2022 AAIC Abstracts

- Assessing a Network-Specific Polygenic Risk Score for Alzheimer's Disease in the Midwestern Amish and Across Diverse Ancestries. Michael D. Osterman1,2, Yeunjoo E. Song1, Nicholas R. Wheeler1, Renee A. Laux1, Larry D. Adams3, Laura J. Caywood3, Michael B. Prough3, Jason E. Clouse3, Sharlene D. Herington3, Susan H. Slifer3, Audrey Lynn1, Jacquelaine Bartlett1, M. Denise Fuzzell1, Sarada L. Fuzzell1, Sherri D. Hochstetler1, Kristy L. Miskimen1, Leighanne R. Main2,4, Daniel A. Dorfsman3,5, Paula Ogrocki6,7, Alan J. Lerner6,7, Jeffery M. Vance3,5, Michael L. Cuccaro3,5, William S. Bush1,2, William K. Scott3,5, Margaret A. Pericak-Vance3,5, Jonathan L. Haines1,2, Alzheimer's Disease Sequencing Project (ADSP)
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- Mosaic Loss of Chromosome Y in Peripheral Blood Cells and Cognitive Status in the Amish. Yeunjoo E. Song1,2, Kristy L. Miskimen1, Renee A. Laux1, M. Denise Fuzzell1, Sarada L. Fuzzell1, Sherri D. Miller1, Leighanne R. Main2,3, Michael D. Osterman1,2, Audrey Lynn1,2, Michael B. Prough5, Susan H. Slifer5, Larry D. Adams5, Laura J. Caywood5, Jason E. Clouse5, Sharlene D. Herington5, Daniel A. Dorfsman5, Jeffery M. Vance5,6, Michael L. Cuccaro5,6, Paula K. Ogrocki4, Alan J. Lerner4, William K. Scott5,6, Margaret A. Pericak-Vance5,6, William S. Bush1,2, and Jonathan L. Haines1,2,3
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- Detecting genetic loci for preservation of cognition in the Midwestern United States Amish. Leighanne R Main1,2, Yeunjoo E Song1,2, Renee Laux1, Kristy Miskimen1, Michael L Cuccaro3, Paula Ogrocki4,5, Alan J Lerner4,5, Jeffery M Vance3, M Denise Fuzzell1, Sarada Fuzzell1, Sherri D Hochstetler3, Michael Osterman1,2, Audrey Lynn1, Daniel Dorfsman3, Laura J Caywood3, Michael B Prough3, Larry D Adams3, Jason E Clouse3, Sharlene D Herington3, William K Scott3, Margaret A Pericak-Vance3 and Jonathan L Haines1,2
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- Distinct features of rapidly progressive Alzheimer's disease. Ping Wang1, Audrey Lynn1, Yeunjoo E. Song1,2, Jonathan L. Haines1,2
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- Identifying context-specific genetic variants and molecular pathways associated with resilience to Alzheimer's disease in the induced immune response. Yousef Mustafa 1, 2, Adam C. Naj 3,4, Jennifer E. Below 5, William S. Bush 1.
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- Leveraging the use of meta-analysis summary statistics to improve gene expression prediction models. Makaela Mews 1, Adam C. Naj 2,3, Jennifer E. Below 4, William S. Bush 5.
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- A Haptoglobin (HP) Exon Deletion Polymorphism Alters the Effect of APOE Alleles on Alzheimer's Disease in European-Descent People with APOEε4. Haimeng Bai 1,2, Adam C Naj 3, Yuk Yee Leung 4, Li-San Wang 4, Gerald D Schellenberg 4, Richard Mayeux 5, Margaret A Pericak-Vance 6, Lindsay A. Farrer 7, Logan Dumitrescu 8, Timothy J. Hohman 8, Brian W Kunkle 6, Eden R Martin 6, Jonathan L. Haines 1,7 William S. Bush 1,7
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- Modeling gene expression on the X chromosome in the brain for transcriptome-wide association studies. Xueyi Zhang1, Shengru Guo 2, Adam C. Naj 3, 4 Jennifer E. Below 5, Brian W. Kunkle 2, Logan Dumitrescu 6, Eden R. Martin 2,7, William S. Bush1,8

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- Spatial Distribution of Rare Missense Variants Within Protein Structures is Associated with AD Risk. Bowen Jin1, John A. Capra2, Penelope Benchek3, Nicholas Wheeler3, Adam C. Naj4, Kara L. Hamilton-Nelson5, John J. Farrell6, Yuk Yee Leung 4, Brian Kunkle5,7, Badri Vadarajan8, Gerard D. Schellenberg4, Richard Mayeux8, Li-san Wang4, Lindsay A. Farrer6, Margaret A. Pericak-Vance5,7, Eden R. Martin5,7, Jonathan L. Haines3, Dana C. Crawford3, William S. Bush3*
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- African-ancestry based polygenic risk scores improve Alzheimer disease risk prediction in individuals of African Ancestry. Bilcag Akgun, Kara L. Hamilton-Nelson, Nicholas A. Kushch, Larry D. Adams, Takiyah D. Starks, Izri M.Martinez Soto, Renee A. Laux, Patrice L. Whitehead, Brian Kunkle, Alzheimer's Disease Genetic Consortium,Michael L. Cuccaro, Jeffery M. Vance, Christiane Reitz, Goldie S. Byrd, Jonathan L. Haines, Gary W. Beecham,Margaret A. Pericak-Vance, Farid Rajabli.

- Fine-mapping of chromosome 9p21 linkage in Puerto Rican Alzheimer disease families. Katrina Celis, Farid Rajabli, Shaina A. Simon, Liyong Wang, Kara L. Hamilton-Nelson, Larry D. Adams, Pedro R. Mena, Sergio Tejada, Patrice L. Whitehead, Derek J. Van Booven, Briseida E. Feliciano-Astacio, Angel Chinea, Nereida I. Feliciano, Heriberto Acosta, Clifton L. Dalgard, Jonathan L. Haines, Fulai Jin, Jeffery M. Vance, Michael L. Cuccaro, Gary W. Beecham, Derek M. Dykxhoorn, Anthony J. Griswold, Margaret A. Pericak-Vance.

- Exploring effect of known Alzheimer disease genetic loci in the Peruvian population. Mario Cornejo-Olivas, MD1,2, Farid Rajabli, PhD3, Nicholas A. Kushch3, Pedro Ramon Mena, MD3, Maryenela Illanes-Manrique, MD1, Larry D. Adams3, Patrice L. Whitehead, BS3, Kara L. Hamilton-Nelson, MPH3, Karina Milla-Neyra, BS1, Victoria Marca, MSc1, Elison Sarapura-Castro, MD1, Carla Manrique- Enciso, B.Sc1, Koni K. Mejía, MD4, Rosario Isasi, JD, MPH3,5, Sheila Castro-Suarez, MD6,7, Ismael Araujo-Aliaga, BS8, Nilton Custodio, PhD, MD9, Rosa Montesinos, MD9, Anthony J. Griswold, PhD3, Clifton L. Dalgard, PhD, CLS10, Gary W. Beecham, PhD3,5, Michael L. Cuccaro, PhD3,5, Jeffery M. Vance, MD, PhD3,5 and Margaret A. Pericak-Vance, PhD3,5, (1)Neurogenetics Research Center, Instituto Nacional de Ciencias Neurológicas, Lima, Peru, (2)Center for Global Health, Universidad Peruana Cayetano Heredia, Lima, Peru, (3)John P. Hussman Institute for Human Genomics, Miller School of Medicine, University of Miami, Miami, FL, USA, (4)Daniel Alcides Carrion National Hospital, Callao, Peru, (5)Dr. John T. Macdonald Foundation Department of Human Genetics, University of Miami Miller School of Medicine, Miami, FL, USA, (6)CBI en Demencias y Enfermedades Desmielinizantes del Sistema Nervioso, Instituto Nacional de Ciencias Neurológicas, Lima, Peru, (7)Atlantic Senior Fellow for Equity in Brain Health at University of California San Francisco., San Francisco, CA, USA, (8)Neurogenetics Research Center, Instituto Nacional de Ciencias Neurologicas, Lima, Peru, (9)Instituto Peruano de Neurociencias, Lima, Peru, (10)Uniformed Services University of the Health Sciences, Bethesda, MD, USA

- Admixed ancestral composition with Amerindian predominance at the Peruvian Alzheimer Disease Initiative (PeADI). Diana Cubas-Montecino1, Farid Rajabli, PhD2, Maryenela Illanes-Manrique, MD1, Nicholas A. Kushch2, Pedro Ramon Mena, MD2, Patrice L. Whitehead, BS2, Kara L. Hamilton-Nelson, MPH2, Karina Milla- Neyra, BS1, Victoria Marca, MSc1, Elison Sarapura-Castro, MD1, Carla Manrique-Enciso, B.Sc1, Koni K. Mejía, MD3, Rosario Isasi, JD, MPH2,4, Sheila Castro-Suarez, MD5,6, Ismael Araujo-Aliaga1, Nilton Custodio, PhD, MD7, Rosa Montesinos, MD7, Anthony J. Griswold, PhD4, Clifton L. Dalgard, PhD, CLS8, Gary W. Beecham, PhD2,4, Michael L. Cuccaro, PhD2,4, Jeffery M. Vance, MD, PhD2,4, Mario Cornejo- Olivas, MD1,9 and Margaret A. Pericak-Vance, PhD2,4.
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- Genomic assessment of early-onset AD identifies novel risk loci and an incomplete genetic overlap with late-onset AD. Eder L. da Fonseca, PhD1, Melissa J. Francois, MPH1, Jiji T. Kurup, PhD2, Chengran Yang, PhD3, Susan H. Slifer, PhD1, Eden R. Martin, PhD1, Brian W. Kunkle, PhD1, Adam Naj, PhD4, Lindsay A. Farrer, PhD5, Jonathan L. Haines, PhD6, Richard P. Mayeux, PhD7, Gerard D. Schellenberg, PhD8, Margaret A. Pericak-Vance, PhD1, Maria V. Fernandez, PhD3, Carlos Cruchaga, PhD3, Christiane Reitz, PhD2, Gary W. Beecham, PhD1, and the Alzheimer Disease Genetics Consortium (ADGC).
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- Examining the impact of a rare protein-truncating SORL1 variant on AD pathology. Brooke A. DeRosa1,2,3, Shaina A. Simon1,2,3, Michael L. Cuccaro1,2,3, Holly N. Cukier1,3,4, Jeffery M. Vance1,2,3, Margaret A. Pericak-Vance1,2,3,4, Derek M. Dykxhoorn1,2,3
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- Association of mitochondrial haplogroups and cognitive impairment in the Amish. Daniel A. Dorfsman1,2, Michael B. Prough, MS2, Laura J. Caywood2, Jason E. Clouse2, Sharlene D. Herington2, Susan H. Slifer, PhD2, Larry D. Adams2, Renee A. Laux, MS3, Yeunjoo E. Song, PhD3, Audrey Lynn, PhD3, M. Denise Fuzzell3, Sarada L. Fuzzell3, Sherri D. Hochstetler3, Kristy L. Miskimen, PhD3, Leighanne R. Main4,5, Michael D. Osterman, MPH3,5, Paula K. Ogrocki, PhD6,7, Alan J. Lerner, MD6,7, Jeffery M. Vance, MD, PhD1,2, Michael L. Cuccaro, PhD1,2, Jonathan L. Haines, PhD8,9, Margaret A. Pericak-Vance, PhD1,2 and William K. Scott, PhD1,2,
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- The Relationship of Alzheimer's Disease, Stroke and Ancestry in the Puerto Rican Alzheimer Disease Population. Briseida E. Feliciano-Astacio, MD1•2, Gary W. Beecham, PhD3,4,5,6, Kara L. Hamilton-Nelson, MPH3•5•7, Concepcion Silva-Vergara, MBA2, Maricarmen Contreras, BA5, Pedro Ramon Mena, MD4,5, Larry D. Adams3,5,?,B,9,10, Heriberto Acosta, MD11, Nereida I Feliciano, MD12, Alexandra Lopez, BSN2, Michael L. Cuccaro, PhD3,4,5,?,B,13, Jeffery M. Vance, MD, PhD3·4·5·7•8·14 and Margaret A. Pericak-Vance, PhD4,5,7,15, (1)Briseida Feliciano, MD, APO Caguas, PR, USA,

- Alzheimer Disease candidate variants are associated with cerebral amyloid angiopathy. Dana Godrich1, Jeremy Pasteris1, Eden R. Martin1,2, Gerard Schellenberg3, Margaret A. Pericak-Vance1,2, Michael Cuccaro1,2, William K. Scott1,2, Walter Kukull4, Thomas Montine5, Gary W. Beecham1,2, and the Alzheimer Disease Genetics Consortium.
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- Analysis of Alzheimer Disease Plasma Biomarker pTau-181 in Individuals of Diverse Admixed Ancestral Backgrounds. Anthony J. Griswold1,2, Farid Rajabli1, Catherine Garcia-Serje1, Jamie Arvizu1, Emma Larkin-Gero1, Patrice L. Whitehead1, Kara L. Hamilton-Nelson1, Larry D. Adams1, Maricarmen Contreras1, Jose Javier Sanchez1, Sergio Tejada1, Pedro R. Mena1, Takiyah Starks3, Mario R Cornejo-Olivas4, Maryenela Illanes-Manrique4, Concepcion Silva5, Michael L. Cuccaro1,2, Jeffery M. Vance1,2, Briseida E. Feliciano-Astacio5, Goldie S. Byrd3, Gary W. Beecham1,2, Jonathan L. Haines6,7, and Margaret A. Pericak-Vance1,2
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- Transcriptomic Analysis of Whole Blood in Admixed Latinx Alzheimer Disease Cohorts. Anthony J. Griswold[1,2], Tianjie Gu[1], Derek Van Booven[1], Patrice L. Whitehead[1], Kara L. Hamilton-Nelson[1], Maricarmen Contreras[1], Jose Javier Sanchez[1], Sergio Tejada[1], Larry D. Adams[1], Pedro R. Mena[1], Concepcion Silva[3], Mario R Cornejo-Olivas[4], Maryenela Illanes-Manrique[4], Michael L. Cuccaro[1,2], Jeffery M. Vance[1,2], Briseida E. Feliciano-Astacio[3], William S. Bush[5,6], Gary W. Beecham[1,2], and Margaret A. Pericak-Vance[1,2]
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- Ancestral Analysis of the Presenilin-1 G206A Variant Reveals it as a Founder Event on an African Haplotype in the Puerto Rican Population. Kara L. Hamilton-Nelson[1], Anthony J. Griswold[1,2], Farid Rajabli[1], Patrice L. Whitehead[1], Maricarmen Contreras[1], Sergio Tejada[1], Pedro R. Mena[1], Jose Javier Sanchez[1], Larry D. Adams[1], Takiyah D. Starks[3], Concepcion Silva[4], Michael L. Cuccaro[1,2], Jeffery M. Vance[1,2], Goldie S. Byrd[3], Jonathan L. Haines[5,6], Gary W. Beecham[1,2], Briseida E. Feliciano-Astacio[4], and Margaret A. Pericak-Vance[1,2]
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- Diverse Ancestral Populations and the Alzheimer's Disease Sequencing Project (ADSP). Brian W. Kunkle, PhD, MPH[1,2] for the Alzheimer's Disease Sequencing Project (ADSP)
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- Characterization of a diverse Frontotemporal Dementia cohort, enriched for Caribbean Hispanic patients. Anisley Martinez, Farid Rajabli, Esther Gu, Sergio Tejada, Erika Negro, Humberto Acosta, Baumel, Camargo, Sun, Jeff Vance, Mike Cuccaro, Margaret Pericak-Vance, Karen Nuytemans.

- The Alzheimer's Disease Sequencing Project Follow Up Study (ADSP-FUS): increasing ethnic diversity in Alzheimer's disease (AD) genetics research. Pedro Ramon Mena, MD1, Brian W. Kunkle, PhD, MPH1, Kelley M. Faber, MS2,3, Larry D. Adams1, Jovita D.Inciute4, Patrice L. Whitehead, BS1, Tatiana M. Foroud, PhD2,3, Dolly Reyes-Dumeyer, BS5, Amanda B Kuzma, MS6, Yuk Yee Leung, PhD6, Adam C Naj, PhD6, Eden R. Martin, PhD1, Clifton L. Dalgard, PhD, CLS7, Gerard D. Schellenberg, PhD6, Li-San Wang, PhD6, Richard Mayeux, MD5, Badri N. Vardarajan, PhD8, Jeffery M. Vance, MD, PhD1, Michael L. Cuccaro, PhD1 and Margaret A. Pericak-Vance, PhD1.
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- Characterization of chromosome 5q35 risk locus in African Ancestry population. Karen Nuytemans, Farid Rajabli, Melissa Jean-Francois, Larry D. Adams, Takiyah D. Starks, Patrice L. Whitehead, Brian W. Kunkle, Allison Caban-Holt, The NIA-LOAD Family-Based Study, Mike L. Cuccaro, Jeffery M. Vance, Jonathan L. Haines, Christiane Reitz, Goldie S. Byrd, Gary W. Beecham, Margaret A. Pericak-Vance

- A Novel Protective locus significantly reduces the ApoE ε4 risk for Alzheimer's Disease in African Ancestry. Marina Lipkin-Vasquez1, Farid Rajabli1, Gary W. Beecham1,2 ,Hugh C. Hendrie3, Olusegun Baiyewu4, Adesola Ogunniyi4, Sujuan Gao5, Nicholas A. Kushch1, Kara L. Hamilton-Nelson1, Juan Young1,2, Derek M. Dykxhoorn1,2, Karen Nuytemans1,2, Brian W. Kunkle1,2, Liyong Wang1,2, Fulai Jin6 , Xiaoxiao Liu6, Briseida E. Feliciano-Astacio7, Alzheimer's Disease Sequencing Project, Alzheimer's Disease Genetic Consortium, Clifton L. Dalgard8, Anthony J. Griswold1,2, Goldie S Bird9, Christiane Reitz10, Jonathan L. Haines11, Margaret A. Pericak-Vance1,2, Jeffery M. Vance1,2.

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- The Peruvian Alzheimer Disease Initiative (PeADI): An international effort model to increase diversity in AD research. Maryenela Illanes-Manrique, MD1, Pedro Ramon Mena, MD2, Karina Milla-Neyra, BS1, Larry D. Adams2,Koni K. Mejía, MD3, Julia Rios-Pinto, MSc1,4, Rosario Isasi, JD, MPH2,5, Angel Medina-Colque, PhD1,6,Gary W. Beecham, PhD2,5, Ivan Cornejo-Herrera, MD1,7,8, Jeffery M. Vance, MD, PhD2,5, Edward Ochoa-Valle, MD1,9, Sheila Castro-Suarez, MD10,11, Michael L. Cuccaro, PhD2,5, Elison Sarapura-Castro, MD1,Mario Cornejo-Olivas, MD1,12 and Margaret A. Pericak-Vance, PhD2,5. (1)Neurogenetics Research Center,Instituto Nacional de Ciencias Neurológicas, Lima, Peru, (2)John P. Hussman Institute for HumanGenomics, Miller School of Medicine, University of Miami, Miami, FL, USA, (3)Daniel Alcides CarrionNational Hospital, Callao, Peru, (4)Universidad Peruana Los Andes, Huancayo, Peru, (5)Dr. John T.Macdonald Foundation Department of Human Genetics, University of Miami Miller School of Medicine,Miami, FL, USA, (6)Dirección Regional de Salud de Puno, Puno, Peru, (7)Hospital Hipolito de Tacna,Tacna, Peru, (8)Universidad Privada de Tacna, Tacna, Peru, (9)Hospital Regional de Cusco, Cusco, Peru,(10)Atlantic Senior Fellow for Equity in Brain Health at University of California San Francisco., SanFrancisco, CA, USA, (11)CBI en Demencias y Enfermedades Desmielinizantes del Sistema Nervioso,Instituto Nacional de Ciencias Neurológicas, Lima, Peru, (12)Center for Global Health, UniversidadPeruana Cayetano Heredia, Lima, Peru.

- Intragenic loci within TOMM40 enhances APOE expression in human microglia. Oded Oron, PhD1, Aura Maria Ramirez, PhD1, Liyong Wang, Ph.D.1,2, Marina Lipkin Vasquez, PhD1, BrookeA DeRosa, PhD1, Katrina Celis, MD1, Alessandra Chesi, PhD3,4, Struan F.A. Grant, PhD3,4, Juan Young,

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- Plasma pTau181 is associated with impaired cognition in the Old Order Amish and adds additional information beyond the known genetic risk factors for AD. Michael B. Prough1, Laura J. Caywood1, Jason E. Clouse1, Sharlene D. Herington1, Susan H. Slifer1, Daniel A. Dorfsman1, Larry D. Adams1, Reneé A. Laux2, Yeunjoo E. Song2, Audrey Lynn2, M. Denise Fuzzell2, Sarada L. Fuzzell2, Sherri D. Hochstetler2, Kristy Miskimen2, Leighanne R. Main3,4, Michael D. Osterman2,4, Paula Ogrocki5,6, Alan J. Lerner5,6, Jeffery M. Vance1,7, Michael L. Cuccaro1,7, Jonathan L. Haines2,4, William K. Scott1,7, Margaret A. Pericak-Vance1,7
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- Using Oligodendrocytes for studies in Alzheimer disease. Aura M. Ramirez, Jihanne Shepherd, Shaina Simmon, Oded Oron, Marina Lipkin, Sofia Moura, Maria Muniz, Farid Rajabli, Liyong Wang, Xiaoxiao Liu, Fulai Jin, Brian Kunkle, Karen Nuytemans, Anthony Griswold, Juan Young, Derek M. Dykxhoorn, Jeffery M. Vance.

- Sex-specific DNA methylation differences associated with Alzheimer's disease. Juan I. Young, Achintya Varma, Lisette Gomez, Hannah Dykxhoorn, Brian Kunkle, Lily Wang, Eden R. Martin

- Harnessing Chromatin 3D interactions to Understand Ancestry-Specific Alzheimer Disease (AD) risk. Liyong Wang, Ph.D.1,2, Xiaoxiao Liu3, Oded Oron, PhD1, Wanying Xu3, Jack Trittipo1, Farid Rajabli, PhD1, Derek M. Dykxhoorn, Ph.D.1,2, Anthony J. Griswold, PhD1,2, Margaret A. Pericak-Vance, PhD1,2, Juan Young, PhD1,2, Fulai Jin, PhD3,4 and Jeffery M. Vance, MD, PhD1,2
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- Depressive Symptoms Associated with an Earlier Age at Onset Differ as a Function of Race-Ethnicity: An Exploratory Analysis. Andrew Zaman, PhD1, Pedro Ramon Mena, MD2, Larry D. Adams1, Maricarmen Contreras, BA1, Faina C Lacroix, MPH1, Sergio Tejada, MD1, Takiyah D. Starks, BS, MS1, Briseida E. Feliciano-Astacio, MD3, Concepcion Silva, MBA3, Allison M Caban-Holt, PhD4, Goldie S. Byrd, PhD4, Izri Martinez, MD5, Temitope Ayodele, BS5, Penelope Baez5, Gabrielle Blackshire6, Sara Kennedy, PhD6, Christiane Reitz, PhD, MD7, Jonathan L. Haines, PhD8,9, Jeffery M. Vance, MD, PhD1, Margaret A. Vance, PhD1 and Michael L. Cuccaro, PhD1.
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- Novel circling SWAT for deep learning based diagnostic classification of Alzheimer's disease: Application to metabolome data. Taeho Jo, Junpyo Kim, Paula Bice, Kevin Huynh, Tingting Wang, Peter J. Meikle, Rima Kaddurah-Daouk, Kwangsik Nho* and Andrew J. Saykin*, for the Alzheimer's

Disease Neuroimaging Initiative (ADNI), Alzheimer's Disease Metabolomics Consortium (ADMC) and AI4AD Consortium

- Genome-wide meta-analysis employing the African Genome Resources panel identifies novel Alzheimer disease risk loci in African-Americans. Jiji T. Kurup, MSc1, Brian W. Kunkle, PhD2, Kara Hamilton-Nelson, MPH2, Melissa Jean-Fancois, MPH2, Michael Schmidt, PhD2, Alzheimer's Disease Genetics Consortium, Eden R. Martin, PhD2, Li-San Wang, PhD7, Gary W. Beecham, PhD2, Lindsay A. Farrer, PhD3, Jonathan L. Haines, PhD4, Goldie S. Byrd, PhD5, Gerard D. Schellenberg, PhD6, Richard Mayeux, MD, MSc1, Margaret A. Pericak-Vance, PhD2, Christiane Reitz, MD, PhD1

- No added value of Sex and APOE*4 stratification for Alzheimer's Disease Genetic Risk Scores. Michael E. Belloy1, Yann Le Guen1, Michael D. Greicius1, and Andre Altmann2
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- Association Analysis on Alzheimer's Disease Sequencing Project (ADSP) 16,905 Whole-Genome Sequence Data. Wan-Ping Lee, PhD1,2, Gina M Peloso, PhD3, Achilleas N Pitsillides, PhD3, Nancy Heard-Costa, PhD4,5, Hui Wang, PhD1·2, Yuk Yee Leung, PhD1·6, Jonathan L. Haines, PhD7·8, Anita L. Destefano, PhD3·4 and Collaboration on Alzheimer's Disease Research (CADRE), and The Cohorts for Heart and Aging Research in Genomic Epidemiology (CHARGE)

- Multi-Ancestry Genome-wide Association Analysis of Late-Onset Alzheimer's Disease (LOAD) in 60,941 Individuals Identifies a Novel Cross-Ancestry Association in LRRC4C. Adam C. Naj, PhD1,2, Christiane Reitz, PhD, MD3,4, Farid Rajabli, PhD5, Gyungah R. Jun, PhD6,7, PenelopeBenchek, PhD8, Giuseppe Tosto, MD, PhD3,4, Jin Sha, MS1, Congcong Zhu, MS6, Nicholas A. Kushch5, Wan-Ping Lee, PhD2,9, Jacob Haut, BS1, Kara L. Hamilton-Nelson, MPH5,10, Nicholas R. Wheeler, PhD8, Yi Zhao, MS2, John Farrell, PhD6, Jaeyoon Chung, PhD6, Michelle Grunin, PhD8, Yuk Yee Leung, PhD2,9,Donghe Li, PhD6, Eder Lucio da Fonseca, PhD5, Jesse B. Mez, MD, MS6,11, Ellen L Palmer, PhD8, Jagan A. Pillai, MD, PhD12,13, Richard Sherva, PhD6,14, Yeunjoo E. Song, PhD8, Xiaoling Zhang, PhD6,7, Taha Iqbal, MS1, Omkar Pathak, MS2, Otto Valladares, MS2,9, Amanda B. Kuzma, MS2,9, Brian W. Kunkle, PhD, MPH5,10, William S. Bush, PhD8, Li-San Wang, PhD2,9, Lindsay A. Farrer, PhD6,7, Jonathan L. Haines, PhD8, Richard Mayeux, PhD,

MD3,4, Margaret A. Pericak-Vance, PhD5,10, and Gerard D. Schellenberg, PhD2 for the Alzheimer's Disease Genetics Consortium (ADGC)

- Novel Loci for Alzheimer Disease Identified by Genome Wide Association Study in Ashkenazi Jews. Donghe Li1, John J Farrell1, Jesse Mez2, Eden R. Martin6,7, William S. Bush9, Richard Mayeux10, Jonathan L. Haines9, Margaret A. Pericak Vance6–8, Li-San Wang11, Gerard D. Schellenberg11, Kathryn L. Lunetta4, Lindsay A. Farrer1–5

- Multiple Viruses Detected in Human DNA are Associated with Alzheimer Disease Risk. Marlene Tejeda1, John Farrell1, Congcong Zhu1, Lee Wetzler2,3, Kathryn L. Lunetta4, William S. Bush5, Eden R. Martin6, Li-San Wang7, Gerard Schellenberg7, Margaret A. Pericak-Vance6, Jonathan L. Haines5, Lindsay A. Farrer1,4, Richard Sherva1

- Variants near X-Chromosome Genes NLGN4X and PTCHD1 are Significantly Associated with Alzheimer's Disease Risk. Jaeyoon Chung1, Xinyu Sun1, Mike Schmidt6, Yeunjoo E. Song7,8, Michelle Grunin7, Ellen Palmer7, William Bush7, Adam C Naj9, Farid Rajabli6, Kara L Hamilton-Nelson6, Xiaoling Zhang1,4, Yuk Yee Leung9, Li-San Wang9, Richard Mayeux10, Gerald D Schellenberg9, Margaret A Pericak-Vance6, Jonathan L. Haines7,8, Lindsay A. Farrer1–5, Brian W Kunkle6, Eden R Martin6

- Identification of Genetic Variants and Serum Metabolites Associated with Blood-derived Mitochondrial DNA Copy Number. Tong Tong1,2, John J. Farrell2, Congcong Zhu2, Zainab Khurshid1,2, Eden R. Martin3, William Bush4, Margaret A. Pericak-Vance3, Li-San Wang5, Gerard Schellenberg5, Jonathan L. Haines4, Kathryn L. Lunetta6, Lindsay A. Farrer1,2,6, and Xiaoling Zhang1,2,6 on behalf of the Alzheimer's Disease Sequencing Project (ADSP)

- Association of short tandem repeats with neuropathological features in late-onset of Alzheimer's disease brains. Annie J. Lee1,2, Hans Ulrich-Klein3,7 Julie A. Schneider4,5,6, David A. Bennett4,5, Philip L. De Jager1,2,3,7, Giuseppe Narzisi8, Mike Zody8, Badri N. Vardarajan1,2,3

- APOE missense variant R145C is associated with increased Alzheimer's disease risk in African ancestry individuals with the APOE ε3/ε4 genotype. Yann Le Guen1,2, PhD, Ana-Caroline Raulin3, PhD, Mark W. Logue, PhD4,5,6,7, Richard Sherva, PhD6, Michael E. Belloy1, PhD, Sarah J. Eger1, BA, Annabel Chen1, BSc, Gabriel Kennedy1, BSc, Lindsey Kuchenbecker3, BSc, Justin P. O'Leary3, BSc, Rui Zhang, MS4, Victoria C. Merritt, PhD8,9,10, Matthew S. Panizzon, PhD9,11,12, Richard L. Hauger, MD8,9,11, Michael J. Gaziano MD12,13,

Guojun Bu3, PhD, Timothy A. Thornton14, PhD, Lindsay A. Farrer6, PhD, Valerio Napolioni15, PhD, Zihuai He1,16, PhD, and Michael D. Greicius1, MD, MPH

- ADSP Functional Genomics: from gene, to function to mechanisms and targets. Carlos Cruchaga, on behalf of the ADSP Functional Genomics Consortium

- Pleiotropic effect of LRRK2 on Parkinson-associated proteins and processing of pathological alpha-synuclein in myeloid cells. Niko-Petteri Nykänen1,2,3, Chengran Yang1,2,3, Oscar Harari1,2,3, Albert A. Davis3,4, Carlos Cruchaga1,2,3, PPMI consortium and Bruno A. Benitez1,2,3,5
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- Comparative analysis of CSF biomarker measurement in Alzheimer's disease by multiplex SOMAscan platform and immunoassay-based ELISA approach. Jigyasha Timsina1,2, Duber Gomez-Fonseca1,2, Fengxian Wang1,2, Lihua Wang1,2, Agustin Ruiz3,4, Ignacio Alvarez5, Miquel Aguilar5, Pau Pastor5, Yun Ju Sung1,2,6, Carlos Cruchaga1,2,7
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- CSF proteo-genomic studies identify an interaction between LRRK2 genetic variants and GRN, GPNMB, CTSB, and ENTPD1. Lihua Wang1,2, Chengran Yang1,2, Samira Mafi Moghaddam1,2, Jigyasha Timsina1,2, Priyanka Gorijala1,2, Fengxian Wang1,2, Ignacio Alvarez3, Miiquel Aguilar3, Agustin Ruiz4,5, Pau Pastor4,5, Yun Ju Sung1,2,6, Carlos Cruchaga1,2,7
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- Large-scale pQTL analysis of over 3,000 CSF samples. Daniel Western1,2, Jigyasha Timsina1,2, Lihua Wang1,2, Ciyang Wang1,2, Agustin Ruiz, Pau Pastor, Yun Ju Sung1,2,3, Carlos Cruchaga1,2,4 1Department of Psychiatry, Washington University School of Medicine, St. Louis, MO, USA. 2NeuroGenomics and Informatics Center, Washington University School of Medicine, St. Louis, MO, USA. 3Division of Biostatistics, Washington University School of Medicine, St. Louis, MO, USA. 4Hope Center for Neurologic Diseases, Washington University, St. Louis, MO, US

- Identification of novel genetic variants and biomarkers for cognitive decline in Alzheimer's disease. Muhammad Ali, PhD1,2, Fengxian Wang, PhD1,3, Samira Mafimoghaddam, PhD1,2, Jack Euesden, PhD4, Chloe Robins, PhD4, David J. Pulford, PhD4 and Carlos Cruchaga, PhD1,2,3,5, (1)Washington University in St. Louis School of Medicine, St. Louis, MO, USA, (2)NeuroGenomics and Informatics Center, St. Louis, MO,USA, (3)Hope Center for Neurological Disorders, St. Louis, MO, USA, (4)GlaxoSmithKline Medicines R&D, Stevenage, SG1 2NY, UK, Hertfordshire, United Kingdom, (5)Knight Alzheimer Disease Research Center, Saint Louis, MO, USA.

- Sex-specific molecular profiling to understand pathology and identify causal genes and drug targets for Alzheimer's disease. Yun J Sung, PhD1, Anh Do, PhD1, Jigyasha Timsina, MS2, Lihua Wang, PhD3, Fengxian Wang, PhD2 and Carlos Cruchaga, PhD2,4.
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- Identification of genetic regulators of human metabolites in CSF. Ciyang Wang1, Samira Mafimoghaddam, PhD2,3, Brenna C Novotny, MS2,4, Yun J Sung, PhD5,6,7, Fabiana H.G. Farias, PhD8,9, Chengran Yang, PhD7,10,11,

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- Genome-Wide Association Study for CSF Aβ42, Tau, and pTau in a Large Multi-cohort Study to Identify Novel AD Genetic Variants. Duber Gomez-Fonseca1,2 , Yun Ju Sung1,2, Fengxian Wang1,2, Anne M. Fagan4,5, Kaj Blennow6,7, Henrik Zetterberg6,7,8,9, Amanda Heslegrave8,9, Per M Johansson8,9,10, Johan Svensson11, Bengt Nellgård10, Alberto Lleó12, Daniel Alcolea12, Jordi Clarimon12, Lorena Rami13, José Luis Molinuevo13,14,15, Marc Suárez-Calvet15,16,17, Estrella Morenas-Rodríguez16,17,20, Gernot Kleinberger16,18, Christian Haass16,17,18, Michael Ewers19, Carlos Cruchaga1,2,3,4,5,*
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- Use of the human reference genome 38 enhances integration of the multi-tissue proteomics with genetics and disease. Heng Yi, MS1,2, Qijun Yang1,2, Jigyasha Timsina, MS1,2, Fengxian Wang, PhD1,2, Lihua Wang, PhD1,2, Carlos Cruchaga, PhD1,2,3 and Yun Ju Sung, PhD1,2, (1)Washington University in St. Louis School of Medicine, St. Louis, MO, USA, (2)NeuroGenomics and Informatics Center, St. Louis, MO, USA, (3)Hope Center for Neurological Disorders, St. Louis, MO, USA

- A large-scale genome-wide association study of early-onset Alzheimer disease. Achal Neupane, PhD1,2; Eder Lucio da Fonseca, PhD4; Jiji Thulaseedhara Kurup, PhD7; Margaret A. Pericak-Vance, PhD3,4; Eden R. Martin, PhD3,4; Gerard D. Schellenberg, PhD5; Christiane Reitz, MD PhD6,7; Gary W. Beecham, PhD 3,4; Carlos Cruchaga, PhD1,2; and Victoria Fernandez, PhD1,2

- GWAS for CSF TREM2 levels identify new variants implicated on TREM2 biology and Alzheimer disease. Samira Mafimoghaddam, PhD1,2, Lihua Wang, PhD1,2, Priyanka Gorijala, Msc1,2, Jigyasha Timsina, Msc1,2, Niko Nykanen, PhD1,2, Fengxian Wang, PhD1,2, Marta Marquié, MD, PhD3,4, Mercè Boada, MD, PhD3,4, Ignacio Alvarez, MSc5, Miquel Aguilar, Msc5, Pau Pastor, MD, PhD5, Agustín Ruiz, MD, PhD3,4, Yun Ju Sung, PhD1,2 and Carlos

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- Genetic architecture of plasma Alzheimer disease biomarkers. Joseph Bradley, Priyanka Gorijala, Suzanne E. Schindler, Yun Ju Sung, Samira Mafimoghaddam, Fengxian Wang, Carlos Cruchaga

- GWAS of Genetic Resilience to Age-Related Risk for Alzheimer's Disease in Admixed African Ancestry Individuals. Michael E. Belloy1, Yann Le Guen1, Sarah J. Eger1,Valerio Napolioni2, Zihuai He1–3, Elizabeth Mormino1,andMichael D. Greicius1,for the Alzheimer's Disease Neuroimaging Initiative.
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- Overlap of genetic risk for Lewy body and Alzheimer's diseasepathology. Seth Talyansky1, Yann Le Guen1,2, PhD, Kaitlyn Pham1, Michael E. Belloy1, PhD,Nandita Kasireddy1, Michael D. Greicius1, MD, MPH
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- Sex-specific genetic predictors of memory, executive function, and language performance. Jaclyn M. Eissman, BS1,2, Alexandra N. Smith, MS1,2, Shubhabrata Mukherjee, PhD, MS3, Michael L. Lee, PhD, MPH3, Seo-Eun Choi, PhD3, Phoebe Scollard, MA3, Emily H. Trittschuh, PhD4, Jesse B. Mez, MD, MS5, William S. Bush, PhD6, Corinne D Engelman, MSPH, PhD7, Qiongshi Lu, PhD7, David W. Fardo, PhD8,9, Keith F. Widaman, PhD10, Rachel F. Buckley, PhD11,12,13, Elizabeth C. Mormino, PhD14, Brian W. Kunkle, PhD, MPH15, Adam C. Naj, PhD16,17, Lindsay R. Clark, PhD7, Katherine A. Gifford,



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- Sex differences in white matter microstructure in aging and Alzheimer's disease: A multi-site free-water imaging study. Derek B. Archer1,2,NiranjanaShashikumar1, Varuna Jasodanand1, Elizabeth E. Moore1, Kimberly R. Pechman1, Murat Bilgel3, Lori L. Beason-Held3, Yang An3, Shannon L. Risacher4,5, Bennett A. Landman6,7,8, Angela L. Jefferson1,2,9, Andrew J. Saykin4,5, Susan M. Resnick3, Timothy J. Hohman 1Vanderbilt Memory and Alzheimer's Center, Vanderbilt University School of Medicine, Nashville, TN, USA2Vanderbilt Genetics Institute, Vanderbilt University Medical Center, Nashville, TN, USA3Laboratory of Behavioral Neuroscience, National Institute on Aging, National Institutes of Health, Baltimore, MD, USA4Indiana University School of Medicine, Indianapolis, IN, USA5Indiana Alzheimer's Disease Research Center, Indianapolis, IN, USA6Vanderbilt University Institute of Imaging Science, Vanderbilt University Medical Center, Nashville, TN, USA7Department of Biomedical Engineering, Vanderbilt University, Nashville, TN, USA8Department of Electrical and Computer Engineering, Vanderbilt University, Nashville, TN, USA9Department of Medicine, Vanderbilt University Medical Center, Nashville, TN, USA

- Leveraging longitudinal, multi-site diffusion MRI data in conjunction with free-water analysis to characterize patterns of white matter neurodegeneration in aging. Derek B. Archer1,2,NiranjanaShashikumar1, Varuna Jasodanand1, Elizabeth E. Moore1, Kimberly R. Pechman1, Murat Bilgel3, Lori L. Beason-Held3, Yang An3, Andrea Shafer3, Shannon L. Risacher4,5, Bennett A. Landman6,7,8, Angela L. Jefferson1,2,9, Andrew J. Saykin4,5, Susan M. Resnick3, Timothy J. Hohman1,2. 1Vanderbilt Memory and Alzheimer's Center, Vanderbilt University School of Medicine, Nashville, TN, USA2Vanderbilt Genetics Institute, Vanderbilt University Medical Center, Nashville, TN, USA3Laboratory of Behavioral Neuroscience, National Institute on Aging, National Institutes of Health, Baltimore, MD, USA4Indiana University School of Medicine, Indianapolis, IN, USA5Indiana Alzheimer's Disease Research Center, Indianapolis, IN,

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- Native American Ancestry is associated with lower risk of Alzheimer's Disease: results from the Genetic of Alzheimer's disease in Peruvian Populations (GAPP) study. Nilton Custodio, PhD, MD1 , Marcio Soto-Ariari, PhD2, Rosa Montesinos, MD3, Maritza Pintado Caipa, MD1, Maria Fernanda Ore-Gomez, PhD4, CLAUDIA RIVERA-FERNANDEZ, Psic6loga5, Dolly Reyes-Dumeyer, BS6 and Giuseppe Tosto, MD, PhD6.
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- Hearing loss and dementia in Peruvian populations. Nilton Custodio, PhD, MD1, Virgilio E Failoc-Rojas, MA2 , Diego Chambergo-Michilot, MS3 , Diego Malaga2 , Maria Fernanda Ore-Gomez, PhD4 , CLAUDIA RIVERA-FERNANDEZ, Psic6loga5 , Marcie Soto-Aiiari, PhD6, Dolly Reyes-Dumeyer, BS7, Sandro Casavilca-Zambrano8 , Rosa Montesinos, MD2 and Giuseppe Tosto, MD, PhD 7
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- Impact of the COVID-19 Pandemic in ADRD Patients and Caregivers in a Latin-American Country. Nilton Custodio, PhD, MD1 , Diego Malaga2 , Diego Chambergo-Michilot, MS3 , Maria Fernanda Ore-Gomez, PhD4 , CLAUDIA RIVERA-FERNANDEZ, Psic6loga5 , Marcio Soto-Ariari, PhD6 , Dolly Reyes-Dumeyer, BS7 ,Virgilio E Failoc-Rojas, MA2 , Sandro Casavilca-Zambrano8 , Rosa Montesinos, MD2 and Giuseppe Tosto, MD, PhD 7.

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- Association between nutritional status and dementia staging among Alzheimer's disease patients in Peru: Preliminary results of the Genetic of Alzheimer's Disease in Peruvian Population Study. Rosa Montesinos, MD1, Diego Chambergo-Michilot, MS2, Diego Malaga 1, Maria Fernanda Ore-Gomez, PhD3, CLAUDIA RIVERA-FERNANDEZ, Psic6loga4, Marcio Soto-Aiiari, PhD5, Dolly Reyes-Dumeyer, BS6, Virgilio E Failoc-Rojas, MA 1, Sandro Casavilca-Zambrano7, Nilton Custodio, PhD, MD 1,8 and Giuseppe Tosto, MD, PhD6
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- Collection of genetic data in ethnic-based studies across Aymaras, Quechuas and Mestizos: the challenges of the Genetics of Alzheimer's in Peruvian Population (GAPP) study. Dolly Reyes-Dumeyer1,2,3, Rosa Montesinos4, Maritza Pintado-Caipa4, Maria Fernanda Oré- Gómez5, Claudia Rivera-Fernandez6, Marcio Soto-Añari6,7, Nilton Custodio4, Giuseppe Tosto1,2,3
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- Sex differences in APOEeffects on cognition are domain-specific. Alex G. Contreras, Skylar Walters, Shubhabrata Mukherjee, Michael L. Lee, Seo-Eun Choi, Phoebe Scollard, Emily H. Trittschuh, Jesse Mez,WilliamS. Bush, Corinne D.Engelman, Qiongshi Lu, David W. Fardo, Keith F. Widaman, Rachel Buckley, Elizabeth Mormino, Brian Kunkle,Adam C. Naj,Lindsay R. Clark, Katherine A. Gifford, The Alzheimer's Disease Neuroimaging Initiative (ADNI)*, Alzheimer'sDisease Genetics Consortium (ADGC), The Alzheimer's Disease Sequencing Project (ADSP), Michael L. Cuccaro, Carlos Cruchaga, Margaret A. Pericak-Vance, Lindsay A. Farrer, Li-San Wang, Gerard Schellenberg, JonathanL. Haines, Angela L. Jefferson, Sterling C. Johnson, Walter A. Kukull, Marilyn S. Albert, C. Dirk Keene, AndrewJ. Saykin, Eric B. Larson, Reisa A. Sperling, Richard Mayeux,Paul M Thompson,Eden R. Martin, David A. Bennett, Lisa Barnes, Julie A. Schneider, Paul K. Crane, Timothy J. Hohman,and Logan Dumitrescu

- Cognitive resilience polygenic risk score sensitive to preclinical disease changes. Jaclyn M. Eissman, BS1,2, Omair A. Khan, MAS3, Dandan Liu, PhD3, Vladislav A Petyuk, PhD4, Katherine A. Gifford, PsyD1, Logan Dumitrescu, PhD1,2, Angela L. Jefferson, PhD1and Timothy J. Hohman, PhD1,2. (1)Vanderbilt Memory & Alzheimer's Center, Vanderbilt University Medical Center, Nashville, TN, USA, (2)Vanderbilt Genetics Institute, Vanderbilt University Medical Center, Nashville, TN, USA, (3)Department ofBiostatistics, Vanderbilt University Medical Center, Nashville, TN, USA, (4)Biological Sciences Division and Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory, Richland, WA, USA, Richland, WA, USA

- Longitudinal GWAS Identifies Novel Genetic Variants and Complex Traits Associated with Resilience to Alzheimer's Disease. Jared Phillips1, Logan Dumitrescu1,2, Derek Archer1,2, Alexandra Smith1, Shubhabrata Mukherjee3, Michael L. Lee3, Seo-Eun Choi3, Phoebe Scollard3, Emily H. Trittschuh4,5, Jesse Mez6, Emily R. Mahoney1,2, William S. Bush7, Corinne D. Engelman8, Qiongshi Lu9,10, David W. Fardo11,12, Keith F. Widaman13, Rachel Buckley14,15,16, Elizabeth Mormino17, Theresa M. Harrison18, R. Elizabeth Sanders3, Lindsay R. Clark10,19,20, Katherine A. Gifford1, Badri Vardarajan21,22,23, The Alzheimer's Disease Neuroimaging Initiative (ADNI)*, Alzheimer's Disease Genetics Consortium (ADGC), The Alzheimer's Disease Sequencing Project (ADSP), Michael L. Cuccaro24,25, Margaret A.



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- Rare Genetic Risk in Progressive Supranuclear Palsy. Timothy S Chang, MD PhD1, Hui Wang, PhD2,3, Wan-Ping Lee, PhD2,3, Urvashi Kumar, BS1, Yuk Yee Leung2,3, Dennis W Dickson4, Clifton Dalgard5,6, Li-San Wang2,3, Gerard Schellenberg, PhD2,3, Daniel H Geschwind, MD PhD7,8,9,10 1Movement Disorders Programs, Department of Neurology, David Geffen School of Medicine, University of California, Los Angeles, Los Angeles, CA 90095, USA2Department of Pathology and Laboratory Medicine, Perelman School of Medicine, University of Pennsylvania, PA 19104, USA3Penn Neurodegeneration Genomics Center, Perelman School of Medicine, University of Pennsylvania, PA 19104, USA4Department of Neuroscience, Mayo Clinic, Jacksonville, FL5Department of Anatomy Physiology& Genetics, Uniformed Services University of the Health Sciences. Bethesda, MD 20814, USA6The American Genome Center, Uniformed Services University of the Health Sciences. Bethesda, MD 20814, USA7Program in Neurogenetics, Department of Neurology, David Geffen School of Medicine, University of California, Los Angeles, Los Angeles, CA 90095, USA8Department of Neurobiology and Behavior, School of Biological Sciences, University of California, Irvine, CA 92697, USA9Department of Human Genetics, David Geffen School of Medicine, University of California, Los Angeles, Los Angeles, CA 90095, USA10Institute of Precision Health, University of California, Los Angeles, Los Angeles, CA 90095, USA

- Beyond the Uniform Data Set (UDS): Benefits of incorporating additional items for the measurement of memory, executive functioning, and language from the University of Pittsburgh Alzheimer's Disease Research Center.

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- Development of harmonized and co-calibrated scores for memory, executive functioning, language, and visuospatial in the Australian Imaging, Biomarkers and Lifestyle (AIBL) Study, the Alzheimer's Disease Neuroimaging Initiative (ADNI), and the National Alzheimer's Coordinating Center (NACC) datasets. Paul K. Crane, Emily Trittschuh, Jesse Mez, Andrew J. Saykin, R. Elizabeth Sanders, Laura E. Gibbons, Michael Lee, Phoebe Scollard, Seo-Eun Choi, Stephanie R. Rainey-Smith, Cheyenne Chooi, Brandon Gavett, Paul Maruff, David Ames, Jessica Culhane, Kathryn Gauthreaux, K.C. Gary Chan, Sarah Biber, Kari Stephens, Walter Kukull, Logan Dumitrescu, Timothy Hohman, for the Alzheimer's Disease Neuroimaging Initiative, Shubhabrata Mukherjee

- Composite scores for memory, executive functioning, and language performance harmonized across waves from the National Alzheimer's Coordinating Center (NACC). Michael Lee, Shubhabrata Mukherjee, Seo-Eun

Choi, Phoebe Scollard, Elizabeth Sanders, Laura E. Gibbons, Jessica Culhane, Kathryn Gauthreaux, Gary Chan, Sarah Biber, Kari Stephens, Walter Kukull, Emily Trittschuh, Jesse Mez, Andrew J. Saykin, Timothy Hohman, Paul K. Crane

- KDM6A expression is associated with a sex disease interaction in activated microglia. Logan Brase, Amy Dunn, Logan Demitrescu, Catherine Kaczorowski, Timothy Hohman, Celeste Karch, Oscar Harari, Bruno A. Benitez

- Characterizing Disrupted Cellular Crosstalk Signaling Networks in Alzheimer's Disease Using Single-NucleiTranscriptomics. R. D'Oliveira Albanus1, L. Brase1, S.-F. You1, C. Soriano-Tarraga1, B. Benitez1, C. Cruchaga1, C. Karch1*, O. Harari1*
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