 11th International Conference on Alzheimer's Disease and Related Disorders
2023	John Trojanowski Memorial Award (Coins for Alzheimer's Research Trust)
2023	Outstanding Research Achievement Award, University of South Florida

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
2022 – present	Member, International Society for Molecular Neurodegeneration

Scientific Advisory Board

2010 – present	External Scientific Advisory Committee, The Johns Hopkins Alzheimer's Disease Research Center

Board of Directors

2022 – present	Board of Directors, Asha Therapeutics

National Institute of Health (CSR) Review Panels

1999, 2000, 2003, 2006, 2009, 2011, 2015 – present	*Ad hoc* member of the National Institutes of Health, Center 2008, for Scientific Review (MDCN, CDIN, BDCN, ZRG1 AARR, TRA, ZRG1, BN, F03A, and 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	*Ad hoc* Reviewer of Pilot applications, Washington University Alzheimer's Disease Research Center
2008, 2010 – present	*Ad hoc* Reviewer of Pilot and Project grants, The Johns Hopkins Alzheimer's Disease Research Center
2014 – present	*Ad hoc* Reviewer of Pilot and Project grants, University of California, San Diego Alzheimer's Disease Research Center
2020	*Ad hoc* Reviewer of Developmental Projects, University of Florida, 1Florida Alzheimer's Disease Research Center

Review Boards of Foundations - International

1999 – present	Reviewer for Medical Research Council (MRC), Neurosciences Program, London, U.K.
2008 – present	*Ad hoc* Reviewer for Stichting voor Alzheimer Onderzoek - Fondation pour la Recherche sur la Maladie D'Alzheimer, Belgium

2009 – present	Italian Telethon Foundation, Italy, External Reviewer
2010 – present	Reviewer, National Medical Research Council, Singapore
2011	*Ad hoc* Reviewer Neurological Foundation of New Zealand
2012	Reviewer, L'Agence Nationale de la Recherche, France
2013	Reviewer, Swiss National Science Foundation, Switzerland
2014	Site Visit Review Panel, Methusalem Research Program at Katholieke Universiteit Leuven, Belgium
2014	*Ad hoc* Reviewer, Austrian Science Fund, Austria
2014 – present	*Ad hoc* Reviewer, Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO, Belgium
2015	*Ad hoc* Reviewer, European funding for Alzheimer's diseases - AFI (Germany) / ISAO (The Netherlands) / LECMA (France)

Review Boards of Foundations - Domestic

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

Journal editorial board

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

UNIVERSITY OF CHICAGO DIVISION OF BIOLOGICAL SCIENCES LEADERSHIP

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

DIVISIONAL ACTIVITIES (UofC)

2003 – 2004	Department of Psychiatry Chair search committee
2008 – 2009	Neurology faculty search committee
2001 – 2005	Member of the Institutional Biosafety Committee
2006 – 2019	Integrated Microscopy Faculty Advisory Committee
2007 – 2019	*Ex officio* Member, Select Agent Institutional Biosafety Committee
2007, ’08, ’09	*Ad hoc* reviewer, Committee on Appointments and Promotions (COAP)
2008 – 2010	Member, Committee on Reappointment of Assistant Professors (COROAP)
2012 – 2019	UC IBC DURC (Dual Use Research of Concern) Task Force member
2012 – 2019	BSD Undergraduate Student Honors Faculty Council
2012 – 2015	BSD Graduate Program Review Committee
2012 – 2017	Institute for Translational Medicine, *Clinical and Translational Science Awards* Scientific Advisory Panel

DEPARTMENTAL ACTIVITIES (UofC)

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 (UofC)

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 – 2019	Medical Scientist Training Program / Interdisciplinary Scientist Training Program Curriculum Committee
2017 – 2019	Member, Neuroscience Cluster Student Admissions Committee

UNIVERSITY OF SOUTH FLORIDA MORSANI COLLEGE OF MEDICINE

2019 – present Chair, NSI / Byrd Faculty Recruitment Committee

2020 Research Strategic Planning Committee

2020 USF-Moffitt Joint Research and Education Initiatives, Steering Committee

2022 Financial Oversight Committee, MCOM (October 1, 2022 – June 30, 2025)

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). Professor and Chair, Department of Aging Neurobiology, 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. (City University of New York Graduate Center, New York). Currently, Director of Innovation and Technology Commercialization, Hospital for Special Surgery, 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). Professor, Department of Neurology, Keio University School of Medicine, Japan.

2003 - 2006 Dr. Li Liu, M.D. Ph.D. (University of Eastern Finland, Finland). Dr. Liu is presently a Neurologist at Wellstar Neurology, Woodstock, GA.

2006 - 2007 Dr. Jun Shi, MD. Ph.D. (Third Military Medical University, China). Presently a Researcher at Sparx Biopharmaceutical Corp, Hindsdale, IL.

2003 - 2008 Dr. Haipeng Cheng, Ph.D. (Fudan University, Shanghai, China). Presently a Senior Investment Director at Sangel Capital, Chicago.

2006 - 2010 Dr. Xavier Meckler, Ph.D. (University Victor Segalen Bordeaux 2, Bordeaux, France). Presently a Design Developer at Relyens, Orléans, 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, Deerfield, IL.

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 Director, Head of Neurology Discovery at Valo, Boston.

2014 - 2018 Dr. Pierre De Rossi, Ph.D. (Lyon Neuroscience Research Center, University Claude Bernard Lyon1, Lyon, France).
Recipient of an Alzheimer's Disease Research Fund of Illinois Department of Public Health fellowship, Alzheimer's Association Research Fellowhsip Award, and BrightFocus Foundation Fellowship Award. Presently Director of Preclinical Research at Carthera, a medtech company based in France.

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. Presently Competitive Intelligence Manager at AMGEN.

2018 - 2019 Nan Xia, Ph.D. (Thomas Jefferson University, Philadelphia). Presently Associate Business Development Manager at Shanghai Hengrui Medicine Co., Ltd. Shanghai, China

2021 - 2022 Pravin V. Marathe, Ph.D. (Tata Memorial Centre- Advanced Centre for Treatment Research and Education in Cancer, Mumbai, INDIA)

2020 - 2024 Daniel Moreira, Ph.D. (Federal University of ABC, Sao Bernardo do Campo, Brazil; University of Coimbra, Coimbra, Portugal)
Recipient of: Alzheimer's Association Research Fellowship Award

Current Trainees

2018 - Moorthi Ponnusamy, Ph.D. (Bharathidasan University, Tiruchirappalli, India).
Recipient of: Alzheimer's Association Research Fellowship Award

2018 - Shuai Wang, 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.
- The Morsani College of Medicine Outstanding Post-Doctoral Scholar Research award – 2021 USF Health Research Day
- Best Talk – 2021 USF Post-doctoral Research Symposium

2019 - Ari Sudwarts, Ph.D. (Queen Mary, University of London, London, UK).
Recipient of: BrightFocus Foundation Fellowship Award
- USF Health award for Outstanding Oral Presentation – 2023 USF Health Research Day

2024 Chanchal Sharma, Ph.D. (Daegu University, Daegu, South Korea)

TEACHING AND STUDENT SUPERVISION

Graduate Student Supervision

2001 - 2006 James W. Bowen, Ph.D. Committee on Neurobiology.
- Graduate Student Poster Award – Brain Research Foundation Chicago 5th Annual Neuroscience Day, December 2005

2007 - 2011 William 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

2019 - Joseph McMillan, Graduate Student, University of South Florida
- 2022 Dorothy Benjamin Graduate Fellowships in Alzheimer's Disease
- 2023 Ruth L. Kirschstein National Research Service Award (NRSA) Individual Predoctoral Fellowship

2020 - Danielle Blazier, Graduate Student, University of South Florida

2022 - Natasha Ram, MSTP Graduate Student, University of South Florida

2025 Krystin Marlin, 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.
Sept 2022 – Feb 2023	Alix Gonand, B.Sc., Candidate for Masters degree in Biological Engineering, Agrocampus-Ouest, Rennes, France.
Sept 2023 – Feb 2024	Elio Bobe, B.Sc., Candidate for Masters degree in Cellular and Molecular Biology, 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
Katherine Leon, Department of Biochemistry and Molecular Biology
Jay Pittman, Department of Biochemistry and Molecular Biology
Huan Xu, Committee on Neurobiology
Eshaan Rao, Committee on Neurobiology, University of Chicago

Current

Nikita Patel, Committee on Neuroscience, University of Chicago
Ilayda Ozsan, Program in Integrated Biomedical Sciences, USF MCOM
Karthick Mayilsamy, Program in Integrated Biomedical Sciences, USF MCOM
Niat Gebru, Program in Integrated Biomedical Sciences, USF MCOM
AbigailEsquivel, Program in Integrated Biomedical Sciences, USF MCOM
Jingsong Ruan, Program in Integrated Biomedical Sciences, USF MCOM (MPP)
Temitope Adeoye, Program in Applied Physics, USF College of Arts and Sciences

Undergraduate Student Training

Lia M. Spitzer, The Johns Hopkins University	
Aash Bhat, Kalamazoo College	(MD, Wayne State Univ SOM)
Nathapong Arunakul, The University of Chicago	(MD, The University of Kansas)
Nicole Speed, University of Albany	(Ph.D., Vanderbilt University)
Gina Monoco, Princeton University	(MD. Ph.D., Loyola Univ. SOM)
Erin McQuinn, Vassar College	(Research Technologist, Northwestern)
Sungho Lee, The University of Chicago	(MD. Ph.D., Case Western)
Priyanka Kumar, The University of Chicago	(MD, 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
/ NSci Honors Fellowship (Summer 2017)
– Neuroscience Ph.D. student at UCLA

Raza Lamb, The Univ. of Chicago (Summer 2016 - 2017) - Data Scientist - U.S. Census Bureau

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 – Spring 2019) Honor Scholar
MD/PhD at Mayo Clinic

Aleks Recupero, The Univ. of Chicago (Winter 2017 – Spring 2019) Honors Thesis
Columbia University, MD. Ph.D. program

Haley Kowalski, The Univ. of Chicago (Fall 2017 - 2019) Honors Thesis
NYU Grossman School of Medicine, MD program

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

Sofia Yunez, The Univ. of Chicago (Fall 2017 – Winter 2019) Volunteer
University of Illinois College of Medicine, MD program

Jessica Psahoulias, The Univ. of Chicago (Winter 2018 – Spring 2020) Honors Thesis
2020 Belgium Fulbright Scholar

Prema Kallepalli, USF Morsani College of Medicine (Fall 2020 – Fall 2021) BS/MD program

Sneha Geethakrishnan, University of California, Davis, May 2021 – July 2023

Vlada Skorobovenko, University of South Florida, Feb 2022 – Aug 2022

Ella Castellano, Emory University, Summer 2022

Om Patel, University of South Florida, July 2022 – present

Sreenidhi Nidamanur, University of South Florida, August 2022 – July 2023

Deeksha Sridher, University of South Florida, Feb 2023 – Dec 2024

Shivam Patel, University of South Florida, Feb 2023 – Oct 2023

Sandhya Ganesh, Johns Hopkins University, Summer 2023

Linh Nguyen, University of South Florida, April 2024 – present

Somanita Sem, University of South Florida, June 2024 – present

Lucia Anton del Rio, University of South Florida, November 2024 – present

High School Student Training

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

Mehal Shah, Ilinois 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 – Spring 2019)

Elise Bertolino, Tampa Preparatory School, Tampa (Summer 2023)

Casey Kittredge, Tampa Preparatory School, Tampa (Summer 2023)

CLASSROOM TEACHING

Spring	BCH6746: *Structural Biology* – Department of Molecular Medicine 1.5 contact hours. Protein misfolding and neurodegenerative diseases
Spring	BMS 6641: Medical Science - *Neurological System* – USF Health Morsani College of Medicine M.D. program. 1.5 contact hours. Learning and Memory
Spring	MSP3 neuroscience / GMS 6706 *Basic Medical Neurosciences* – Section III. 1.5 contact hours. Learning and Memory

CURRENTLY ACTIVE SUPPORT

NATIONAL INSTITUTES OF HEALTH RF1AG079141

"Microglial function of GWAS risk factor BIN1 in Alzheimer's disease pathogenesis and inflammatory signaling"
MPIs: Gopal Thinakaran and Srikant Rangaraju (Emory University)
Inclusive dates: 09/15/2022 - 08/31/2027
The goal of this application is to use cell-type-specific BIN1 conditional knock-out mice and cultured microglia to study how BIN1, an AD risk factor gene, influences amyloid and tau pathogenesis and neuroinflammatory signaling in the diseased brain.
Funding: Total costs: $2,250,452 for years 1-3 [years 4 and 5 pending $1.35 million]

NATIONAL INSTITUTES OF HEALTH RF1AG077610

"The role of Alzheimer's disease GWAS risk factor BIN1 in tau neuropathology and propagation *in vivo*"
Principal Investigator: Gopal Thinakaran
Inclusive dates: 06/01/2022 - 05/31/2027
The goal of this application is to use inducible and cell-type-specific BIN1 conditional knock-out mice to test BIN1's role in tau pathogenesis and pathology propagation *in vivo* and develop novel insights into the role of BIN1 as a late-onset AD risk factor.
Funding: Total costs: $2,174,618 for years 1-3 [years 4 and 5 pending $1.48 million]

Coins for Alzheimer's Research Trust

"Epitranscriptomic modulation of tau pathology through m^6A RNA methylation"
Principal Investigator: Gopal Thinakaran
Inclusive dates: 07/01/23 – 6/30/25
The goal of this proposal is to test the hypothesis that YTHDF1, a key m^6A reader, modulates cerebral tau burden and neuroinflammation, and to apply the enhanced CrossLinking ImmunoPrecipitation (eCLIP) workflow to identify to identify m^6A transcripts that directly bind to YTHDF1 during tau pathogenesis.
Funding: Total costs $250,000 over 2 years

F. Hoffmann-La Roche Ltd

Impact of *Bin1* reduction in mouse brain on Tau pathology *in vivo*
Principal Investigator: Gopal Thinakaran
Inclusive dates: 02/06/25 – 07/05/27
The objective of the study is to determine how a reduction in *Bin1* expression, simultaneously across cell types in the brain, influences tau pathology in the PS19 mouse model.
Funding: Total costs $604,495 over 2 years

NATIONAL INSTITUTES OF HEALTH R01NS073899

"The hsp90 Cochaperone FKBP51 Regulates tau Structure and Function"
Principal Investigator: Laura Blair; Thinakaran Role: PI
Inclusive dates: 03/01/2023 - 2/28/28
This proposal aims to validate FKBP51 as a target in tauopathy and explore the impact on neuropsychiatric symptoms.

Funding: Tota costs: $3,438,962

NATIONAL INSTITUTES OF HEALTH R21AA031559
"Chimera-BONCAT: A novel *in vivo* model for in-depth characterization of the human microglial response to alcohol"
Principal Investigator: Stanley Stevens Jr.; Thinakaran Role: PI
Inclusive dates: 06/01/2024 – 05/31/2026
This project will develop a novel chimeric animal model that utilizes the BONCAT approach for cell type-specific labeling and processing of human microglia for deep proteomic analysis.
Funding: Tota costs: $409,717

PENDING RESEARCH SUPPORT

NATIONAL INSTITUTES OF HEALTH R25AG086101
MPIs: Paula, Bickford, Bernard Batson, and Gopal Thinakaran
"USF Health Expanding Research in AD/ADRD Post-baccalaureate Research Education Program" Impact score: 28. Council met on April 22.
Inclusive dates: 04/01/25 – 3/31/30
The goal of this proposal is to establish the USF Health Expanding Research in AD/ADRD (ERA) Postbaccalaureate Research Education Program (PREP), which is committed to developing a diverse pool of postbaccalaureate students and fostering their transition to AD/ADRD research-focused doctoral degree programs to earn a PhD or MD/PhD.
Funding: Total costs $ 2,056,859 over 5 years.

NATIONAL INSTITUTES OF HEALTH R01AG096436
"Exploring the Role of Elevated Microglial BIN1 Expression in Alzheimer's Disease Pathophysiology" Scored at 11th percentile. (FY24 ADRD payline is at 17th percentile)
Principal Investigator: Gopal Thinakaran
Inclusive dates: 07/2025 – 06/2030
The proposed investigation will use mouse models to study how BIN1 influences amyloid and tau pathogenesis and microglial response in the diseased brain. We aim to develop novel insights into how BIN1 functions as a late-onset AD risk factor.
Funding: Total costs: $3,770,825 over 5 years.

NATIONAL INSTITUTES OF HEALTH RO1
"YTHDF1-Mediated Modulation of Alzheimer's Pathophysiology via m^{6}A Recognition"
Principal Investigator: Gopal Thinakaran
Inclusive dates: 12/2025 – 11/2030
Our investigation will use relevant disease models to study how YTHDF1, a reader protein that facilitates the translation of m6A-methylated RNA, influences amyloid pathogenesis and neuroinflammatory signaling in the diseased brain. Our goal is to develop novel insights into the role of YTHDF1-mediated epitranscriptomic gene expression in AD pathophysiology.
Funding: Total costs: $3,799,102

NATIONAL INSTITUTES OF HEALTH R01AG098150
"Artificial intelligence-accelerated drug discovery for TREAT-AD targets"
Principal Investigator: Haian Fu (Emory University); Thinakaran Role: MPI
Inclusive dates: 12/2025 – 11/2030
The proposed investigation will use transformative approaches, including artificial intelligence and machine learning, to accelerate drug discovery to enable de novo design of bioactive molecules with desirable drug-like properties, expediting the discovery of therapeutic candidates. The goals are to design and identify novel chemical probes for four TREAT-AD nominated targets, APOE4, BIN1, MDK and SFRP1.
Funding: Total costs: $6,862,120

NATIONAL INSTITUTES OF HEALTH R01NS138972-01A1
"Biorepository for Chronic Subdural Hematoma Treatment with Embolization Versus Surgery Study"
Principal Investigator: Peter Kan (UTMB); Thinakaran Role: MPI
Inclusive dates: 12/2025 – 11/2030
The overarching goal of this proposal is establish a BIO-CHESS (BIOrepository for Chronic Subdural Hematoma Treatment with Embolization Versus Surgery Study) repository to build on the framework and leverage the existing infrastructure of the recently NINDS-funded CHESS trial and perform digital spatial profiling to understand the mechanisms of cSDH formation and recurrence and ultimately identify new therapeutic targets.
Funding: Total costs: $3,855,64

COMPLETED RESEARCH SUPPORT

Federal grants

NATIONAL INSTITUTES OF HEALTH R01 AG061824 08/2019 - 03/24
APP-mediated signaling, sleep perturbations, and Alzheimer's disease mouse models
MPIs: Angele Parent (USF), David Gozal (UM); Thinakaran Role: PI
Funding: Total costs: $3,525,662

NATIONAL INSTITUTES OF HEALTH RO1 AG063175 05/01/19 – 2/29/24
MPIs: Jubao Duan (NorthShore University HealthSystem) and Thinakaran
Modeling Alzheimer's disease genetic variants in hiPSC
Funding: Subaward Total costs $812,520 over 5 years.

NATIONAL INSTITUTES OF HEALTH RF1AG056061-01 03/01/2018 - 02/28/2023
The role of elevated BIN1 expression in Alzheimer's disease
Funding: Direct costs: $ 2,499,671 over 5 years

NATIONAL INSTITUTES OF HEALTH RF1AG054223-01 08/15/2016 - 04/31/2022
Cell autonomous and non-cell autonomous roles of the GWAS risk factor BIN1 in Alzheimer's disease neuropathology
Funding: Direct costs: $ 1,858,530 over 5 years

NATIONAL INSTITUTES OF HEALTH 1S10OD030346-01 06/01/2021 - 05/31/2022
High-plex Protein and Gene Expression Digital Spatial Profiler for Core Facility
Funding: $ 450,000

NATIONAL INSTITUTES OF HEALTH 1R01AG057290 09/15/2017 - 04/30/2022
Programming amylin secretion to slow brain aging - an animal model
Multiple PIs: Florin Despa (Univ of Kentucky) and Gopal Thinakaran
Funding: Subaward Direct Costs: $ 1,234,695 over 5 years

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: $1,103125 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 1RO1NS055223 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 γ-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 γ-secretase in transgenic mice"
Total direct costs: $240,000

ALZHEIMER'S ASSOCIATION 1/5/08 – 12/31/10
"Exploring β-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 Aβ production by PS1/γ-secretase"
Total direct costs: $240,000

ALZHEIMER'S ASSOCIATION 1/5/05 – 12/31/07
"Exploring γ-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/γ-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 β-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-κB in Alzheimer's disease β-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 - 35th 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.

6th 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 8th 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 7th 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, **Ottowa Health Research Institute**, Ottawa, Canada.

The 8th 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, 131st 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 **11th 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: β- and γ-Secretases*, Xiamen, China.

22nd 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, Gainsville, 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.

14th International Conference on Alzheimer's & Parkinson's Diseases, Lisbon, Portugal, March 26-1, 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.

MCB Graduate Program Seminar, Brown University, Providence, RI, October 30, 2019.

Alzheimer's Disease Research Center and enter for Neurodegenerative Disease Seminar Series, Emory University, Atlanta, GA. November 14, 2019.

USF Health Leadership and Innovation Forum Tampa Bay - Healthcare Day, "Uniting to Unlock Mysteries of the Brain: the USF Health Neurosciences Institute", Thursday, December 5, 2019.

2020 - USF Genomics Seminar, College of Public Health, University of South Florida, Tampa, FL, October 6, 2020.

Grand Rounds, Department of Neurology, University of South Florida, Tampa, FL, October 23, 2020.

2021 - **2nd International Conference on Genome Biology** (ICGB-2), Madurai Kamaraj University, Madurai, INDIA, February 28 – March 2, 2021.

15th International Conference on Alzheimer's and Parkinson's Diseases: Mechanisms, Clinical Strategies and promising Treatments of Neurodegenerative Diseases. Virtual Conference, March 9 – 14, 2021.

Leadership Tampa Bay Healthcare Day, "Advances in Alzheimer's Disease Research", Thursday, May 6, 2021.

NSI Faculty Seminar Series, Byrd Alzheimer's Center, June 3, 2021.

2022 - USF Health Neuroscience Institute, Morsani College of Medicine, University of South Florida, Tampa, FL, September 8, 2022.

International Society for Molecular Neurodegeneration 2022 (ISMND2022). Glial and Vascular Contributions to Neurodegenerative Diseases. Athens, Greece, October 10-12, 2022.

2023 - **4th International conference on Genome Biology,** Madurai Kamaraj University, Madurai, INDIA, February 28, 2023.

Digital Spatial Genomics Symposium, University of South Florida, Tampa, FL, February 28, 2023.

USF Health The Leadership and Innovation Forum of Tampa (LIFT) Quarterly meeting, University Club, Tampa, FL, March 2, 2023.

Department of Pharmacology, Addiction Science, and Toxicology, University of Tennessee Health Science Center College of Medicine, Memphis, TN, March 22, 2023.

30th Annual Conference of the *American Society for Neural Therapy and Repair*, Clearwater, FL, April 27 - 30, 2023

24th Annual Board Meeting of the *Coins for Alzheimer's Research Trust* Fund, Greenville, SC, May 2, 2023.

Tampa Bay Chapter of BioFlorida meeting, Tampa, May 10, 2023.

Guest Speaker, Monthly meeting of Rotary Club of St. Petersburg, August 4, 2023.

SENDcon Southeastern Neurodegenerative Disease Conference, Atlanta, October10-12, 2023

2024 - Roche Pharma Research and Early Development group seminar, F. Hoffmann - La Roche Ltd, Switzerland, February 12, 2024.

Neurodegeneration Seminar, UC San Diego, Shiley-Marcos Alzheimer's Disease Research Center, San Diego, February 20, 2024.

Mini-symposium: Translational Research on Alzheimer's Disease and Brain Injury, Endeavor Health Research Institute, Evanston, May 10, 2024

Alzheimer's Association International Conference; Research Session: Unraveling the role of the GWAS risk factor BIN1 in Alzheimer's disease pathophysiology. Philadelphia, July 28, 2024.

5th International Genes & Diseases Symposium, Chongqing, China. Virtual talk on October 18, 2024.

6th Intl Symposium on Pathomechanisms of Amyloid Diseases, Tallahassee, December 4-6, 2024.

2025 - University of California Irvine, 2024-25 UCI MIND Seminar series, Jan 30, 2025.

19th International Conference on Alzheimer's & Parkinson's Diseases, **Vienna, Austria**, April 1-5, 2025.

3rd Targeting Therapy of Alzheimer's and Related Neurodegenerative Diseases Conference, Crete, 07 – 10 May 2025.

BIBLIOGRAPHY (in reverse chronologic order)
Current H-index 60, >16,342 times cited (Web of Science)

Manuscripts under review

McMillan JD, Wang S, Wohlfahrt J, Guergues J, Stevens SM Jr., and Thinakaran G: Proteomic characterization of the Alzheimer's disease risk factor BIN1 interactome. bioRxiv [Preprint] BIORXIV/2025/642169. 2025. Under revision in *Molecular and Cellular Proteomics*.

Karthivashan G, Wang S, Wu Q, Dahal A, Li X, Galleguillos D, Sipione S, Thinakaran G and Kar S: Native PLGA nanoparticles attenuate cognitive deficits and disease-associated pathological features in 5XFAD mouse model of AD.

Kozlova A, Siwei Zhang S, Sudwarts A, Zhang H, Smirnou S, Sun X, Stephenson K, Zhao X, Jamison B, Ponnusamy M, He X, Pang ZP, Sanders AR, Bellen HJ, Thinakaran G† and Duan J†: Alzheimer's disease risk allele of *PICALM* causes detrimental lipid droplets in microglia. Res Sq [Preprint]. 2024 May 24:rs.3.rs-4407146. doi: 10.21203/rs.3.rs-4407146/v1. Under revision in *Nature*.

Shi Z, Wen K, Zou Z, Fu W, Guo K, Sammudin NH, Ruan X, Sullere S, Wang S, Zhang X, Thinakaran G, He C, and Zhuang X: YTHDF1 mediates translational control by m^6A mRNA methylation in adaptation to environmental challenges. bioRxiv [Preprint]. 2024 Aug 9:2024.08.07.607063. doi: 10.1101/2024.08.07.607063. PMID: 39149343

Original Peer Reviewed Articles

112. Zhao X, Li Y, Zhang S; Sudwarts A, Zhang H, Kozlova A, Moulton MJ, Goodman LD, Pang ZP, Sanders AR, Bellen HJ, Thinakaran G, and Duan J: Alzheimer's disease protective allele of Clusterin modulates neuronal excitability through lipid-droplet-mediated neuron-glia communication. Molecular Neurodegeneration, 2025, in press. doi: 10.1101/2024.08.14.24312009. PMID: 39185522
111. Moreira-Silva D, Yuksel M, Ponnusamy M, Hansen MT, McMillan JD, Geethakrishnan S, Wang S, Collier LA, and Thinakaran G: Amylin exacerbates tau pathology in the visual cortex of diabetic mice by impairing lysosomal activity. Genes & Diseases, 2025, in press. https://doi.org/10.1016/j.gendis.2025.101602.
110. Aow J, Huang, T-R, Goh, Y-T, Xu A, Sun Y, Thinakaran G, and Koo EH. Evidence for a clathrin-independent endocytic pathway for APP internalization in the neuronal somatodendritic compartment. Cell Rep. 2023. 42(7):112774. doi: 10.1016/j.celrep.2023.112774.
109. Ulku I, Liebsch F, Akerman SC, Schulz JF, Kulic L, Hock C, Pietrzik C, Di Spiezio A, Thinakaran G, Saftig P, Multhaup G. Mechanisms of amyloid-β34 generation indicate a pivotal role for BACE1 in amyloid homeostasis. Scientific Reports, 2023. 13(1):2216. doi: 10.1038/s41598-023-28846-z.

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