

Daniel R. Schonhaut, PhD

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Education

University of Pennsylvania

PH.D. NEUROSCIENCE (ADVISOR: MICHAEL J. KAHANA, COMPUTATIONAL MEMORY LAB)

- NSF Graduate Research Fellow

Philadelphia, PA

2016 - 2022

University of California, Los Angeles

B.A. POLITICAL SCIENCE, PSYCHOLOGY

- *Summa Cum Laude* (GPA: 3.97)
- Highest Honors in Political Science

Los Angeles, CA

2008 - 2012

Professional

2024-	Senior Research Scientist , Memory and Aging Center, University of California, San Francisco
2022-2024	Research Scientist , Memory and Aging Center, University of California, San Francisco
2014-2016	Research Analyst , Department of Neurology, University of California, San Francisco
2012-2013	Reporter , Los Angeles Times
2008-2012	Reporter, Assistant News Editor, News Editor , Daily Bruin, University of California, Los Angeles

Awards & Fellowships

2024	Poster award finalist , Alzheimer's Association International Conference	
	Travel grant , Human Amyloid Imaging Conference	\$1,000
2023	Travel grant , Human Amyloid Imaging Conference	\$1,000
2018-2022	Graduate Research Fellowship , National Science Foundation	\$135,000
2016	Best poster , Northern California Alzheimer's Researchers' Symposium	\$1,000
	Best poster , Musculoskeletal and Neurodegenerative Diseases Symposium	
	Travel grant , Alzheimer's Imaging Consortium	
	Travel grant , Degeneration and Regeneration in Musculoskeletal and Neurodegenerative Diseases Symposium	
	Travel grant , Human Amyloid Imaging Conference	
2015	Blue Ribbon highlight poster , International Congress of Parkinson's Disease and Movement Disorders	≤ \$1,000
	Travel grant , Alzheimer's Association International Conference	
2012	Phi Beta Kappa , University of California, Los Angeles	
	Highest Honors, Political Science , University of California, Los Angeles	

Skills

PROGRAMMING

- Python (NumPy, Pandas, PyTorch, Sklearn, SciPy, Seaborn, Statsmodels, SQLite3), R, SQL, Linux, MATLAB, C#

ANALYTICAL

- Statistics, A/B testing, Time series, Longitudinal modeling, Graph theory, Machine Learning, Deep Learning/AI

Publications

- Schonhaut, D.R.**, Rao, A.M., Ramayya, A.G., Solomon, E.A., Herweg, N.A., Fried, I & Kahana, M.J. (2024). MTL neurons phase-lock to human hippocampal theta. *eLife*. doi: 10.7554/eLife.85753
- Schonhaut, D.R.**, Aghajan, Z.M., Kahana, M.J. & Fried, I. (2023). A neural code for time and space in the human brain. *Cell Rep*, 42(11):113238. doi: 10.1016/j.celrep.2023.113238
- Schonhaut, D.R.** (2023). Time, space, and rhythm across neurons in the human medial temporal lobe and prefrontal cortex. ProQuest. doi: 20.500.14332/58959
- Schonhaut, D.R.**, McMillan, C.T., Spina, S., Dickerson, B.C., Siderowf, A., Devous, M.D., Tsai, R., Winer, J., Russell, D.S., Litvan, I., Roberson, E.D., Seeley, W.W., Grinberg, L.T., Kramer, J.H., Pressman, P., Nasrallah, I., Baker, S.L., Gomperts, S.N., Johnson, K.A., Grossman, M., Jagust, W.J., Boxer, A.L. & Rabinovici, G.D. (2017). ¹⁸F-flortaucipir tau PET distinguishes established progressive supranuclear palsy from controls and Parkinson's disease: A multicenter study. *Ann Neurol*, 82(4): 622-634. doi: 10.1002/ana.25060
- Schonhaut, D.R.** & Rabinovici, G.D. "Neuroimaging advances in Alzheimer's disease" in Lehner, T., Miller, B.L. & State, M.W. (Eds.), *Genomics, Circuits, and Pathways in Clinical Neuropsychiatry*. Philadelphia: Elsevier, 2016. ISBN: 978-0-12-800105-9
- Ossenkoppele, R.* , **Schonhaut, D.R.***, Schöll, M., Lockhart, S.N., Ayakta, N., Lazaris, A., Cantwell, A., Baker, S.L., O'Neil, J.P., Gorno-Tempini, M.L., Miller, B.L., Jagust, W.J. & Rabinovici, G.D. **Equal contribution*. (2016). Tau patterns mirror clinical and neuroanatomical variability in Alzheimer's disease: An [¹⁸F]AV1451 PET study. *Brain*. doi: 10.1093/brain/aww027
- Sakon, J.J., Halpern, D.J., **Schonhaut, D.R.** & Kahana, M.J. (2024). Human hippocampal ripples signal encoding of episodic memories. *J Neurosci*. doi: 10.1523/JNEUROSCI.0111-23.2023
- Herweg, N.A., Kunz, L., **Schonhaut, D.R.**, Brandt, A., Wanda, P.A., Sharan, A.D., Sperling, M.R., Schulze-Bonhage, A. & Kahana, M.J. (2023). A learned map for places and concepts in the human medial temporal lobe. *J Neurosci*, 43(19): 3538-3547. doi: 10.1523/JNEUROSCI.0181-22.2023
- Iaccarino, L., La Joie, R., Edwards, L., Strom, A., **Schonhaut, D.R.**, Ossenkoppele, R., Pham, J., Mellinger, T., Janabi, M., Baker, S.L., Soleimani-Meigooni, D., Rosen, H.J., Miller, B.L., Jagust, W.J. & Rabinovici, G.D. (2021). Spatial relationships between molecular pathology and neurodegeneration in the Alzheimer's disease continuum. *Cereb Cortex*, 31(1): 1-14. doi: 10.1093/cercor/bhaa184
- Betzel, R.F., Medaglia, J.D., Kahn, A.E., Soffer, J., **Schonhaut, D.R.** & Bassett, D.S. (2019). Structural, geometric and genetic factors predict interregional brain connectivity patterns probed by electrocorticography. *Nat Biomed Eng*, 3(11): 902-916. doi: 10.1038/s41551-019-0404-5
- Ossenkoppele, R., Iaccarino, L., **Schonhaut, D.R.**, Brown, J.A., La Joie, R., O'Neil, J.P., Janabi, M., Baker, S.L., Kramer, J.H., Gorno-Tempini, M.L., Miller, B.L., Rosen, H.J., Seeley, W.W., Jagust, W.J. & Rabinovici, G.D. (2019). Tau covariance patterns in Alzheimer's disease patients match intrinsic connectivity networks in the healthy brain. *Neuroimage Clin*, 23:101848. doi: 10.1016/j.nicl.2019.101848
- Winer, J., Maass, A., Pressman, P., Stiver, J., **Schonhaut, D.R.**, Baker, S.L., Kramer, J.H., Rabinovici, G.D. & Jagust, W.J. (2018). Associations between tau, β -amyloid, and cognition in Parkinson disease. *JAMA Neurol*, 75(2): 227-235. doi: 10.1001/jamaneurol.2017.3713
- Bejanin, A., **Schonhaut, D.R.**, La Joie, R., Kramer, J.H., Baker, S.L., Sosa, N., Ayakta, N., Cantwell, A., Janabi, M., Lauriola, M., O'Neil, J.P., Gorno-Tempini, M.L., Miller, Z.A., Rosen, H.J., Miller, B.L., Jagust, W.J. & Rabinovici, G.D. (2017). Tau pathology and neurodegeneration contribute to cognitive impairment in Alzheimer's disease. *Brain*, 140(12): 3286-3300. doi: 10.1093/brain/awx243
- Iaccarino, L., Tammewar, G., Ayakta, N., Baker, S.L., Bejanin, A., Boxer, A.L., Gorno-Tempini, M.L., Janabi, M., Kramer, J.H., Lazaris, A., Lockhart, S.N., Miller, B.L., Miller, Z., O'Neil, J.P., Ossenkoppele, R., Rosen, H.J., **Schonhaut, D.R.**, Jagust, W.J. & Rabinovici, G.D. (2017). Local and distant relationships between amyloid, tau and neurodegeneration in Alzheimer's disease. *Neuroimage Clin*, 17: 452-464. doi: 10.1016/j.nicl.2017.09.016
- Spina, S., **Schonhaut, D.R.**, Boeve, B.F., Seeley, W.W., Ossenkoppele, R., O'Neil, J.P., Lazaris, A., Rosen, H.J., Perry, D.C., Miller, B.L., Dickson, D.W., Parisi, J.E., Jagust, W.J., Murray, M.E. & Rabinovici, G.D. (2017). Frontotemporal dementia with the V337M *MAPT* mutation: Tau-PET and pathology correlations. *Neurology*, 88(8): 758-766. doi: 10.1212/WNL.0000000000003636
- Baker, S.L., Lockhart, S.N., Price, J.C., He, M., Huesman, R.H., **Schonhaut, D.R.**, Faria, J., Rabinovici, G.D. & Jagust, W.J. (2017). Reference tissue-based kinetic evaluation of ¹⁸F-AV-1451 for tau imaging. *J Nucl Med*, 58(2): 332-338. doi: 10.2967/jnumed.116.175273

- Schöll, M.*, Lockhart, S.N.*, **Schonhaut, D.R.**, O’Neil, J.P., Janabi, M., Ossenkoppele, R., Baker, S.L., Vogel, J., Faria, J., Schwimmer, H., Rabinovici, G.D. & Jagust, W.J. **Equal contribution*. (2016). PET imaging of tau deposition in the aging human brain. *Neuron*, 89(5): 971-982. doi: 10.1016/j.neuron.2016.01.028
- Ossenkoppele, R., **Schonhaut, D.R.**, Baker, S.L., O’Neil, J.P., Janabi, M., Ghosh, P.M., Santos, M., Miller, Z.A., Bettcher, B.M., Gorno-Tempini, M.L., Miller, B.L., Jagust, W.J. & Rabinovici, G.D. (2015). Tau, amyloid, and hypometabolism in a patient with posterior cortical atrophy. *Ann Neurol*, 77(2): 338-342. doi: 10.1002/ana.24321
- Moreno, F., Rabinovici, G.D., Karydas, A., Miller, Z., Chan Hsu, S., Legati, A., Fong, J., **Schonhaut, D.R.**, Esselmann, H., Watson, C., Stephens, M.L., Kramer, J.H., Wiltfang, J., Seeley, W.W., Miller, B.L., Coppola, G. & Grinberg, L.T. (2015). A novel mutation P112H in the TARDBP gene associated with frontotemporal lobar degeneration and abundant neuritic amyloid plaques without motor neuron disease. *Acta Neuropathol Commun*, 3: 19. doi: 10.1186/s40478-015-0190-6

Presentations

TALKS

2024	Human Amyloid Imaging Conference	Miami, FL
2023	Alzheimer’s Association International Conference	Amsterdam, Netherlands
2022	Context and Episodic Memory Symposium	Philadelphia, PA
2021	Memory: It’s About Time	Virtual
2019	Society for Neuroscience Annual Meeting	Chicago, IL
2016	American Academy of Neurology Annual Meeting	Vancouver, Canada
	Human Amyloid Imaging Conference	Miami, FL
2015	Alzheimer’s Association International Conference	Washington, D.C.

POSTERS

2020	Cognitive Neuroscience Society Annual Meeting	Virtual
2017	Society for Neuroscience Annual Meeting	Washington, D.C.
2016	Musculoskeletal and Neurodegenerative Diseases	Malmö, Sweden
	Alzheimer’s Association International Conference	Toronto, Canada
	Northern California Alzheimer’s Researchers’ Symposium	Davis, CA
2015	Alzheimer’s Disease Center Research Symposium	Davis, CA
	Alzheimer’s Imaging Consortium	Miami, FL
	International Congress of Parkinson’s Disease and Movement Disorders	San Diego, CA

GUEST LAB MEETINGS

2021	Ueli Rutishauser lab, California Institute of Technology	Los Angeles, CA
	Electrocorticography Research Group, University of Pennsylvania	Philadelphia, PA
2020	Marc Howard lab, Boston University	Boston, MA
	Cog Fog meeting, University of California, Los Angeles	Los Angeles, CA
2019	Itzhak Fried lab, University of California, Los Angeles	Los Angeles, CA
	György Buzsáki lab, New York University	New York, NY
2016	Henrik Zetterberg lab, University of Gothenburg	Gothenburg, Sweden
	Philip Scheltens lab, VU University Medical Center	Amsterdam, Netherlands

Teaching

2019	Introduction to Neurobiology , Teaching Assistant	University of Pennsylvania
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Mentoring

2023-	Marlene Lin , Master's student in biostatistics, UCSF
2023-	Xiuxiu Zhang, MS in bioengineering , Staff Research Assistant, UCSF
2023-	Piyush Maiti, MS in bioengineering , Staff Research Assistant, UCSF
2022-	Jhony Mejia-Perez, BS , Staff Research Assistant, UCSF
2022-	Claire Yballa, BA , Clinical Research Coordinator, UCSF
2021-2022	Brandon S. Katerman, BA , Staff Research Assistant, University of Pennsylvania
2020-2021	Jason Chou, BS , Staff Research Assistant, University of Pennsylvania
2019-2020	Connor A. Keane, BS , Staff Programmer, University of Pennsylvania
2014-2016	Stacey Jou , Undergraduate Researcher, University of California, Berkeley
2015	Sasha Ashall , Undergraduate Researcher, University of California, Berkeley

Service

OUTREACH

2017-2019	Philadelphia Science Festival , Event lead, Neuroscience Graduate Group
2016-2019	Science outreach in West Philadelphia high schools , Guest instructor

PEER REVIEW

- Alzheimer's and Dementia
- Biological Psychiatry
- eLife
- JAMA Neurology
- Journal of Alzheimer's Disease
- Nature Communications
- Science