
SIMON N. VANDEKAR

simon.vandekar@vumc.org

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Office Address:

Department of Biostatistics
Vanderbilt University Medical Center
Vanderbilt University
2525 West End Avenue #1136
Nashville, TN 37203

Office Phone Number:

615-875-2325

Education:

University of Pennsylvania, Philadelphia, PA *2014-2018*
Ph.D. in Biostatistics
Dissertation advisor: Russell T. Shinohara

Pennsylvania State University, State College, PA *2005-2009*
B.S. in Psychology-Neuroscience

Academic Appointments:

Associate Professor of Biostatistics *2024-present*
Assistant Professor of Biostatistics *2018-2024*
Director of Graduate Recruitment *2022-present*
Department of Biostatistics
Vanderbilt University, School of Medicine

Professional Activities:

Intramural:

Chair, 20th Anniversary Celebration Committee *2023*
Member, Comprehensive Exam Committee *2021-present*
Member, Department of Biostatistics Search Committee *2021-present*
Member, Department of Biostatistics Graduate Admissions Committee *2022-present*
Member, Summer Internship for Underrepresented Undergraduates *2022-present*

Extramural:

Program Chair Elect - Section on Statistics in Imaging Section,
American Statistical Association (ASA) *2020-2021*
Program Chair - Section on Statistics in Imaging Section, ASA *2021-2022*
Program Chair - Statistical Methods in Imaging Conference 2022 *2021-2022*
President - Middle TN Chapter, ASA *2022-2023*

Committee Member - Statistical Methods in Imaging Conference 2023 2022-2023

Editorial Experience:

Reviewer:

Bioinformatics, Biometrics, Biostatistics, Human Brain Mapping, Journal of the American Medical Association Psychiatry, Journal of the American Medical Association Otolaryngology, Journal of the American Statistical Association, IEEE Journal of Biomedical Health Informatics, Journal of the Royal Statistical Society Series B, The Lancet Psychiatry, Neuroimage, Neuron, PLOS ONE, Psychoneuroendocrinology, IEEE Transactions on Medical Imaging, Statistical Methods in Medical Research, WIREs Computational Statistics

Associate Editor:

Biostatistics

2024-present

Teaching Experience:

Didactic:

Teaching Assistant, Categorical and Survival Analysis

Spring 2016

Teaching Assistant, Linear Models and GLMs

Spring 2017

Teaching Assistant, Categorical and Survival

Spring 2018

Instructor, Substantially revised BIOS6311

Fall 2020-Fall 2023

Instructor, Summer Internship for Underrepresented Undergrads *Summer 2022*

Research Supervision:

Nicholas Strayer (PhD Biostatistics 2019), Role: Committee Member

Kavya Sharman (PhD Chemical and Physical Biology 2022), Role: Committee Member

Cody Heiser (PhD Chemical and Physical Biology 2023), Role: Committee Member

Harsimran Kaur (PhD Chemical and Physical Biology), Role: Committee Member

Coleman Harris (PhD Biostatistics 2022), Role: Dissertation Advisor

Kenneth Liao (MS Biostatistics, 2024), Role: Dissertation Advisor

Kaidi Kang (PhD Biostatistics), Role: Dissertation Advisor

Jiangmei (Ruby) Xiong (PhD Biostatistics), Role: Dissertation Advisor

Megan Jones (PhD Biostatistics), Role: Dissertation Advisor

Julia Sheffield, PhD (assistant professor of psychiatry and behavioral sciences),

Role: K23 Biostatistics Mentor

Heather Ward, MD (assistant professor of psychiatry and behavioral sciences),

Role: K23 Biostatistics Mentor

Xinyu Zhang (PhD Biostatistics), Role: Research Assistantship Supervisor

Membership:

American Statistical Association

2014-present

Eastern North America Region (ENAR)

of the International Biometric Society

2015-present

Organization for Human Brain Mapping

2015-2016

Grant Support:

R01MH133843 (Vandekar)	07/01/2023-6/30/2028
	1.20 calendar months
NIMH	\$181,525
Precision brain charts for imaging-genomics of schizophrenia and the psychosis spectrum	
Role: Site Principal Investigator	
R01DK133415 (McKernan)	05/05/2023-2/29/2028
	0.60 calendar months
NIDDK	\$686,309
Mechanistic-Based Treatment of Interstitial Cystitis/Bladder Pain Syndrome	
Role: Co-Investigator	
P50MH132642-01 (Woodward)	04/03/2023 - 03/31/2028
	0.3 calendar months
NIMH	\$2,162,500 (total)
Functional and behavioral dissection of higher order thalamocortical circuits in schizophrenia	
Role: Biostatistician	
R01MH112847-06A1 (Vandekar)	09/01/2022-06/30/2027
	1.2 calendar months
NIMH	\$26,855 (annual total)
Inter-modal Coupling Image Analytics	
Role: Site Principal Investigator	
R01HD107695 (Corbett)	09/01/2022 - 06/30/2027
	0.60 calendar months
NICHD	\$3,330,139
Pubertal, Psychological and Physiological Development in Females with Autism	
Role: Co-Investigator	
K24MH126280 (Woodward)	09/15/2021-08/31/2026
	0.3 calendar months
NIMH	\$149,320 (annual total)
Research and mentoring on cognitive neuroscience and high-field MRI of the thalamus in schizophrenia	
Role: Co-Investigator	
R01MH123563 (Vandekar)	08/01/2020-05/31/2025
	2.40 calendar months
NIMH	\$2,113,210
Semiparametric Inference for Psychiatric Neuroimaging	
Role: Principal Investigator	
K23DK118118 (McKernan)	05/13/2019-03/31/2023
	0.60 calendar months
NIDDK	\$686,309

Optimizing Psychosocial Treatment of Interstitial Cystitis/Bladder Pain Syndrome
Role: Biostatistician

R01MH118273 (Heckers) 08/01/2019-05/31/2024
0.60 calendar months

NIMH \$3,689,156
The General Factor of Psychopathology in Psychosis and Severe Mental Illness
Role: Co-Investigator

R01NS109114 (Smith) 09/15/2018-06/30/2023
0.96 calendar months

NINDS \$1,733,700
Structural and functional MRI of the cervical spinal cord in multiple sclerosis
Role: Co-Investigator

U2CCA233291-01 (Coffey) 09/20/2018-06/30/2023
3.00 calendar months

NCI \$10,993,061
Integrative single-cell atlas of host and microenvironment in colorectal neoplastic transformation: data analysis
Role: Co-Investigator

R01MH115000 (Woodward) 06/04/2018-03/31/2022
0.60 calendar months

NIMH \$1,587,494
Development of thalamocortical circuits and cognitive function in healthy individuals and youth at-risk for psychosis
Role: Co-Investigator

R01MH111599 (Corbett) 07/01/2017-05/31/2022
0.60 calendar months

NIMH \$2,348,293
Examining stress and arousal across pubertal development in ASD
Role: Co-Investigator

R01MH070560 (Heckers) 02/07/2005-03/31/2026
1.2 calendar months

NIMH \$818,430 (annual total)
Imaging Hippocampal Function in Psychosis
Role: Co-Investigator

Invited Presentations:

1. "Effect sizes and replicability in longitudinal studies of brain-phenotype associations," 2024. Joint Statistical Meetings (JSM). Portland, OR.
2. "Normalization and Cell Phenotyping for mIF Data," 2024. Pacific Symposium on Biocomputing. Kona, HI.
3. "Effect Sizes and Replicability in Brain-wide Association Studies (BWAS)," 2023. Computational and Methodological (CM) Statistics Conference. Berlin, Germany.

4. "Robust and reproducible group-level neuroimage analysis in R with the pbj package," 2022. CM Statistics Conference. London, UK.
5. "Cell Normalization and Phenotyping for Multiplexed Single-Cell Imaging," 2022. Jefferson University, Philadelphia, PA.
6. "Cell Normalization and Phenotyping for Multiplexed Single-Cell Imaging," 2022. JSM. Washington, DC.
7. "Cell Normalization and Phenotyping for Multiplexed Single-Cell Imaging," 2022. ENAR Conference. Houston, TX.
8. "A robust measure of effect size for neuroimage analysis," 2021. CM Statistics Conference. London, UK.
9. "A general measure of effect size for neuroimaging analysis," 2021. Department of Biostatistics, Emory University. Virtual.
10. "A general measure of effect size for neuroimaging analysis," 2021. Penn Statistical Imaging Endeavor, University of Pennsylvania. Virtual.
11. "Robust spatial extent inference in R using the pbj package," 2021. Department of Biostatistics, University of California, San Francisco. Virtual.
12. "Thresholding Statistical Maps by Effect Sizes for Spatial Extent Inference of Neuroimages," 2020. CM Statistics Conference. London, UK.
13. "Robust Spatial Extent Inference in R using the pbj Package," 2020. Department of Epidemiology and Biostatistics, University of San Francisco. San Francisco, CA.
14. "Robust Spatial Extent Inference in R using the pbj Package," 2019. Department of Biomedical Informatics, University of Arkansas for Medical Sciences. Little Rock, AR.
15. "Robust Spatial Extent Inference in R using the pbj Package," 2019. Department of Biostatistics, Boston University. Boston, MA.
16. "Robust Spatial Extent Inference in R using the pbj Package," 2019. Department of Statistics, Indiana University, Bloomington. Bloomington, IN.
17. "On Testing the Spatial Correspondence Between Maps of Human Brain Structure and Function," 2019. International Chinese Statistical Association. Raleigh, NC.
18. "Robust Spatial Extent Inference with a Semiparametric Bootstrap Joint Testing Procedure," 2019. Statistical Methods in Imaging. Irvine, CA.
19. "Robust Spatial Extent Inference with a Semiparametric Bootstrap Joint Testing Procedure," 2019. ENAR Conference. Philadelphia, PA.
20. "Association Tests for Neuroimaging Studies of Development and Disease," 2018. Columbia University. New York, NY.
21. "Association Tests for Neuroimaging Studies of Development and Disease," 2018. Johns Hopkins University. Baltimore, MD.
22. "Powerful, Fast, and Robust Family-Wise Error Control for Neuroimaging," 2017. JSM. Baltimore, MD.
23. "More Powerful Permutation Tests Using Voxel-wise Transformations," 2017. Statistical Methods in Imaging. Pittsburgh, PA. – Student paper award
24. "Analysis of Spatially Correlated Developmental Neuroimaging Data," 2015. North Carolina State University. Raleigh, NC.
25. "Multivariate Nonlinear Age Trajectories in Cortical Thickness," 2013. Johns Hopkins University. Baltimore, MD.

Peer Reviewed Publications:

1. Dennis, Nancy A., Caitlin R. Bowman, and Simon N. **Vandekar**. 2012. "True and Phantom Recollection: An fMRI Investigation of Similar and Distinct Neural Correlates and Connectivity." *Neuroimage* 59 (3): 2982–93.
2. Satterthwaite, Theodore D., Russell T. Shinohara, Daniel H. Wolf, Ryan D. Hopson, Mark A. Elliott, Simon N. **Vandekar**, Kosha Ruparel, Monica E. Calkins, David R. Roalf, and Efsthathios D. Gennatas. 2014. "Impact of Puberty on the Evolution of Cerebral Perfusion during Adolescence." *Proceedings of the National Academy of Sciences*, 201400178.
3. Satterthwaite, Theodore D., Simon **Vandekar**, Daniel H. Wolf, Kosha Ruparel, David R. Roalf, Chad Jackson, Mark A. Elliott, et al. 2014. "Sex Differences in the Effect of Puberty on Hippocampal Morphology." *Journal of the American Academy of Child and Adolescent Psychiatry* 53 (3): 341–50.e1. <https://doi.org/10.1016/j.jaac.2013.12.002>.
4. Schmitt, J. E., J. J. Yi, D. R. Roalf, L. A. Loevner, K. Ruparel, D. Whinna, M. C. Souders, et al. 2014. "Incidental Radiologic Findings in the 22q11.2 Deletion Syndrome." *American Journal of Neuroradiology* 35 (11): 2186–91. <https://doi.org/10.3174/ajnr.A4003>.
5. Sun, Wenguang, Brian J. Reich, T. Tony Cai, Michele Guindani, and Armin Schwartzman. 2015. "Visual Exploration Differences During Relational Memory Encoding in Early Psychosis." *Journal of the Royal Statistical Society: Series B (Statistical Methodology)* 77 (1): 112910.
6. **Vandekar**, Simon N., Russell T. Shinohara, Armin Raznahan, David R. Roalf, Michelle Ross, Nicholas DeLeo, Kosha Ruparel, et al. 2015. "Topologically Dissociable Patterns of Development of the Human Cerebral Cortex." *Journal of Neuroscience* 35 (2): 599–609. <https://doi.org/10.1523/JNEUROSCI.3628-14.2015>.
7. Schmitt, J. Eric, Simon **Vandekar**, James Yi, Monica E. Calkins, Kosha Ruparel, David R. Roalf, Daneen Whinna, et al. 2015. "Aberrant Cortical Morphometry in the 22q11.2 Deletion Syndrome." *Biological Psychiatry, Autism and Brain Development*, 78 (2): 135–43. <https://doi.org/10.1016/j.biopsych.2014.10.025>.
8. Satterthwaite, Theodore D., Daniel H. Wolf, David R. Roalf, Kosha Ruparel, Guray Erus, Simon **Vandekar**, Efsthathios D. Gennatas, et al. 2015. "Linked Sex Differences in Cognition and Functional Connectivity in Youth." *Cerebral Cortex* 25 (9): 2383–94. <https://doi.org/10.1093/cercor/bhu036>.
9. Satterthwaite, T. D., S. N. **Vandekar**, D. H. Wolf, D. S. Bassett, K. Ruparel, Z. Shehzad, R. C. Craddock, et al. 2015. "Connectome-Wide Network Analysis of Youth with Psychosis-Spectrum Symptoms." *Molecular Psychiatry* 20 (12): 1508–15. <https://doi.org/10.1038/mp.2015.66>.
10. Roalf, David R., Megan Quarmley, Mark A. Elliott, Theodore D. Satterthwaite, Simon N. **Vandekar**, Kosha Ruparel, Efsthathios D. Gennatas, et al. 2016. "The Impact of Quality Assurance Assessment on Diffusion Tensor Imaging Outcomes in a Large-Scale Population-Based Cohort." *NeuroImage* 125 (January): 903–19. <https://doi.org/10.1016/j.neuroimage.2015.10.068>.
11. Satterthwaite, Theodore D., Daniel H. Wolf, Monica E. Calkins, Simon N. **Vandekar**, Guray Erus, Kosha Ruparel, David R. Roalf, et al. 2016. "Structural Brain Abnormalities in Youth With Psychosis Spectrum Symptoms." *JAMA Psychiatry* 73 (5): 515–24. <https://doi.org/10.1001/jamapsychiatry.2015.3463>.

12. Shanmugan, Sheila, Daniel H. Wolf, Monica E. Calkins, Tyler M. Moore, Kosha Ruparel, Ryan D. Hopson, Simon N. **Vandekar**, et al. 2016. "Common and Dissociable Mechanisms of Executive System Dysfunction Across Psychiatric Disorders in Youth." *American Journal of Psychiatry* 173 (5): 517–26. <https://doi.org/10.1176/appi.ajp.2015.15060725>.
13. **Vandekar**, Simon N., Russell T. Shinohara, Armin Raznahan, Ryan D. Hopson, David R. Roalf, Kosha Ruparel, Ruben C. Gur, Raquel E. Gur, and Theodore D. Satterthwaite. 2016. "Subject-Level Measurement of Local Cortical Coupling." *NeuroImage* 133 (June): 88–97. <https://doi.org/10.1016/j.neuroimage.2016.03.002>.
14. Satterthwaite, T. D., P. A. Cook, S. E. Bruce, C. Conway, E. Mikkelsen, E. Satchell, S. N. **Vandekar**, T. Durbin, R. T. Shinohara, and Y. I. Sheline. 2016. "Dimensional Depression Severity in Women with Major Depression and Post-Traumatic Stress Disorder Correlates with Fronto-Amygdalar Hypoconnectivity." *Molecular Psychiatry* 21 (7): 894–902. <https://doi.org/10.1038/mp.2015.149>.
15. Kaczurkin, Antonia N., Tyler M. Moore, Kosha Ruparel, Rastko Ciric, Monica E. Calkins, Russell T. Shinohara, Mark A. Elliott, et al. 2016. "Elevated Amygdala Perfusion Mediates Developmental Sex Differences in Trait Anxiety." *Biological Psychiatry, Stress, Fear, and Anxiety*, 80 (10): 775–85. <https://doi.org/10.1016/j.biopsych.2016.04.021>.
16. Baum, Graham L., Rastko Ciric, David R. Roalf, Richard F. Betzel, Tyler M. Moore, Russell T. Shinohara, Ari E. Kahn, Simon N. **Vandekar**, Petra E. Rupert, and Megan Quarmley. 2017. "Modular Segregation of Structural Brain Networks Supports the Development of Executive Function in Youth." *Current Biology* 27 (11): 1561–72.
17. Roalf, David R., J. Eric Schmitt, Simon N. **Vandekar**, Theodore D. Satterthwaite, Russell T. Shinohara, Kosha Ruparel, Mark A. Elliott, Karthik Prabhakaran, Donna M. McDonald-McGinn, and Elaine H. Zackai. 2017. "White Matter Microstructural Deficits in 22q11.2 Deletion Syndrome." *Psychiatry Research: Neuroimaging* 268: 35–44.
18. Sharma, Anup, Daniel H. Wolf, Rastko Ciric, Joseph W. Kable, Tyler M. Moore, Simon N. **Vandekar**, Natalie Katchmar, Aylin Daldal, Kosha Ruparel, and Christos Davatzikos. 2017. "Common Dimensional Reward Deficits across Mood and Psychotic Disorders: A Connectome-Wide Association Study." *American Journal of Psychiatry* 174 (7): 657–66.
19. **Vandekar**, Simon N., Haochang Shou, Theodore D. Satterthwaite, Russell T. Shinohara, Alison K. Merikangas, David R. Roalf, Kosha Ruparel, Adon Rosen, Efsthios D. Gennatas, and Mark A. Elliott. 2017. "Sex Differences in Estimated Brain Metabolism in Relation to Body Growth through Adolescence." *Journal of Cerebral Blood Flow & Metabolism*, 39(3): 524–35. <https://doi.org/10.1177/0271678X17737692>.
20. Reich, Brian J., Joseph Guinness, Simon N. **Vandekar**, Russell T. Shinohara, and Ana-Maria Staicu. 2018. "Fast Function-on-Scalar Regression with Penalized Basis Expansions." *International Journal of Biostatistics* 74 (2): Article 28.
21. Valcarcel, Alessandra M., Kristin A. Linn, Fariha Khalid, Simon N. **Vandekar**, Shahamat Tauhid, Theodore D. Satterthwaite, John Muschelli, Melissa Lynne Martin, Rohit Bakshi, and Russell T. Shinohara. 2018. "A Dual Modeling

- Approach to Automatic Segmentation of Cerebral T2 Hyperintensities and T1 Black Holes in Multiple Sclerosis.” *NeuroImage: Clinical* 20: 1211–21.
22. Valcarcel, Alessandra M., Kristin A. Linn, Simon N. **Vandekar**, Theodore D. Satterthwaite, John Muschelli, Peter A. Calabresi, Dzung L. Pham, Melissa Lynne Martin, and Russell T. Shinohara. 2018. “MIMoSA: An Automated Method for Intermodal Segmentation Analysis of Multiple Sclerosis Brain Lesions.” *Journal of Neuroimaging* 28 (4): 389–98.
<https://doi.org/10.1111/jon.12506>.
 23. Reardon, P. K., Jakob Seidlitz, Simon **Vandekar**, Siyuan Liu, Raihaan Patel, Min Tae M. Park, Aaron Alexander-Bloch, Liv S. Clasen, Jonathan D. Blumenthal, and Francois M. Lalonde. 2018. “Normative Brain Size Variation and Brain Shape Diversity in Humans.” *Science* 360 (6394): 1222–27.
<https://doi.org/10.1126/science.aar2578>.
 24. Xia, Cedric Huchuan, Zongming Ma, Rastko Ciric, Shi Gu, Richard F. Betzel, Antonia N. Kaczkurkin, Monica E. Calkins, et al. 2018. “Linked Dimensions of Psychopathology and Connectivity in Functional Brain Networks.” *Nature Communications* 9 (1): 3003. <https://doi.org/10.1038/s41467-018-05317-y>.
 25. Alexander-Bloch, Aaron F., Haochang Shou, Siyuan Liu, Theodore D. Satterthwaite, David C. Glahn, Russell T. Shinohara, Simon N. **Vandekar**, and Armin Raznahan. 2018. “On Testing for Spatial Correspondence between Maps of Human Brain Structure and Function.” *NeuroImage* 178 (September): 540–51.
<https://doi.org/10.1016/j.neuroimage.2018.05.070>.
 26. **Vandekar**, Simon N., Theodore D. Satterthwaite, Adon Rosen, Rastko Ciric, David R. Roalf, Kosha Ruparel, Ruben C. Gur, Raquel E. Gur, and Russell T. Shinohara. 2018. “Faster Family-Wise Error Control for Neuroimaging with a Parametric Bootstrap.” *Biostatistics* 19 (4): 497–513.
<https://doi.org/10.1093/biostatistics/kxx051>.
 27. **Vandekar**, Simon N., Theodore D. Satterthwaite, Cedric H. Xia, Azeez Adebimpe, Kosha Ruparel, Ruben C. Gur, Raquel E. Gur, and Russell T. Shinohara. 2019. “Robust Spatial Extent Inference with a Semiparametric Bootstrap Joint Inference Procedure.” *Biometrics* 75 (4): 1145–55.
<https://doi.org/10.1111/biom.13114>.
 28. Corbett, Blythe A., Sara Ioannou, Alexandra P. Key, Catherine Coke, Rachael Muscatello, Simon **Vandekar**, and Ian Muse. 2019. “Treatment Effects in Social Cognition and Behavior Following a Theater-Based Intervention for Youth with Autism.” *Developmental Neuropsychology* 44 (7): 481–94.
<https://doi.org/10.1080/87565641.2019.1676244>.
 29. McHugo, Maureen, Pratik Talati, Kristan Armstrong, Simon N. **Vandekar**, Jennifer Urbano Blackford, Neil D. Woodward, and Stephan Heckers. 2019. “Hyperactivity and Reduced Activation of Anterior Hippocampus in Early Psychosis.” *American Journal of Psychiatry*, October.
<https://doi.org/10.1176/appi.ajp.2019.19020151>.
 30. Corbett, Blythe A., Simon **Vandekar**, Rachael A. Muscatello, and Yajas Tanguturi. 2020. “Pubertal Timing during Early Adolescence: Advanced Pubertal Onset in Females with Autism Spectrum Disorder.” *Autism Research* 13 (12): 2202–2215.
<https://doi.org/10.1002/aur.2406>.
 31. Parikh, Meghana P., Simon **Vandekar**, Christina Moore, Linda Thomas, Nathan Britt, Bhinnata Piya, Laura S. Stewart, Einas Batarseh, Lubna Hamdan, and

- Steffany J. Cavallo. 2020. "Temporal and Genotypic Associations of Sporadic Norovirus Gastroenteritis and Reported Norovirus Outbreaks in Middle Tennessee, 2012–2016." *Clinical Infectious Diseases* 71 (9): 2398–2404.
32. Larsen, Bart, Josiane Bourque, Tyler M. Moore, Azeez Adebimpe, Monica E. Calkins, Mark A. Elliott, Ruben C. Gur, et al. 2020. "Longitudinal Development of Brain Iron Is Linked to Cognition in Youth." *Journal of Neuroscience* 40 (9): 1810–18. <https://doi.org/10.1523/JNEUROSCI.2434-19.2020>.
33. **Vandekar**, Simon, Ran Tao, and Jeffrey Blume. 2020. "A Robust Effect Size Index." *Psychometrika* 85 (1): 232–46. <https://doi.org/10.1007/s11336-020-09698-2>.
34. Alexander-Bloch, Aaron F., Armin Raznahan, Simon N. **Vandekar**, Jakob Seidlitz, Zhixin Lu, Samuel R. Matthias, Emma Knowles, et al. 2020. "Imaging Local Genetic Influences on Cortical Folding." *Proceedings of the National Academy of Sciences* 117 (13): 7430–36. <https://doi.org/10.1073/pnas.1912064117>.
35. Avery, Suzanne N., Maureen McHugo, Kristan Armstrong, Jennifer U. Blackford, Simon **Vandekar**, Neil D. Woodward, and Stephan Heckers. 2020. "Habituation during Encoding: A New Approach to the Evaluation of Memory Deficits in Schizophrenia." *Schizophrenia Research*, July. <https://doi.org/10.1016/j.schres.2020.07.007>.
36. Hamdan, Lubna, Simon **Vandekar**, Andrew J. Spieker, Herdi Rahman, Danielle Ndi, Emily S. Shekarabi, Jyotsna Thota, et al. 2020. "Epidemiological Trends of Racial Differences in Early- and Late-Onset Group B Streptococcus Disease in Tennessee." *Clinical Infectious Diseases*, October. <https://doi.org/10.1093/cid/ciaa1511>.
37. Kim, Ahra, Sarah L. Rader, Thomas V. Fernandez, Simon N. **Vandekar**, and Alan S. Lewis. 2020. "Leveraging Aggression Risk Gene Expression in the Developing and Adult Human Brain to Guide Future Precision Interventions." *Molecular Psychiatry*, October, 1–3. <https://doi.org/10.1038/s41380-020-00903-3>.
38. Avery, Suzanne N., Kristan Armstrong, Maureen McHugo, Simon **Vandekar**, Jennifer Urbano Blackford, Neil D. Woodward, and Stephan Heckers. 2021. "Relational Memory in the Early Stage of Psychosis: A 2-Year Follow-up Study." *Schizophrenia Bulletin* 47 (1): 75–86.
39. Connell, Jennifer, Ahra Kim, Nathan E. Brummel, Mayur B. Patel, Simon N. **Vandekar**, Pratik Pandharipande, Robert S. Dittus, Stephan Heckers, E. Wes Ely, and Jo Ellen Wilson. 2021. "Advanced Age Is Associated With Catatonia in Critical Illness: Results From the Delirium and Catatonia Prospective Cohort Investigation." *Frontiers in Psychiatry* 12: 1999. <https://doi.org/10.3389/fpsy.2021.673166>.
40. McHugo, Maureen, Suzanne Avery, Kristan Armstrong, Baxter P. Rogers, Simon N. **Vandekar**, Neil D. Woodward, Jennifer Urbano Blackford, and Stephan Heckers. 2021. "Anterior Hippocampal Dysfunction in Early Psychosis: A 2-Year Follow-up Study." *Psychological Medicine*, 1–10.
41. McKernan, Lindsey C., Leslie J. Crofford, Ahra Kim, Simon N. **Vandekar**, William S. Reynolds, Kathryn A. Hansen, Daniel J. Clauw, and David A. Williams. 2021. "Electronic Delivery of Pain Education for Chronic Overlapping Pain Conditions: A Prospective Cohort Study." *Pain Medicine* 22 (10): 2252–62. <https://doi.org/10.1093/pm/pnab018>.
42. Weinstein, Sarah M., Simon N. **Vandekar**, Azeez Adebimpe, Tinashe M. Tapera, Timothy Robert-Fitzgerald, Ruben C. Gur, Raquel E. Gur, et al. 2021. "A

- Simple Permutation-Based Test of Intermodal Correspondence.” *Human Brain Mapping* 42 (16): 5175–87. <https://doi.org/10.1002/hbm.25577>.
43. Muscatello, Rachael A., Simon N. **Vandekar**, and Blythe A. Corbett. 2021. “Evidence for Decreased Parasympathetic Response to a Novel Peer Interaction in Older Children with Autism Spectrum Disorder: A Case-Control Study.” *Journal of Neurodevelopmental Disorders* 13 (1): 6. <https://doi.org/10.1186/s11689-020-09354-x>.
 44. Roeske, Maxwell J., Maureen McHugo, Simon **Vandekar**, Jennifer Urbano Blackford, Neil D. Woodward, and Stephan Heckers. 2021. “Incomplete Hippocampal Inversion in Schizophrenia: Prevalence, Severity, and Impact on Hippocampal Structure.” *Molecular Psychiatry*, January, 1–10. <https://doi.org/10.1038/s41380-020-01010-z>.
 45. **Vandekar**, Simon N., and Jeremy Stephens. 2021. “Improving the Replicability of Neuroimaging Findings by Thresholding Effect Sizes Instead of P-Values.” *Human Brain Mapping* 42 (8): 2393–98. <https://doi.org/10.1002/hbm.25374>.
 46. Muscatello, Rachael A., Ahra Kim, Simon **Vandekar**, and Blythe A. Corbett. 2021. “Diagnostic and Physical Effects in Parasympathetic Response to Social Evaluation in Youth With and Without Autism Spectrum Disorder.” *Journal of Autism and Developmental Disorders* 52 (8): 3427–42. <https://doi.org/10.1007/s10803-021-05224-0>.
 47. Avery, Suzanne N., Anna S. Huang, Julia M. Sheffield, Baxter P. Rogers, Simon **Vandekar**, Alan Anticevic, and Neil D. Woodward. 2021. “Development of Thalamocortical Structural Connectivity in Typically Developing and Psychosis Spectrum Youth.” *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*, October. <https://doi.org/10.1016/j.bpsc.2021.09.009>.
 48. Hamdan, Lubna, Varvara Probst, Zaid Haddadin, Herdi Rahman, Andrew J. Spieker, Simon **Vandekar**, Laura S. Stewart, et al. 2021. “Influenza Clinical Testing and Oseltamivir Treatment in Hospitalized Children with Acute Respiratory Illness, 2015-2016.” *Influenza and Other Respiratory Viruses*, October. <https://doi.org/10.1111/irv.12927>.
 49. Huang, Anna S., Baxter P. Rogers, Julia M. Sheffield, Simon **Vandekar**, Alan Anticevic, and Neil D. Woodward. 2021. “Characterizing Effects of Age, Sex and Psychosis Symptoms on Thalamocortical Functional Connectivity in Youth.” *NeuroImage* 243 (November): 118562. <https://doi.org/10.1016/j.neuroimage.2021.118562>.
 50. Chen, Bob, Cherie’ R. Scurrah, Eliot T. McKinley, Alan J. Simmons, Marisol A. Ramirez-Solano, Xiangzhu Zhu, Nicholas O. Markham, et al. 2021. “Differential Pre-Malignant Programs and Microenvironment Chart Distinct Paths to Malignancy in Human Colorectal Polyps.” *Cell* 184 (26): 6262-6280.e26. <https://doi.org/10.1016/j.cell.2021.11.031>.
 51. Baller, Erica B., Alessandra M. Valcarcel, Azeez Adebimpe, Aaron Alexander-Bloch, Zaixu Cui, Ruben C. Gur, Raquel E. Gur, Bart L. Larsen, Kristin A. Linn, and Carly M. O’Donnell. 2022. “Developmental Coupling of Cerebral Blood Flow and fMRI Fluctuations in Youth.” *Cell Reports* 38 (13): 110576.
 52. Corbett, Blythe A., Rachael A. Muscatello, Ahra Kim, Simon **Vandekar**, Sara Duffus, Sloane Sparks, and Yasas Tanguturi. 2022. “Examination of Pubertal Timing and Tempo in Females and Males with Autism Spectrum Disorder

- Compared to Typically Developing Youth.” *Autism Research* 15 (10): 1894–1908. <https://doi.org/10.1002/aur.2786>.
53. Finlayson, AJ Reid, Ahra Kim, April B. Mallory, Simon **Vandekar**, and Peter R. Martin. 2022. “Changing Characteristics of Physicians Referred for Fitness-for-Duty Evaluation.” *General Hospital Psychiatry* 77: 128–29.
 54. Harris, Coleman, Julia Wrobel, and Simon **Vandekar**. 2022. “Mxnorm: An R Package to Normalize Multiplexed Imaging Data.” *Journal of Open Source Software* 7 (71): 4180.
 55. Hu, Fengling, Sarah M. Weinstein, Erica B. Baller, Alessandra M. Valcarcel, Azeez Adebimpe, Armin Raznahan, David R. Roalf, et al. 2022. “Voxel-Wise Intermodal Coupling Analysis of Two or More Modalities Using Local Covariance Decomposition.” *Human Brain Mapping* 43 (15): 4650–63. <https://doi.org/10.1002/hbm.25980>.
 56. Kumar, Ashwin, Simon **Vandekar**, Kurt Schilling, Aashim Bhatia, Bennett A. Landman, and Seth Smith. 2022. “Mapping Pediatric Spinal Cord Development with Age.” In *Medical Imaging 2022: Image Processing*, 12032:286–92. SPIE.
 57. Williamson, Edwin, Erica Shoemaker, Ahra Kim, Shashank Joshi, A. Lee Lewis, Simon **Vandekar**, Isheeta Zalpuri, and Anna Kerlek. 2022. “Child and Adolescent Psychiatry Fellowship Program Participation in the National Resident Matching Program Match: Trends and Implications for Recruitment.” *Academic Psychiatry* 46 (1): 25–30.
 58. Harris, Coleman R., Eliot T. McKinley, Joseph T. Roland, Qi Liu, Martha J. Shrubsole, Ken S. Lau, Robert J. Coffey, Julia Wrobel, and Simon N. **Vandekar**. 2022. “Quantifying and Correcting Slide-to-Slide Variation in Multiplexed Immunofluorescence Images.” *Bioinformatics (Oxford, England)*, January, btab877. <https://doi.org/10.1093/bioinformatics/btab877>.
 59. McHugo, Maureen, Baxter P. Rogers, Suzanne N. Avery, Kristan Armstrong, Jennifer Urbano Blackford, Simon N. **Vandekar**, Maxwell J. Roeske, Neil D. Woodward, and Stephan Heckers. 2022. “Increased Amplitude of Hippocampal Low Frequency Fluctuations in Early Psychosis: A Two-Year Follow-up Study.” *Schizophrenia Research* 241 (February): 260–66. <https://doi.org/10.1016/j.schres.2022.02.003>.
 60. White, Brian R., Claudia Chan, Simon **Vandekar**, and Russell T. Shinohara. 2022. “Statistical Approaches to Temporal and Spatial Autocorrelation in Resting-State Functional Connectivity in Mice Measured with Optical Intrinsic Signal Imaging.” *Neurophotonics* 9 (4): 041405. <https://doi.org/10.1117/1.NPh.9.4.041405>.
 61. Bethlehem, Richard A. I., Jakob Seidlitz, Simon R. White, Jacob W. Vogel, Kevin M. Anderson, Chris Adamson, Sophie Adler, George S. Alexopoulos, Evdokia Anagnostou, and Ariosky Areces-Gonzalez. 2022. “Brain Charts for the Human Lifespan.” *Nature* 604 (7906): 525–33. <https://doi.org/10.1038/s41586-022-04554-y>.
 62. Muscatello, Rachael A., Emma Rafatjoo, Karan K. Mirpuri, Ahra Kim, Simon **Vandekar**, and Blythe A. Corbett. 2022. “Salivary Testosterone in Male and Female Youth with and without Autism Spectrum Disorder: Considerations of Development, Sex, and Diagnosis.” *Molecular Autism* 13 (1): 37. <https://doi.org/10.1186/s13229-022-00515-4>.

63. Weinstein, Sarah M., Simon N. **Vandekar**, Erica B. Baller, Danni Tu, Azeez Adebimpe, Tinashe M. Tapera, Ruben C. Gur, et al. 2022. "Spatially-Enhanced Clusterwise Inference for Testing and Localizing Intermodal Correspondence." *NeuroImage* 264 (December): 119712. <https://doi.org/10.1016/j.neuroimage.2022.119712>.
64. Smith, Joshua R., Corey E. Hopkins, Jiangmei Xiong, James Luccarelli, Elizabeth Shultz, and Simon **Vandekar**. 2022. "Use of ECT in Autism Spectrum Disorder and/or Intellectual Disability: A Single Site Retrospective Analysis." *Journal of Autism and Developmental Disorders*, December, 1–20. <https://doi.org/10.1007/s10803-022-05868-6>.
65. Heiser, Cody N., Alan J. Simmons, Frank Revetta, Eliot T. McKinley, Marisol A. Ramirez-Solano, Jiawei Wang, Harsimran Kaur, Justin Shao, Gregory D. Ayers, and Yu Wang. 2023. "Molecular Cartography Uncovers Evolutionary and Microenvironmental Dynamics in Sporadic Colorectal Tumors." *Cell* 186 (25): 5620–37.
66. McKernan, Lindsey C., Erin L. Connors, Anna M. Ryden, Michael T. M. Finn, Ahra Kim, Simon N. **Vandekar**, Roger R. Dmochowski, and W. Stuart Reynolds. 2023. "Clinical Hypnosis Can Reduce Lower Urinary Tract Symptoms in Individuals with Chronic Pain." *Neurourology and Urodynamics* 42 (1): 330–39. <https://doi.org/10.1002/nau.25090>.
67. Smith, Joshua R., Isaac Baldwin, Tasia York, Carina Anderson, Trey McGonigle, Simon **Vandekar**, Lee Wachtel, and James Luccarelli. 2023. "Alternative Psychopharmacologic Treatments for Pediatric Catatonia: A Retrospective Analysis." *Frontiers in Child and Adolescent Psychiatry* 2: 1208926.
68. White, Brian R., Claudia Chan, Temilola Adepoju, Russell T. Shinohara, and Simon **Vandekar**. 2023. "Controlling the Familywise Error Rate in Widefield Optical Neuroimaging of Functional Connectivity in Mice." *Neurophotonics* 10 (1): 015004. <https://doi.org/10.1117/1.NPh.10.1.015004>.
69. Kang, Kaidi, Megan T. Jones, Kristan Armstrong, Suzanne Avery, Maureen McHugo, Stephan Heckers, and Simon **Vandekar**. 2023. "Accurate Confidence and Bayesian Interval Estimation for Non-Centrality Parameters and Effect Size Indices." *Psychometrika*, February. <https://doi.org/10.1007/s11336-022-09899-x>.
70. Corbett, Blythe A., Trey McGonigle, Rachael A. Muscatello, Jinyuan Liu, and Simon **Vandekar**. 2023. "The Developmental Trajectory of Diurnal Cortisol in Autistic and Neurotypical Youth." *Development and Psychopathology*, July, 1–12. <https://doi.org/10.1017/S0954579423000810>.
71. Sexton, Morgan T., Ahra Kim, Trey McGonigle, Sarasota Mihalko, Simon N. **Vandekar**, Nathan E. Brummel, Mayur B. Patel, et al. 2023. "In-Hospital Catatonia, Delirium, and Coma and Mortality: Results from the Delirium and Catatonia Prospective Cohort Investigation." *Schizophrenia Research*, August. <https://doi.org/10.1016/j.schres.2023.07.031>.
72. Corbett, Blythe A., Alexandra P. Key, Mark E. Klemencic, Rachael A. Muscatello, Dorita Jones, Jennifer Pilkington, Christina Burroughs, and Simon **Vandekar**. 2023. "Investigating Social Competence in a Pilot Randomized Clinical Trial of a Theatre-Based Intervention Enhanced for Adults with Autism Spectrum Disorder." *Journal of Autism and Developmental Disorders*, December. <https://doi.org/10.1007/s10803-023-06214-0>.

73. Smith, Joshua R., Isaac Baldwin, Katherine Audrey Termini, Trey McGonigle, Simon **Vandekar**, and James Luccarelli. 2024. "Use of ECT for Children with and without Catatonia: A Single-Site Retrospective Analysis." *Journal of ECT*, January. <https://doi.org/10.1097/YCT.0000000000000993>.
74. McHugo, Maureen, Maxwell J. Roeske, Simon N. **Vandekar**, Kristan Armstrong, Suzanne N. Avery, and Stephan Heckers. 2024. "Smaller anterior hippocampal subfields in the early stage of psychosis." *Translational Psychiatry* 14 (1):69. <https://doi.org/10.1038/s41398-023-02719-5>.
75. Wagstyl, Konrad, Sophie Adler, Jakob Seidlitz, Simon **Vandekar**, Travis T Mallard, Richard Dear, Alex R DeCasien, Theodore D Satterthwaite, Siyuan Liu, Petra E Vértés, Russell T Shinohara, Aaron Alexander-Bloch, Daniel H Geschwind, and Armin Raznahan. 2024. "Transcriptional cartography integrates multiscale biology of the human cortex." *eLife* 12:RP86933. <https://doi.org/10.7554/eLife.86933.3>.
76. White, Brian R., Temilola E. Adepoju, Hayden B. Fisher, Russell T. Shinohara, and Simon **Vandekar**. 2024. "Spatial nonstationarity of image noise in widefield optical imaging and its effects on cluster-based inference for resting-state functional connectivity." *Journal of Neuroscience Methods* 404: 110076. <https://doi.org/10.1016/j.jneumeth.2024.110076>
Ho, Natalie CW, Richard AI Bethlehem, Jakob Seidlitz, Nikita Nogovitsyn, Paul Metzack, Pedro L. Ballester, Stefanie Hassel, Susan Rotzinger, Jordan Poppenk, and Raymond W. Lam. 2024. "Atypical Brain Aging and Its Association with Working Memory Performance in Major Depressive Disorder." *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*. <https://www.sciencedirect.com/science/article/pii/S2451902224001101>.
77. Muscatello, Rachael A., Trey McGonigle, Simon **Vandekar**, and Blythe A. Corbett. 2024. "Social Context in Stress and Autism: Comparing Physiological Profiles across Two Social Paradigms in Youth with and without Autism Spectrum Disorder." *Research in Autism Spectrum Disorders* 112: 102354.
78. Smith, Joshua R., Corey E. Hopkins, Jiangmei Xiong, James Luccarelli, Elizabeth Shultz, and Simon **Vandekar**. 2024. "Use of ECT in Autism Spectrum Disorder and/or Intellectual Disability: A Single Site Retrospective Analysis." *Journal of Autism and Developmental Disorders* 54 (3): 963–82. <https://doi.org/10.1007/s10803-022-05868-6>.
79. Huang, Anna S., Kaidi Kang, Simon **Vandekar**, Baxter P. Rogers, Stephan Heckers, and Neil D. Woodward. 2024. "Lifespan Development of Thalamic Nuclei and Characterizing Thalamic Nuclei Abnormalities in Schizophrenia Using Normative Modeling." *Neuropsychopharmacology*, March, 1–10. <https://doi.org/10.1038/s41386-024-01837-y>.
80. Corbett, Blythe A., Rachael A. Muscatello, Trey McGonigle, Simon **Vandekar**, Christina Burroughs, and Sloane Sparks. 2024. "Trajectory of Depressive Symptoms over Adolescence in Autistic and Neurotypical Youth." *Molecular Autism* 15 (1): 18. <https://doi.org/10.1186/s13229-024-00600-w>.
81. Weinstein, Sarah M., Simon N. **Vandekar**, Bin Li, Aaron F. Alexander - Bloch, Armin Raznahan, Mingyao Li, Raquel E. Gur, et al. 2024. "Network Enrichment Significance Testing in Brain-Phenotype Association Studies" *Human Brain Mapping* 45 (8): e26714. <https://doi.org/10.1002/hbm.26714>.
82. Xiong, Jiangmei, Harsimran Kaur, Cody N Heiser, Eliot T McKinley, Joseph T

- Roland, Robert J Coffey, Martha J Shrubsole, et al. 2024. "GammaGateR: Semi-Automated Marker Gating for Single-Cell Multiplexed Imaging." *Bioinformatics* 40 (6): btae356. <https://doi.org/10.1093/bioinformatics/btae356>.
83. Siciliano, Rachel E., Trey W. McGonigle, Margaret M. Benningfield, Simon **Vandekar**, Margaret V. Owens, Brandi Felts, Allegra S. Anderson, David A. Cole, and Alexandra H. Bettis. 2024. "Anxiety and Depression Symptoms Improve in Partial Hospitalization Treatment for Adolescents with and without Suicidal Thoughts and Behaviors: Leveraging Measurement-Based Care and Electronic Health Record Data." *Evidence-Based Practice in Child and Adolescent Mental Health*, June, 1–16. <https://doi.org/10.1080/23794925.2024.2358494>.
84. Cook, Sarah R., Kritin Vasamreddy, Anna Combes, Simon **Vandekar**, Merezé Visagie, Delaney Houston, Lily Wald, et al. 2024. "Biological Variation in Cervical Spinal Cord MRI Morphometry in Healthy Individuals and People with Multiple Sclerosis." *Journal of Neuroimaging* 34 (4): 466–74. <https://doi.org/10.1111/jon.13219>.
85. Corbett, Blythe A., Rachael A. Muscatello, Melissa Cyperski, Eleonora Sadikova, E. Kale Edmiston, Trey William McGonigle, Rachel Calvosa, and Simon **Vandekar**. 2024. "Gender Diversity in Autistic and Neurotypical Youth over Adolescence and Puberty: A Longitudinal Study." *Autism Research* 17 (7): 1450–63. <https://doi.org/10.1002/aur.3141>.

Other publications:

1. **Vandekar**, Simon, 2019. Two Methodologies in "Amygdala Activation and Connectivity to Emotional Processing Distinguishes Asymptomatic Patients With Bipolar Disorders and Unipolar Depression" That Can Produce False-Positive Results and Some Statistical Recommendations. *Biological Psychiatry: Cognitive Neuroscience and Neuroimaging*. <https://doi.org/10.1016/j.bpsc.2018.12.007>
2. Rozenblatt-Rosen, Orit, Aviv Regev, Philipp Oberdoerffer, et al., 2020. The Human Tumor Atlas Network: Charting Tumor Transitions across Space and Time at Single-Cell Resolution. *Cell* 181, 236–249.
3. Wrobel, Julia, Coleman Harris, and Simon **Vandekar**. 2023. "Statistical Analysis of Multiplex Immunofluorescence and Immunohistochemistry Imaging Data." In *Statistical Genomics*, edited by Brooke Fridley and Xuefeng Wang, 141–68. *Methods in Molecular Biology*. New York, NY: Springer US. https://doi.org/10.1007/978-1-0716-2986-4_8.