Annie J. Lee, Ph.D., M.S.

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ACAMEDIC APPOINTMENTS

2022 – Present **Assistant Professor (Tenure-track) of Neurological Sciences**
Department of Neurology, Gertrude H. Sergievsky Center,
Taub Institute for Research on Alzheimer's Disease and the Aging Brain,
Columbia University Irving Medical Center, New York, NY

2019 – 2022 **Instructor**
Department of Neurology, Columbia University Irving Medical Center, New York, NY

TRAINING & EDUCATION

2019 – 2019 **Staff Scientist**
Department of Neurology, Columbia University Irving Medical Center, New York, NY
- PIs: Richard Mayeux, Philip De Jager

2013 – 2019 **Ph.D.in Biostatistics**
Department of Biostatistics, Columbia University, New York, NY
- Thesis: Statistical Methods for Genetic Studies with Family History of Diseases
- Advisor: Yuanjia Wang

2011 – 2013 **M.S. in Biostatistics**
Department of Biostatistics, Columbia University, New York, NY

2005 – 2010 **B.S. in Mathematics**
Ewha Womans University, Seoul, South Korea

2005 – 2010 **B.S. in Statistics (Double Major)**
Ewha Womans University, Seoul, South Korea

PROFESSIONAL EXPERIENCE

2013 – 2019 **Graduate Student Research Assistant**
Department of Biostatistics, Columbia University, New York, NY
- Advisors: Yuanjia Wang, Karen Marder

2012 – 2013 **Statistical Genetics Analyst**
Gertrude H. Sergievsky Center, Columbia University Medical Center, New York, NY
- Advisors: Joseph Lee, Nicole Schupf

2012 Summer **Summer Research Intern (NIH-IRTA)**
NICHD, NIH, Rockville, MD
- Advisor: Ruzong Fan

2010 – 2011 **Graduate Student Research Assistant**
Department of Computational Science and Engineering, Yonsei University, Seoul, South Korea

2007 Summer **Summer Research Intern (NSF-AGEP)**
Department of Statistics, Iowa State University, Ames, Iowa

HONORS & AWARDS

2025	Martha Ondrey Junior Investigator Prize, ROSMAP meeting
2025	Prof. Chin Ok Lee & Ms. Kwanghee Kim Award, KSEA Northeast Regional Conference
2024	NIH/NIA K01 Mentored Research Scientist Career Development Award
2024	New Investigator Award, National Alzheimer's Coordinating Center and the Alzheimer's Association
2024	Junior Faculty Award, International Conference on Alzheimer's & Parkinson's Diseases and related neurological disorders (AD/PD) (EUR 1,000)
2023	Carol and Gene Ludwig Pilot Grant in Neurodegeneration
2023	Health Enhancement Scientific Program, Health and Aging Brain Study-Health Disparities (HABS-HD)
2022	ASPIRE! Peer and Near-Peer Mentoring Program Award
2022	Career MODE (Careers through Mentoring and training in Omics and Data) Program Award, NIH/NIGMS R25 Innovative Program to Enhance Research Training
2022	Skills for Health and Research Professionals (SHARP) Training Scholarship Awards
2021	Fellowship Award, Korean American Society in Biotech and Pharmaceuticals (KASBP)
2021	Reserve and Resilience Travel Scholarship, NIA-supported Collaboratory on Research Definitions for Reserve and Resilience in Cognitive Aging and Dementia
2018	Outstanding Student Paper Award, ASA-Korean International Statistical Society Section
2016	NIH/NIA F31 Individual Predoctoral Fellowship
2016	Honorable Mention for Student Paper Award, ASA-Risk Analysis Section
2014	NIH TL1/T32 Personalized Medicine Training Fellowship, Clinical and Translational Science Awards
2013	KUSCO Scholarship Award, Korean-American Scientists and Engineers Association (KSEA)
2013	KSEA Outstanding Poster Award
2012	NIH/NICHD Summer student Intramural Research and Training Award
2010 – 2011	World Class University Scholarship Award, Yonsei University
2009	Student Tutor Scholarship, Institute for teaching and learning, Ewha Womans University
2008 – 2009	Dean's list (Summa cum laude), Ewha Womans University
2007	NSF REU Alliance Graduate Education Professoriate Fellowship (AGEP), Iowa State University
2005	Ewha Frontier Scholarship for Global Health Research Project, Ewha Womans University

ADMINISTRATIVE LEADERSHIP AND ACADEMIC SERVICE

ACADEMIC SERVICE

- Committee Member, CUIMC Biostatistics Collaborative Model Working Group 02/2022-Present
- Ph.D Representative, Biostatistics Student Cohort, Dept. of Biostatistics, Columbia University 09/2016-05/2019
- Member, Graduate Student Research Seminars (GSRS), Columbia University 09/2016-05/2019
- Member, Korean Graduate Student Association (KGSA), Columbia University 09/2012-05/2019
- Member, Korean Graduate Students for Health (KGSH), Columbia University 09/2011-05/2019

Professional Organizations and Societies

MEMBERSHIPS

- Alzheimer's Association International Conference (AAIC)
- Alzheimer's & Parkinson's Diseases and related neurological disorders (AD/PD)
- American Statistical Association (ASA)
- Korean-American Scientists and Engineers Association (KSEA)

JOURNAL REVIEWER

- American Journal of Preventive Medicine, Frontiers in Genetics, The Lancet Neurology, Frontiers in Immunology, Nature Aging, Neurobiology of Disease, Scientific report, npj Parkinson's Disease

GRANT SUPPORT

ACTIVE

2025 – 2026 **Research Stabilization Fund, Columbia University, PI**
Title: Multivariate Outcome-Guided Clustering for Disease Subtyping Using Multi-Omics and Clinical Data Integration

2024 – 2026 **The National Alzheimer's Coordinating Center and the Alzheimer's Association, New Investigator Award, PI**
Title: Genomic Link between Vascular Risk Factors and AD in Diverse Populations

2024 – 2029 **K01AG084849**, **NIH/NIA, PI**
Title: Genetic Association Between Alzheimer's Disease and Cardio-Cerebrovascular Risk Factors

2023 – 2025 **The Carol and Gene Ludwig Pilot Grant in Neurodegeneration, PI**
Title: Genetic Association Between Alzheimer's Disease and Cardio-Cerebrovascular Risk Factors

2023 – 2025 **Health and Aging Brain Study-Health Disparities (HABS-HD), Health Equity Scholars Program, NIH, PI**
Title: Identifying the causal mechanistic relationship of genes, cardiovascular risk factors, cerebrovascular pathology, and Alzheimer's Disease in multi-ethnic populations

2023 – 2025 **Columbia ADRC REC Program, NIH/NIA, PI**
Title: Genetic Interaction Between Alzheimer's Disease and Cardiovascular Risk Factors

2022 – 2027 **R01NS073671-09, NIH/NINDS, co-I (PI: Wang)**
Title: Statistical Methods for Integrating Mixed-type Biomarkers and Phenotypes in Neurodegenerative Disease Modeling

2021 – 2026 U24AG074855, NIH/NIA, Biostatistician
ADSP Phenotype Harmonization Consortium

2021 – 2026 U54AG052427, NIH/NIA, Biostatistician
Coordinating Center for Genetics and Genomics of Alzheimer's Disease (CGAD)

2020 – 2024 U01AG068028, NIH/NIA, Biostatistician
Characterizing complex structural variation in Alzheimer's disease

COMPLETE

2016 – 2019 **F31AG054095, NIH/NIA, PI**
Title: Efficient Statistical Methods for Association Studies with Dense Genotypes and Family History of Disease

2014 – 2016 **TL1TR000082, NIH/Clinical and Translational Science Awards (CTSA), Predoctoral Trainee**
Title: Methods for age-specific penetrance estimate of LRRK2 mutations on the risk of Parkinson's disease incorporating personalized characteristics

Educational Contributions

TEACHING

- **Organizer/Co-speaker**, Seminar series "Statistical and Computational Methods in Neurodegenerative Disease Research", Department of Biostatistics, Columbia University. (1 hour per week for 15 weeks), Fall 2025
- **Instructor**, "Advanced Statistical and Computational Methods in Genetics and Genomics" (P8119), Department of Biostatistics, Columbia University. (3 hours per week for 15 weeks, 20 graduate students approximately), Fall 2023
- **Instructor**, "Statistical Computing with SAS" (P6110), Columbia University, The Biostatistics Epidemiology Summer Training Diversity Program (BEST) Diversity Program, REU program Funded by NIH/NHLBI (R25 HL096260-06), Summer 2017, Summer 2018.
- Teaching Assistant, "Probability" (P8104), Department of Biostatistics, Columbia University, Instructor: Dr. Prakash Goroochurn, Fall 2015.

- Teaching Assistant, "Statistical Inference" (P8109), Dept. of Biostatistics, Columbia University, Instructor: Dr. Arindam RoyChoudhury, Spring 2015.
- Teaching Assistant, "Complex Analysis II", Dept. of Mathematics, Ewha Womans University, Instructor: Dr. Eung Il Ko, Fall 2009.
- Teaching Assistant, "Modern Geometry", Dept. of Mathematics, University of Northern Iowa, Instructor: Dr. Jerry R. Ridenhour, Fall 2007.
- Tutor, Department of Mathematics, University of Northern Iowa, Cedar Falls, Iowa, Spring 2007, Fall 2007.

MENTORING (The * indicates that I am the primary mentor or practicum advisor.)

Associate Research scientist, Department of Neurology, Columbia University:

- Minghua Liu, 2024-Present.

Postdoctoral Research Scientists, Department of Neurology, Columbia University:

- Anisha Das, 2025.
- Boyi Hu* (co-mentored by Dr. Yuanjia Wang), 2023-Present.

Master's Students, Department of Biostatistics, Columbia University:

- Yaduo Wang, 2024-2025.
- Xuesen Zhao, 2023-2024.
- Zuoquai Cui, 2023-2024.
- Zhengwei Song, 2023-2024.
- Tvisha Ragendri Devavarapu, 2023.

Undergraduate Students

- Danielle Savellano, Allegheny College, mentor through BEST Program, Columbia University, 2023
- Kayla Scott-McDowell, Mt. Holyoke College, mentor through BEST Program, Columbia University, 2023

High school Students

- Leah Kang, Northern Valley Regional High School, 2023
- Tessa Hunt, Dobbs Ferry High School, mentor through BrainSTORM Program at CUMC, 2024
- Tristin Yun, Tenafly High School, 2024

Consultation

- Statistical Consultation for clinical research fellows, 2015-2016

Publications

A. Original, peer-reviewed articles (In chronological order)

- ***An asterisk (*) is used to indicate correspondence author or senior author***
- ***Current and former M.S. advisees and post-doctoral fellows are indicated by an <u>underline</u>***

Substantive Area Publications:

1. Heavener KS, Tamucci KA, **Lee AJ**, Kabra K, Chatila ZK, Yidenk M, Bennett DA, Vardarajan BN, Bradshaw EM. P2RX7 modulates the function of human microglia-like cells and mediates the association of IL18 with Alzheimer's disease traits. ***Neurobiology of Disease***. 2025. doi: 10.1016/j.nbd.2025.107106.
2. Gunasekaran TI, Sanchez D, Reyes-Dumeyer D, Ventura R, Morales C, Alshikho M, **Lee AJ**, Lantigua RA, Gu Y, Honig LS, Vardarajan BN, Brickman AM, Mayeux R. Frequency of Microvascular Pathology and Hippocampal Atrophy on

Magnetic Resonance Imaging in a Community Study of Alzheimer's Disease with Blood-Based Biomarkers. ***Ann Neurol***. 2025 Jul 30. doi: 10.1002/ana.70006. Epub ahead of print. PMID: 40735976.

3. Eissman JM, Ma Y, Qiao M, Reyes-Dumeyer D, Piriz A, **Lee AJ**, Lantigua RA, Medrano M, Mejia DR, Honig LS, Grodstein F, Bennett DA, De Jager PL, Dalgard CL, Mayeux R, Vardarajan BN. Biological Age and Age Acceleration Predict Alzheimer's Disease Plasma Biomarker Levels. ***medRxiv*** 2025.05.22.25328181; doi: 10.1101/2025.05.22.25328181
4. Yilmaz E, Chen KW, Cakir EÖ, Bhattarai P, Liu M, Ciener BL, Qiao M, Lantigua RA, Medrano M, Rivera D, Piriz AL, De Jager PL, Bartolini F, Ma Y, Teich AF, **Lee AJ**, Reyes-Dumeyer D, Vardarajan BN, Mayeux R, Kizil C. Single-nucleus multiomics in brains from Hispanic individuals reveal APOE-ε4-driven disruption of focal adhesion signaling in the presence of cerebrovascular pathology. ***medRxiv***. 2025 May 21. doi: 10.1101/2025.05.21.25328040.
5. Li B, Yadav S, Zhou S, Du Y, Qian L, Karas Z, Zhang Y, Shen L, Lee JJ, Vardarajan BN, **Lee AJ**, Garmire LX; Alzheimer's Disease Neuroimaging Initiative (ADNI). Identification and Validation of New Molecular Subtypes within the Early and Late Mild Cognitive Impairment Stages of Alzheimer's Disease. ***medRxiv***. 2025 May 24:2023.04.06.23288268. doi: 10.1101/2023.04.06.23288268. PMID: 40475149; PMCID: PMC12140535.
6. Marshe VS, Tuddenham JF, Chen K, Chiu R, Haage VC, Ma Y, **Lee AJ**, Shneider NA, Agin-Liebes JP, Alcalay RN, Teich AF, Canoll P, Riley CS, Keene D, Schneider JA, Bennett DA, Menon V, Taga M, Klein HU, Olah M, Fujita M, Zhang Y, Sims PA, De Jager PL. A factor-based analysis of individual human microglia uncovers regulators of an Alzheimer-related transcriptional signature. ***bioRxiv***. 2025.03.27.641500. doi: 10.1101/2025.03.27.641500.
7. Hoost SS, Honig LS, Kang MS, Bahl A, **Lee AJ**, Sanchez D, Reyes-Dumeyer D, Lantigua RA, Dage JL, Brickman AM, Manly JJ, Mayeux R, Gu Y. Association of dietary fatty acids with longitudinal change in plasma-based biomarkers of Alzheimer's disease. ***J Prev Alzheimers Dis***. 2025 Mar 18:100117. PMID: 40107919.
8. Eissman JM, Qiao M, Kalia V, Zerlin-Esteves M, Reyes-Dumeyer D, Piriz A, Dubey S, Nandakumar R, **Lee AJ**, Lantigua RA, Medrano M, Mejia DR, Honig LS, Dalgard CL, Miller GW, Mayeux R, Vardarajan BN. Genetic Regulation of the Metabolome Differs by Sex, Alzheimer's Disease Stage, and Plasma Biomarker Status. ***medRxiv***. 2025 Mar 17:2025.02.26.25322932. doi: 10.1101/2025.02.26.25322932. PMID: 40061336; PMCID: PMC11888523.
9. Bhattarai P, Yilmaz E, Cakir EÖ, Korkmaz HY, **Lee AJ**, Ma Y, Celikkaya H, Cosacak MI, Haage V, Wang X, Nelson N, Lin W, Zhang Y, Nuriel T, Jülich D, Iş Ö, Holley SA, De Jager PL, Fisher E, Tubbesing K, Teich AF, Bertucci T, Temple S, Ertekin-Taner N, Vardarajan BN, Mayeux R, Kizil C. APOE-ε4-induced fibronectin at the blood-brain barrier is a conserved pathological mediator of disrupted astrocyte–endothelia interaction in Alzheimer's disease. ***bioRxiv***. 2025.01.24.634732. doi: 10.1101/2025.01.24.634732.
10. Dodd RB, Enomoto M, Zhou Y, Satoh K, Zhang Y, Chen F, Acheson B, Ghaffari D, Sayn-Wittgenstein E, Manning JJ, Dukas GV, Patel R, Schweizer Burguete A, Kralovec MJ, Rashid M, Hall JL, Tamucci KA, Chatila ZK, Liu M, **Lee AJ**, Vardarajan BN, Taga MF, Pollari S, Rabinovitch A, Rillahan CD, Bobkov AA, Sergienko E, Meadows W, Qamar S, Randle SJ, Johnson CM, Sevalle J, Griffin J, Bohm C, Ikura M, Xian X, Herz J, Kelly MA, West J, Satapathy S, Wilson MR, Javitch JA, Fraser PE, Bennett DA, De Jager PL, Fishelson Z, Frenkel D, Asher WB, Bradshaw EM, St George-Hyslop P. CD33 and clusterin interact biophysically and genetically to modulate Alzheimer risk. ***bioRxiv***. 2025.07.29.667318. doi: 10.1101/2025.07.29.667318.
11. Vo N, Rillahan CD, Chatila ZK, Virga DM, Hall JL, Tamucci KA, Rashid M, Connor SM, Chintamen S, Guzman G, Taga M, Liu M, De Jager PL, St George-Hyslop P, **Lee AJ**, Vardarajan BN, Bennett DA, Kohler JJ, Schenone M, Elyaman W, Carr SA, Bradshaw EM. CD33–CD45 interaction reveals a mechanistic link to Alzheimer's disease susceptibility. ***bioRxiv***. 2025.07.28.667311. doi: 10.1101/2025.07.28.667311.
12. Tuddenham JF, Taga M, Haage V, Marshe VS, Roostaei T, White C, **Lee AJ**, Fujita M, Khairallah A, Zhang Y, Green G, Hyman B, Frosch M, Hopp S, Beach TG, Serrano GE, Corboy J, Habib N, Klein HU, Soni RK, Teich AF, Hickman RA, Alcalay RN, Shneider N, Schneider J, Sims PA, Bennett DA, Olah M, Menon V, De Jager PL. A cross-disease resource of living human microglia identifies disease-enriched subsets and tool compounds recapitulating microglial states. ***Nat Neurosci***. 2024;27(12):2521-2537. PMID: 39406950.

13. Lam TG, Ross SK, Ciener B, Xiao H, Flaherty D, **Lee AJ**, Dugger BN, Reddy H, Teich AF. Pathologic subtyping of Alzheimer's disease brain tissue reveals disease heterogeneity. ***medRxiv***. 2024 Oct 15:2024.10.14.24315458. doi: 10.1101/2024.10.14.24315458. PMID: 39484271; PMCID: PMC11527055.
14. Touil H, Luquez T, Comandante-Lou N, **Lee AJ**, Fujita M, Habeck C, Kroshilina A, Hegewisch-Solloa E, McInvale J, Zuroff L, Isnard S, Walker E, Zhang L, Routy JP, Zhang Y, Mace EM, Klotz L, Wiendl H, Xia Z, Bar-Or A, Menon V, Stern Y, De Jager PL. Relation of CMV and brain atrophy to trajectories of immunosenescence in diverse populations. ***bioRxiv*** 2024.10.07.614568; doi: https://doi.org/10.1101/2024.10.07.614568
15. Gunasekaran TI, Meena D, **Lee AJ**, Wu S, Dumitrescu L, Sperling R, Hohman TJ, Alzheimer's Disease Neuroimaging Initiative and the A4 Study, Huang J, Dehghan A, Tzoulaki I, Mayeux R, Vardarajan B. Genome-wide scan of Flortaucipir PET levels finds JARID2 associated with cerebral tau deposition. ***medRxiv*** 2024.10.04.24314853; doi: https://doi.org/10.1101/2024.10.04.24314853
16. Beckers L, Rashid M, **Lee AJ**, Chatila ZK, Tamucci KA, Talcoff RC, Hall JL, Bennett DA, Vardarajan BN, Bradshaw EM. CD33 and SHP-1/PTPN6 Interaction in Alzheimer's Disease. ***Genes (Basel)***. 2024;15(9):1204. PMID: 39336795; PMCID: PMC11431297.
17. Touil H, Fujita M, Lee A, Habeck C, Zuroff L, Klotz L, Xia Z, Wiendl H, Bar-Or A, Stern Y, De Jager P. Leveraging immunosenescence cellular signatures to evaluate the "immune-age": moving towards precision medicine in multiple sclerosis. ***Mult Scler J***. 2024 Sep;30(3):1150. doi: 10.1177/13524585241267852.
18. Trumpff C, Monzel AS, Sandi C, Menon V, Klein HU, Fujita M, **Lee A,** Petyuk VA, Hurst C, Duong DM, Seyfried NT, Wingo AP, Wingo TS, Wang Y, Thambisetty M, Ferrucci L, Bennett DA, De Jager PL, Picard M. Psychosocial experiences are associated with human brain mitochondrial biology. ***Proc Natl Acad Sci U S A***. 2024 Jul 2;121(27):e2317673121. doi: 10.1073/pnas.2317673121. Epub 2024 Jun 18. PMID: 38889126; PMCID: PMC11228499.
19. İş Ö, Wang X, Reddy JS, Min Y, Yilmaz E, Bhattarai P, Patel T, Bergman J, Quicksall Z, Heckman MG, Tutor-New FQ, Can Demirdogen B, White L, Koga S, Krause V, Inoue Y, Kanekiyo T, Cosacak MI, Nelson N, **Lee AJ**, Vardarajan B, Mayeux R, Kouri N, Deniz K, Carnwath T, Oatman SR, Lewis-Tuffin LJ, Nguyen T; Alzheimer's Disease Neuroimaging Initiative; Carrasquillo MM, Graff-Radford J, Petersen RC, Jr Jack CR, Kantarci K, Murray ME, Nho K, Saykin AJ, Dickson DW, Kizil C, Allen M, Ertekin-Taner N. Gliovascular transcriptional perturbations in Alzheimer's disease reveal molecular mechanisms of blood brain barrier dysfunction. ***Nat Commun***. 2024 Jun 20;15(1):4758. doi: 10.1038/s41467-024-48926-6. PMID: 38902234; PMCID: PMC11190273.
20. Mao T, Kim J, Peña-Hernández MA, Valle G, Moriyama M, Luyten S, Ott IM, Gomez-Calvo ML, Gehlhausen JR, Baker E, Israelow B, Slade M, Sharma L, Liu W, Ryu C, Korde A, Lee CJ, Monteiro VS, Lucas C, Dong H, Yang Y; Yale SARS-CoV-2 Genomic Surveillance Initiative; Gopinath S, Wilen CB, Palm N, Dela Cruz CS, Iwasaki A. Intranasal neomycin evokes broad-spectrum antiviral immunity in the upper respiratory tract. ***Proc Natl Acad Sci U S A.*** 2024 Apr 30;121(18):e2319566121. doi: 10.1073/pnas.2319566121.
21. Yang Z, Cieza B, Reyes-Dumeyer D, **Lee A**, Ma Y, Yilmaz E, Lantigua R, Miller G, Brown L, Honig L, Ciener B, Leskinin S, Sivakumar S, Vardarajan B, Dugger BN, Jin LW, Murray ME, Dickson DW, Rissman RA, Hiniker A, Pericak-Vance M, Vance J, Foroud TM, Kizil C, Teich AF, Mayeux R, Tosto G. MU-BRAIN: MUltiethnic Brain Rna-seq for Alzheimer Initiative. ***bioRxiv*** 2024.02.20.581250; doi: https://doi.org/10.1101/2024.02.20.581250
22. De Jager RM, **Lee AJ**, Sigalov A, Taga M. An image segmentation pipeline optimized for human microglia uncovers sources of morphological diversity in Alzheimer's disease. ***bioRxiv*** 2024.02.01.577128; doi: https://doi.org/10.1101/2024.02.01.577128
23. Bartosch AMW, Youth EHH, Hansen S, Wu Y, Buchanan HM, Kaufman ME, Xiao H, Koo SY, Ashok A, Sivakumar S, Soni RK, Dumitrescu LC, Lam TG, Ropri AS, **Lee AJ**, Klein HU, Vardarajan BN, Bennett DA, Young-Pearse TL, De Jager PL, Hohman TJ, Sproul AA, Teich AF. ZCCHC17 modulates neuronal RNA splicing and supports cognitive resilience in Alzheimer's disease. ***Journal of Neuroscience***. 2024; JN-RM-2324-22. doi: 10.1523/JNEUROSCI.2324-22.2023. PMID: 38050142.
24. Siddiqui T, Cosacak MI, Popova S, Bhattarai P, Yilmaz E, **Lee AJ**, Min Y, Wang X, Allen M, İş Ö, Atasavum ZT, Rodriguez-Muela N, Vardarajan BN, Flaherty D, Teich AF, Santa-Maria I, Freudenberg U, Werner C, Tosto G, Mayeux

R, Ertekin-Taner N, Kizil C. Nerve growth factor receptor (Ngfr) induces neurogenic plasticity by suppressing reactive astroglial Lcn2/Slc22a17 signaling in Alzheimer's disease. ***npj Regenerative Medicine.*** 2023;8(1):33. PMCID: PMC10333226.

25. **Lee, A.J.**, Sanchez D., Reyes-Dumeyer D., Manly, J.J., Brickman, A.R., Vardarajan, B.N., Mayeux, R. Reliability and Validity of Self-reported Vascular Risk Factors in a Multi-Ethnic Community Based Study of Aging and Dementia. ***Journal of Alzheimer's Disease*.** 2023; 95(1):275-285. PMCID: PMC10578288. doi: 10.3233/JAD-230374
26. Qiao M, **Lee AJ**, Dolly Reyes-Dumeyer, Kelley Faber, Alison Goate, Alan Renton, Michael Chao, Brad Boeve, Carlos Cruchaga, Margaret Pericak-Vance, Jonathan L. Haines, Roger Rosenberg, Debby Tsuang, Robert A. Sweet, David A. Bennett, Robert S. Wilson, Tatiana Foroud, Richard Mayeux, Badri N. Vardarajan. Polygenic Risk Score Penetrance & Recurrence Risk in Familial Alzheimer Disease. ***Annals of Clinical and Translational Neurology.*** 2023 May;10(5):744-756. PMCID: PMC10187719.
27. Honig LS, Kang MS, **Lee AJ**, Reyes-Dumeyer D, Piriz A, Soriano B, Franco Y, Coronado ZD, Recio P, Mejía DR, Medrano M, Lantigua RA, Teich AF, Dage JL, Mayeux R. Evaluation of Plasma Biomarkers for A/T/N Classification of Alzheimer Disease Among Adults of Caribbean Hispanic Ethnicity. ***JAMA Network Open.*** 2023 Apr;6(4):e238214. PMCID: PMC10119732.
28. **Lee AJ**, Ma Y, Yu L, Dawe RJ, McCabe C, Arfanakis K, Mayeux R, Bennett DA, Klein HU, De Jager PL. Multi-region brain transcriptomes uncover two subtypes of aging individuals with differences in Alzheimer risk and the impact of APOEe4. 2023. ***bioRxiv*** 2023.01.25.524961; doi: doi.org/10.1101/2023.01.25.524961
29. Cook L, Schulze J, Uhlmann WR, Verbrugge J, Marder K, **Lee AJ**, Wang Y, Alcalay RN, Nance M, Beck JC. Tools for communicating risk for Parkinson's disease. ***npj Parkinson's Disease***. 2022 Nov;8(1):164. PMCID: PMC9709050.
30. **Lee, A.J.**, Raghavan N.S., Bhattarai P., Siddiqui T., Sariya S., Reyes-Dumeyer S., Flowers X.E., Cardoso, S.A.L, De Jager, P.L., Bennett, D.A., Schneider, J.A, Menon, V., Wang, Y., Lantigua, R.A., Medrano, M. Rivera, D., Jiménez-Velázquez, I.A., Kukull, W.A., Brickman, A.M., Manly, J.J., Tosto, G., Kizil, C., Vardarajan, B.N., Mayeux, R. *FMNL2* regulates gliovascular interactions and is associated with vascular risk factors and cerebrovascular pathology in Alzheimer's disease. ***Acta Neuropathologica.*** 2022 Jul;144: 59-79. PMCID: PMC9217776.
31. Trumpff C, Owusu-Ansah E, Klein HU, **Lee AJ**, Petyuk V, Wingo TS, Wingo AP, Thambisetty M, Ferrucci L, Seyfried NT, Bennett DA, De Jager PL, Picard M. Mitochondrial respiratory chain protein co-regulation in the human brain. ***Heliyon.*** 2022 Apr; 8(5):e09353. PMCID: PMC9118667.
32. Diaconu C, **Lee AJ**, Onomichi K, De Jager RL, Riley C, Levine L, Vargas W, Shelter K, De Jager PL, Farber RS. Hypogonadism in men with multiple sclerosis: Prevalence and clinical associations. ***Multiple Sclerosis and Related Disorders.*** 2022 Mar;59:103508. PMID: 35123293.
33. Epstein S, Xia Z, **Lee AJ**, Dahl M, Edwards K, Levit E, Longbrake EE, Perrone C, Kavak K, Weinstock-Guttman B, Diallo F, Ricci A, Riley CS, De Jager PL, Farber R, Wesley SF; Multiple Sclerosis Resilience to COVID-19 (MSReCOV) Collaborative. Vaccination Against SARS-CoV-2 in Neuroinflammatory Disease: Early Safety/Tolerability Data. ***Multiple Sclerosis and Related Disorders*.** 2022 Jan;57:103433. PMCID: PMC8638239.
34. Klein HU, Trumpff C, Yang HS, **Lee AJ**, Picard M, Bennett DA, De Jager PL. Characterization of mitochondrial DNA quantity and quality in the human aged and Alzheimer's disease brain. ***Molecular Neurodegeneration*.** 2021 Nov; 16(1):75. PMCID: PMC8572491.
35. Raghavan NS, Dumitrescu L, Mormino E, Mahoney E, **Lee AJ,** Gao Y, Bilgel M, Goldstein D, Harrison T, Engelman CD, Saykin AJ, Whelan CD, Liu JZ, Jagust W, Albert M, Johnson SC, Yang H, Johnson K, Aisen P, Resnick SM, Sperling R, De Jager PL, The Alzheimer's Disease Neuroimaging Initiative, Schneider J, Bennett DA, Schrag M, Vardarajan B, Hohman TJ, Mayeux R. Association Between Common Variants in RBFOX1, an RNA-Binding Protein, and Brain Amyloidosis in Early and Preclinical Alzheimer Disease. ***JAMA Neurology***. 2020 Oct;77(10):1288–1298. PMCID: PMC7309575
36. **Lee AJ,** Wang Y, Alcalay RN, Mejia-Santana H, Saunders-Pullman R, Bressman S, Corvol JC, Brice A, Lesage S, Mangone G, Tolosa E, Pont-Sunyer C, Vilas D, Schüle B, Kausar F, Foroud T, Berg D, Brockmann K, Goldwurm S, Siri C, Asselta R, Ruiz-Martinez J, Mondragón E, Marras C, Ghate T, Giladi N, Mirelman A, Marder K, Michael J. Fox

LRRK2 Cohort Consortium. Penetrance estimate of *LRRK2* p.G2019S Mutation in Non-Ashkenazi Jewish in the Michael J. Fox LRRK2 Consortium. ***Movement Disorders***. 2017 Oct;32(10):1432-1438. PMCID: PMC5656509

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Statistical Methodology Publications:

40. Hu B, De Jager PL, Bennett DA, Vardarajan BN, Wang Y, **Lee AJ**. TPClust: Temporal Profile-Guided Subtyping Using High-Dimensional Omics Data. ***bioRxiv***. 2025 Aug 7:2025.08.05.668514. doi: 10.1101/2025.08.05.668514. PMID: 40799531; PMCID: PMC12340809.
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42. **Lee AJ**, Marder K, Alcalay RN, Wang Y. Estimation of Genetic Risk Function with Covariates in the Presence of Missing Genotypes. ***Statistics in Medicine***. 2017 Sep;36(22):3533-3546. PMCID: PMC5583003
43. Fan R, **Lee AJ**, Lu Z, Liu A, Troendle JF, Mills JL. Association analysis of complex diseases using triads, parent-child dyads and singleton monads. ***BMC Genetics***. 2013 Sep;14:78. PMCID: PMC3844511

B. Conference Abstracts

1. Gunasekaran TI, **Lee AJ**, Lao PJ, Gutierrez J, Manly JJ, Gu Y, Brickman AM, Honig LS, Vardarajan BN, Mayeux R. Understanding Biomarker Discordance: MRI and PET Phenotypes Shed Light on Alzheimer's Pathology. ***Alzheimers Dement***. 2025 Jan 9;20(Suppl 8):e095708. doi: 10.1002/alz.095708. PMCID: PMC11713549.
2. Eissman JM, Qiao MN, Kalia V, Zerlin-Esteves M, Reyes-Dumeyer D, Piriz A, Dubey S, Nandakumar R, **Lee AJ**, Lantigua RA, Medrano M, Mejia DR, Honig LS, Dalgard CL, Miller GW, Mayeux R, Vardarajan BN. Multi-omics integration in Caribbean Hispanics identifies cardio and cerebrovascular pathways in AD. ***Alzheimers Dement***. 2025 Jan 9;20(Suppl 8):e095342. doi: 10.1002/alz.095342. PMCID: PMC11714036.
3. Dacey R, Han X, Moore MR, Chung J, Durape S, Rosenthaler M, Uretsky M, Abdolmohammadi B, **Lee AJ**, Brickman AM, Hohman TJ, Cuccaro ML, Bennett DA, Crane PK, Kamboh MI, Kukull WA, Au R, Haines JL, Pericak-Vance MA, Schellenberg GD, Mayeux R, Lunetta KL, Farrer LA, Mez J. Genome-wide Interaction and Stratified Study with Smoking Identifies Association of *APAF1* and *MIXL1/LIN9* with Alzheimer's Disease. ***Alzheimers Dement***. 2025 Jan 3;20(Suppl 1):e091434. doi: 10.1002/alz.091434. PMCID: PMC11710319.
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5. Cieza B, Yang Z, Reyes-Dumeyer D, **Lee AJ**, Dugger BN, Jin LW, Murray ME, Dickson DW, Pericak-Vance MA, Vance JM, Foroud TM, Mayeux R, Tosto G. Basic science and pathogenesis. ***Alzheimer's Dement***. 2024 Dec;20:e092971. doi: 10.1002/alz.092971

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7. Bhattarai P, Gunasekaran TI, Uzrek BT, Reyes-Dumeyer D, Jülich D, **Lee AJ**, Yilmaz E, Tayran H, Lantigua RA, Medrano M, Mejia DR, Recio P, Flaherty D, Dalgard CL, Nuriel T, Ertekin-Taner N, Dickson DW, Teich AF, Holley S, Mayeux R, Kizil C, Vardarajan BN. Rare genetic variation in fibronectin 1 (FN1) protects against APOE ε4 in Alzheimer's disease. ***Alzheimer's Dement***. 2024 Dec;20:e089111. doi: 10.1002/alz.089111.
8. Bhattarai P, Gunasekaran TI, Uzrek BT, Reyes-Dumeyer D, Jülich D, **Lee AJ**, Yilmaz E, Tayran H, Lantigua RA, Medrano M, Mejia DR, Recio P, Flaherty D, Dalgard CL, Nuriel T, Ertekin-Taner N, Dickson DW, Teich AF, Holley S, Mayeux R, Kizil C, Vardarajan BN. Basic science and pathogenesis. ***Alzheimer's Dement***. 2024 Dec;20:e089111. doi: 10.1002/alz.089111.
9. Yang Z, Cieza B, Reyes-Dumeyer D, Lee AJ, Dugger BN, Jin LW, Murray ME, Dickson DW, Pericak-Vance MA, Vance JM, Foroud TM, Teich AF, Mayeux R, Tosto G. A multiethnic transcriptome for Alzheimer disease identifies cross-ancestry and ancestry-specific expression profiles. ***Alzheimer's Dement***. 2024 Dec;20:e092011. doi: 10.1002/alz.092011.
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11. Cieza B, Yang Z, Reyes-Dumeyer D, Lee AJ, Dugger BN, Jin LW, Murray ME, Dickson DW, Pericak-Vance MA, Vance JM, Foroud TM, Mayeux R, Tosto G. Polytranscriptomic risk score for Alzheimer disease in a large diverse multi-center brain bank study. ***Alzheimer's Dement***. 2024 Dec;20:e092971. doi: 10.1002/alz.092971.
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13. Regelson AN, Archer DB, Durant A, Mukherjee S, Lee ML, Choi SE, Scollard P, Trittschuh EH, Mez J, Bush WS, Kuzma AB, Cuccaro ML, Cruchaga C, Farrer LA, Wang LS, Schellenberg GD, Mayeux R, Kukull WA, Keene CD, Saykin AJ, Johnson SC, Engelman CD, Bennett DA, Barnes LL, Larson EB, Nho K, Goate AM, Renton AE, Marcora E, Fulton-Howard B, Patel T, Risacher SL, DeStefano AL, Schneider JA, Habes M, Seshadri S, Satizabal CL, Maillard P, Toga AW, Crawford K, Tosun D, Vance JM, Mormino E, DeCarli CS, Montine TJ, Beecham G, Biber SA, De Jager PL, Vardarajan BN, **Lee AJ**, Brickman AM, Reitz C, Manly JJ, Lu Q, Rentería MA, Deming Y, Pericak-Vance MA, Haines JL, Crane PK, Hohman TJ, Dumitrescu LC. Novel rare variant associations with late-life cognitive performance. ***Alzheimer's Dement***. 2024 Dec;20:e095364. doi: 10.1002/alz.095364.
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17. Bhattarai P, Cosacak MI, **Lee AJ**, Yilmaz E, Is O, Wang X, Vardarajan BN, Ertekin-Taner N, Mayeux R, Kizil C. Functional investigation of the gliovascular niche-related genes and their relevance to Alzheimer's disease pathomechanisms in zebrafish. ***Alzheimer's Dement***. 2023 Dec;19:e073812. doi: 10.1002/alz.073812.
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19. Kalia V, Reyes-Dumeyer D, Dubey S, Nandakumar R, **Lee AJ,** Lantigua RA, Medrano M, Mejia DR, Recio P, Honig LS, Mayeux R, Miller GW, Vardarajan BN. Metabolites correlate with plasma biomarkers and clinical diagnosis of Alzheimer's disease. ***Alzheimer's Dement***. 2023 Dec;19:e078516. doi: 10.1002/alz.078516.
20. Is O, Wang X, Reddy JS, Patel T, Min Y, Quicksall Z, Heckman MG, Gao J, Bergman J, Ferreira Da Mesquita SG, Kizil C, Bhattarai P, Cosacak MI, **Lee AJ**, Vardarajan BN, Mayeux R, Koga S, Kanekiyo T, White LJ, Deniz K, Tutor-New FQ, Carnwath T, Oatman SR, Lewis-Tuffin L, Nguyen T, Carrasquillo MM, Radford JG, Petersen RC, Jack CR Jr, Kantarci K, Nho K, Saykin AJ, Dickson DW, Murray ME, Allen M, Ertekin-Taner N. Gliovascular molecular alterations in Alzheimer's disease: a cross-tissue, cross-species study. ***Alzheimer's Dement***. 2023 Dec;19:e073806. doi: 10.1002/alz.073806.
21. Gunasekaran TI, **Lee AJ**, Dumitrescu LC, Mormino EC, Sperling RA, Saykin AJ, Hohman TJ, Vardarajan BN; Alzheimer's Disease Neuroimaging Initiative. Multi-cohort genome-wide association study on flortaucipir PET identifies novel risk loci associated with tau deposition and its role in AD pathology. ***Alzheimer's Dement***. 2023 Dec;19:e080383. doi: 10.1002/alz.080383.
22. Touil H, Fujita M, Luquez T, **Lee A,** Brickman A, Habeck C, Menon V, Stern Y, Farber DL, Bar-Or A, De Jager P. Immunosenescence trajectories in multiple sclerosis and diverse controls reveal cytotoxic effector granzyme B IFN-γ NK cell signatures as a hallmark of aging. ***Mult Scler J.*** 2023 Oct;29:484-485. doi: 10.1177/13524585231234567.
23. **Lee AJ,** Klein HU, Schneider JA, Bennett DA, De Jager PL, Narzisi G, Zody M, Vardarajan BN. Association of short tandem repeats with neuropathological features in late-onset Alzheimer's disease brains. ***Alzheimer's Dement***. 2023 Jun;19:e066552. doi: 10.1002/alz.066552.
24. Hoost S, Brickman A, **Lee A**, Gu Y, Sanchez D, Reyes-Dumeyer D, Honig L, Manly J, Lantigua R, Kang MS, Dage J, Mayeux R. Association of Alzheimer's plasma biomarker concentrations with body mass index in older adults (P10-6.005). ***Neurology***. 2023 Apr 25;100(17 Suppl 2):2541. doi: 10.1212/WNL.0000000000202541.
25. Kalia V, Reyes-Dumeyer D, Dubey S, Nandkumar R, **Lee A**, Lantigua R, Medrano M, Rivera D, Honig L, Mayeux R, Vardarajan B. Plasma metabolites associated with clinically diagnosed Alzheimer's disease and the association is augmented using blood-based biomarkers (P10-6.003). ***Neurology***. 2023 Apr 25;100(17 Suppl 2):4136. doi: 10.1212/WNL.0000000000204136.
26. Touil H, Fujita M, Kroshilina A, **Lee AJ**, Luquez T, Yung C, Gray J, Zuroff L, Brickman AM, Manly JJ, Farber DL, Bar-Or A, Xia Z, Stern Y, De Jager PL. Characterization of immunosenescence trajectories in diverse adults and patients with multiple sclerosis. ***Mult Scler J.*** 2022 Oct;28(3 Suppl):236-237. doi: 10.1177/13524585221123645.
27. Taga M, Duquesne L, **Lee A**, Sigalov A, Peralta Cruz F, De Jager P. Amyloid and some tau proteinopathy are observed in a subset of individuals with multiple sclerosis. ***Mult Scler J***. 2022 Oct;28(3 Suppl):977. doi: 10.1177/13524585221123678.
28. **Lee AJ,** Ma Y, Yu L, Dawe RJ, Arfanakis K, Mayeux R, Bennett DA, Klein HU, De Jager PL. Multi-region brain

transcriptomes uncover two subtypes of aging individuals with differences in the impact of APOE ε4. ***Alzheimer's Dement.*** 2021 Dec;17:e057240. doi: 10.1002/alz.057240.

29. Raghavan NS, Dumitrescu L, Mormino EC, Mahoney ER, **Lee A**, Gao Y, Bilgel M, Goldstein DB, Harrison TM, Engelman CD, Saykin AJ, Whelan C, Liu J, Jagust WJ, Albert MS, Johnson SC, Yang HS, Johnson KA, Aisen PS, Resnick SM, Sperling RA, De Jager PL; Alzheimer's Disease Neuroimaging Initiative (ADNI), Schneider JA, Bennett DA, Schrag M, Vardarajan BN, Hohman TJ, Mayeux R. Genetic associations with brain amyloidosis: Genetics/genetic factors of Alzheimer's disease. ***Alzheimer's Dement***. 2020 Dec;16:e042191. doi: 10.1002/alz.042191.

30. Schupf N, Dang LH, **Lee A**, Pang D, Zigman WB, Luchsinger JA, Krinsky-McHale S, Silverman W, Tycko B, Kisselev S, Clark L, Lee JH. P1-268: Variants in candidate genes for Alzheimer's disease are associated with declining plasma Aβ peptides in adults with Down syndrome. ***Alzheimer's Dement***. 2015 Jul;11(7 Suppl Part 10):P458. doi: 10.1016/j.jalz.2015.06.266.

31. **Lee A**, Lee JH, Cheng R, Pang D, Krinsky-McHale S, Jenkins E, Zigman W, Silverman W, Tycko B, Clark L, Schupf N. P2-002: Genetic characterization of beta amyloid peptides in adults with Down syndrome with a focus on chromosomes other than 21. ***Alzheimer's Dement***. 2014 Jul;10(Suppl):P471. doi: 10.1016/j.jalz.2014.05.860.

C. Book Chapters, Reviews and Commentaries

1. Gorroochurn P. (2012). Classic Problems of Probability. Wiley. Acknowledgement for proofreading.

Presentations

Conference Talks

Invited:

1. Joint Statistical Meetings (JSM), Nashville, TN. "Machine Learning Integration of Longitudinal Clinical and High-Dimensional Omics Data for Disease Subtype Identification". 8/2025
2. 1st Annual Carol and Gene Ludwig Center for Research on Neurodegeneration Symposium, Columbia University, New York, NY. "Multi-Omics of Vascular Risk Factors in Alzheimer's disease". 11/22/2024
3. International Conference on Intelligent Biology and Medicine (ICIBM), Multi-omics and Multi-modal Data Integration in Biomedicine session, Houston, TX. "A novel machine learning method for Temporal profile-guided disease subtyping using high-dimensional omics data". 10/11/2024
4. International Day of Women in Statistics and Data Science (IDWSDS), Use of Artificial Intelligence and Statistics in the World of Mental Health session, Virtual. "Alzheimer's Disease Subtyping through Integration of Longitudinal Cognitive Function, Vascular Risk Factors, and Omics Data Using Novel Latent Mixture Model". 10/8/2024
5. The Health & Aging Brain Study - Health Disparities (HABS-HD) annual meeting, Fort Worth, Texas. "A Novel Machine Learning method for Disease Subtyping Using Longitudinal Clinical and High-Dimensional Omics Data". 9/26/2024
6. New England Statistics Symposium (NESS), Advances In Statistical Machine Learning With Innovative Applications session, Storrs, CT. "A Semi-Parametric Approach for Longitudinal Outcome-Guided Disease Subtyping Using High-Dimensional Omics Data". 5/22/2024
7. AD/PD, Ancestry and genetics of neurodegeneration session, Lisbon, Portugal. "Genome-wide Gene-based study in Multi-ethnic Cohorts identifies Genes that Interact with Vascular Risk Factors in Alzheimer's Disease". 3/6/2024. ***Junior Faculty Award***.
8. NIA Annual Tri-Consortia Meeting-AMP AD-MODEL AD-TREAT AD, Virtual. "Multi-region brain transcriptomes uncover two subtypes of aging individuals with differences in Alzheimer risk and the impact of APOEe4". 12/2021
9. Accelerating Medicines Partnership Program for Alzheimer's Disease (AMP AD) MODEL-AD TREAT-AD Joint Annual Meeting, Virtual. "Population Structure of the Older Brain Using Multi-Region Transcriptomic Data Approach". 12/10/2020

Contributed:

1. AD/PD, Genetic and Epidemiological Insights in AD & PD session, Vienna, Austria. “Integrative Multi-Omics Analysis Reveals Molecular Pathways Interacting with Vascular Pathologies in Alzheimer’s Disease”. 4/2/2025.
2. American Society of Human Genetics (ASHG), Denver, CO. “Novel short tandem repeats on the Telomere-to-Telomere reference genome are associated with Alzheimer’s disease neuropathology”. 11/6/2024
3. AD/PD, Gothenburg, Sweden, Hybrid. “Genetic Association Between Alzheimer’s Disease and Cardio-Cerebrovascular Risk Factors”. 3/2023
4. JSM, Virtual. “Unsupervised Clustering of Aging Individuals Using Multi-Region Brain Transcriptomes”. 8/2021
5. JSM, Denver, CO. “Control Confounding by Familial Relatedness in Genome-Wide Association Studies”. 7/2019
6. JSM, Vancouver, British Columbia, Canada. “Efficient Statistical Methods for Genome-Wide Association Studies with Disease Family History Data”. 7/2018. ***ASA Korean International Statistical Society Outstanding Student Paper Award***
7. JSM, Baltimore, MD. “Efficient Statistical Methods for Association Studies with Dense Genotypes and Family History of Disease”. 8/2017
8. JSM, Chicago, IL. “Estimation of Genetic Risk Function with Covariates in the Presence of Missing Genotypes”. 8/2016. ***ASA Honorable Mention for Student Paper Award, Risk Analysis Section***
9. The Association for Clinical and Translational Science (ACTS), Washington DC. “Age Specific Risk of Parkinson's Disease with *LRRK2* G2019S mutations and Covariates”. 4/2016
10. American Public Health Association Annual meeting and Exposition, Boston, MA. “Association analysis of complex diseases using triads, parent-child dyads and singleton monads”. 11/2013
11. NSF-AGEP National meeting, Iowa city, IA. “Mathematical Modeling of the Immune Response in Tissues”. 7/2007

Posters:

32. “Molecular Pathways Underlying Neurodegenerative and Vascular Pathologies in Alzheimer's Disease using Multi-Omics Analysis”. *Alzheimer’s Association International Conference (AAIC)*, Toronto, Canada, 7/2025, Poster.
33. “Multi-ancestry Genome-wide Gene-Vascular Risk Factors Interaction Analyses in Alzheimer’s Disease”. *AAIC*, Philadelphia, PA, 7/2024, Poster.
34. “Multi-ancestry Genome-wide Gene-Vascular Risk Factors Interaction Analyses in Alzheimer’s Disease”. *Alzheimer’s Disease Sequencing Project (ADSP)*, Rockville, MD, 3/2024, Poster.
35. “Multi-ethnic genome-wide, gene-based study identifies genes that interact with vascular risk factors in Alzheimer’s Disease”. *AAIC*, Amsterdam, Netherlands, 8/2023, Poster.
36. “Association of short tandem repeats with neuropathological features in late-onset of Alzheimer’s disease brains”. *AAIC*, San Diego, CA, 7/2022, Poster.
37. “Multi-region brain transcriptomes uncover two subtypes of aging individuals with differences in Alzheimer risk and the impact of APOEe4”. *AAIC*, Denver, CO, 7/2021, Poster.
38. “Age Specific Penetrance of the LRRK2 G2019S Mutation in the Michael J. Fox Ashkenazi Jewish LRRK2 Consortium”. *Annual Research Poster Day, TRANSFORM programs, Irving Institute for Clinical and Translational Research*, Columbia University, NY, 4/2015, Poster.
39. “Multiple genes on Chromosome 21 are associated with individual differences in plasma levels of beta amyloid peptides in adults with Down syndrome”. *US-Korea Conference on Science (UKC)*, NJ, 8/2013, Poster. **KSEA Outstanding Poster Award**
40. “Association analysis of complex diseases using triads, parent-child dyads and singleton monads”. *Practicum Poster Symposium, Department of Biostatistics*, Columbia University, NY, 5/2013, Poster.
41. “Association Analysis of Complex Diseases Using Triads, Parent-child Pairs, and Singleton Cases”. *NIH Summer Research Program Poster Day*, Bethesda, MD, 8/2012, Poster.

Invited Seminar Talks

1. The Center for Translational and Computational Neuroimmunology (CTCN) division seminar, Department of Neurology, Columbia University, NY. “A Novel Machine Learning method for Disease Subtyping Using Longitudinal Clinical and High-Dimensional Omics Data”. 10/3/2024
2. Alzheimer's Disease Research Center (ADRC)-Research Education Core (REC), Columbia University. “A Novel Machine Learning method for Disease Subtyping Using Longitudinal Clinical and High-Dimensional Omics Data”. 9/20/2024
3. ADSP-PHC External Advisory Board Meeting, Hybrid. “ADSP-PHC Vascular Risk Factors Harmonization”. 6/18/2024
4. ADSP-PHC Investigators' Meeting, Nashville, TN, Hybrid. “ADSP-PHC Vascular Risk Factors Harmonization”. 6/6/2024
5. Sergievsky Faculty Meeting, Department of Neurology, Columbia University, NY. “Multi-Omics of Cardio-Cerebrovascular Risk Factors in Alzheimer’s Disease”. 5/14/2024
6. Neurology Grand Rounds, Ludwig Pilot Grant in Neurodegeneration, Department of Neurology, Columbia University, NY. “Multi-Omics of Cardio-Cerebrovascular Risk Factors in Alzheimer’s Disease”. 4/26/2024
7. ADSP-PHC Workgroup Meeting, Hybrid. “ADSP-PHC Vascular Risk Factors Harmonization”. 2/15/2024
8. ADSP-PHC Investigators’ Meeting, Nashville, TN, Hybrid. “Vascular Risk Factors Harmonization”. 6/2023
9. Neurology Grand Rounds, Department of Neurology, Columbia University, NY. “Cerebrovascular Pathology in Alzheimer’s Disease: Mechanisms and Models”. 3/2023
10. CTCN division seminar, Department of Neurology, Columbia University, NY. “Short Tandem Repeats in Alzheimer’s Disease”. 7/2022
11. CTCN division seminar, Department of Neurology, Columbia University, NY. “Gene interacts with cerebrovascular risk factors to alter Alzheimer’s disease risk”. 9/2021
12. CTCN division seminar, Department of Neurology, Columbia University, NY. “Exploring subtypes of aging human brains using transcriptomic profiles”. 11/2020
13. Precision Medicine Working Group, Department of Biostatistics, Columbia University, NY. “Population structure of the aging human brain”. 10/2020
14. Graduate Student Research Seminars, Department of Biostatistics, Columbia University, NY. “Statistical Methods for Association Studies with Dense Genotypes and Family History of Disease”. 5/2017
15. Graduate Student Research Seminars, Department of Biostatistics, Columbia University, NY. “Estimation of Genetic Risk Function with Covariates in the Presence of Missing Genotypes”. 3/2016
16. Graduate Student Research Seminars, Department of Biostatistics, Columbia University, NY. “Estimation of Genetic Risk Function with Covariates in the Presence of Missing Genotypes”. 10/2015
17. Department of Computational Science and Engineering, Yonsei University, Seoul, South Korea. “Exploring the validity of spatial model in the spread of Foot-and-mouth Disease”. 3/2011
18. Department of Computational Science and Engineering, Yonsei University, Seoul, South Korea. “Traffic flow with Non-linear first-order equation”. 5/2010
19. Department of Computational Science and Engineering, Yonsei University, Seoul, South Korea. “Reaction Diffusion Equation with Convection equation”. 3/2010