

Daniel J. Panyard, PhD

Curriculum Vitae

Department of Genetics
School of Medicine
Stanford University
Stanford, CA 94305

Email: dpanyard@stanford.edu
Web: <https://dpanyard.github.io/>
Twitter: @DanielPanyard

EDUCATION

Stanford University , Stanford, CA Postdoctoral Research Fellowship PI: Dr. Michael Snyder	2020 – Present
University of Wisconsin-Madison , Madison, WI PhD, Epidemiology (awarded August 23, 2020) Dissertation: Leveraging Genomic Data to Study the Cerebrospinal Fluid Metabolome in Brain-Related Phenotypes Co-advisors: Drs. Qiongshi Lu and Corinne Engelman	2015 – 2020
Certificate in Bioinformatics at the Graduate Level (awarded December 23, 2018)	2015 – 2018
Loyola Stritch School of Medicine , Maywood, IL	2010 – 2011
Michigan State University , East Lansing, MI BS, Physiology, College of Natural Science Specialization: Bioethics, Humanities, & Society	2006 – 2010

RESEARCH

Postdoctoral Research Fellow , Stanford University, Palo Alto, CA Multiomic post-GWAS analyses in Alzheimer's disease; microsampling-derived omics measurements and applications; longitudinal, precision health multiomics in autism (Dr. Michael Snyder)	2020 – Present
Research Associate , Department of Veteran's Affairs, Palo Alto, CA	2021 – Present
Research Assistant , University of Wisconsin-Madison, Madison, WI Genomics, metabolomics, and proteomics of Alzheimer's disease (Dr. Corinne Engelman)	2019 – 2020
Trainee , University of Wisconsin-Madison, Madison, WI Bio-Data Science Training Program (T32LM012413-02) Rotation: tissue-specific polygenic risk scores in Alzheimer's disease (Dr. Qiongshi Lu) Rotation: genotype-metabolite associations in cerebrospinal fluid (Dr. Corinne Engelman)	2017 – 2019
Trainee , University of Wisconsin-Madison, Madison, WI	2016 – 2017

Interdisciplinary Training Program in Cardiovascular and Pulmonary Biostatistics
(5T32HL83806-10)

Rotation: gene expression in allergies to sulfa antibiotics (Dr. Michael Newton)

Rotation: predicting long-range chromatin interaction (Dr. Sushmita Roy)

Rotation: RNA-seq and epigenomics in murine anemia models (Dr. Sündüz Keleş)

Research and Project Assistant, Health Innovation Program, Madison, WI 2015 – 2016
Implementing clinic protocols to address hypertension and tobacco use among
rheumatology patients (Dr. Christie Bartels)

Professorial Assistant, Michigan State University, Lansing, MI 2006 – 2010
Atomic force microscopy of desmosomes in pemphigus vulgaris

Research Associate, IRMC Emergency Department, Lansing, MI Fall 2008

PUBLICATIONS

* Denotes joint first authorship

† Denotes joint senior authorship

‡ Denotes corresponding author

1. Morrow, A. R., **Panyard, D. J.**[‡], Deming, Y. K., Jonaitis, E., Dong, R., Vasiljevic, E., Betthausen, T., Kollmorgen, G., Suridjan, I., Bayfield, A., Hulle, C. A. V., Zetterberg, H., Blennow, K., Carlsson, C. M., Asthana, S., Johnson, S. C., & Engelman, C. D. (2022). CSF sphingomyelin metabolites in Alzheimer's disease, neurodegeneration, and neuroinflammation. *MedRxiv*. <https://doi.org/10.1101/2022.01.19.22268636>. (in peer review at *Alzheimer's Disease: Diagnosis and Disease Monitoring*)
2. **Panyard, D. J.**^{*‡}, McKetney, J.^{*}, Deming, Y. K., Morrow, A. R., Ennis, G. E., Jonaitis, E. M., Hulle, C. A. V., Cruchaga, C., Yang, C., Sung, Y. J., Zetterberg, H., Blennow, K., Kollmorgen, G., Suridjan, I., Bayfield, A., Bendlin, B. B., Carlsson, C. M., Johnson, S. C., Asthana, S., Coon, J. J.[†], & Engelman, C. D.^{†‡} (2021). Large-scale proteomic analysis of CSF implicates altered glucose metabolism in Alzheimer's disease. *MedRxiv*. <https://doi.org/10.1101/2021.09.02.21262642>. (in peer review at *Science Translational Medicine*)
3. **Panyard, D. J.**, Deming, Y. K., Darst, B. F., Hulle, C. A. V., Blennow, K., Kollmorgen, G., Suridjan, I., Carlsson, C. M., Johnson, S. C., Asthana, S., Engelman, C. D.[†], & Lu, Q.[†]. (2021). Liver-specific polygenic risk score is more strongly associated than genome-wide score with Alzheimer's disease diagnosis in a case-control analysis. *MedRxiv*, 2021.04.29.21256279. <https://doi.org/10.1101/2021.04.29.21256279>. (in peer review at *Genetic Epidemiology*)
4. Bartels, C. M., Johnson, L., Ramly, E., **Panyard, D. J.**, Gilmore-Bykovskiy, A., Johnson, H. M., McBride, P., Li, Z., Sampene, E., Lauver, D. R., Lewicki, K., & Piper, M. E. (2021). Impact of a Rheumatology Clinic Protocol on Tobacco Cessation Quit Line Referrals. *Arthritis Care & Research*. <https://doi.org/10.1002/acr.24589>. PMID: 33825349
5. McKetney, J.^{*}, **Panyard, D. J.**^{*}, Johnson, S. C., Carlsson, C., Engelman, C. D., & Coon, J. J. (2021). Pilot proteomic analysis of cerebrospinal fluid in Alzheimer's disease. *Proteomics. Clinical Applications*, e2000072. <https://doi.org/10.1002/prca.202000072>. PMID: 33682374

6. **Panyard, D. J.**, Kim, K. M., Darst, B. F., Deming, Y. K., Zhong, X., Wu, Y., Kang, H., Carlsson, C. M., Johnson, S. C., Asthana, S., Engelman, C. D.[†], & Lu, Q.[†] (2021). Cerebrospinal fluid metabolomics identifies 19 brain-related phenotype associations. *Communications Biology*, 4(1), 1–11. <https://doi.org/10.1038/s42003-020-01583-z>. PMID: PMC7803963
7. Bartels, C. M., Ramly, E., Johnson, H. M., Lauver, D. R., **Panyard, D. J.**, Li, Z., Sampene, E., Lewicki, K., & McBride, P. E. (2018). Connecting Rheumatology Patients to Primary Care for High Blood Pressure: Specialty clinic protocol improves follow-up and population blood pressures. *Arthritis Care & Research*. <https://doi.org/10.1002/acr.23612>. PMID: PMC6274604
8. Reinhart, J. M., Rose, W., **Panyard, D. J.**, Newton, M. A., Liebenstein, T. K., Yee, J., & Trepanier, L. A. (2018). RNA expression profiling in sulfamethoxazole-treated patients with a range of in vitro lymphocyte cytotoxicity phenotypes. *Pharmacology Research & Perspectives*, 6(2), e00388. <https://doi.org/10.1002/prp2.388>. PMID: PMC5832900
9. **Panyard, D. J.**^{*}, Ramly, E.^{*}, Dean, S. M., & Bartels, C. M. (2018). Bridging clinical researcher perceptions and health IT realities: A case study of stakeholder creep. *International Journal of Medical Informatics*, 110, 19–24. <https://doi.org/10.1016/j.ijmedinf.2017.11.014>. PMID: PMC5769155
10. Vreede, A. P., Johnson, H. M., Piper, M., **Panyard, D. J.**, Wong, J. C., & Bartels, C. M. (2017). Rheumatologists Modestly More Likely to Counsel Smokers in Visits Without Rheumatoid Arthritis Control: An Observational Study. *JCR: Journal of Clinical Rheumatology*, 23(5), 273. <https://doi.org/10.1097/RHU.0000000000000559>. PMID: PMC5590221
11. Bartels, C. M., Ramly, E., **Panyard, D. J.**, Lauver, D. R., Johnson, H. M., Lewicki, K., & McBride, P. E. (2017). *Quit Connect Health Toolkit*. University of Wisconsin-Madison School of Medicine and Public Health, UW Center for Tobacco Research and Intervention, and UW Health. <https://www.hipxchange.org/QuitConnectHealth>
12. Fung, C. K. M., Seiffert-Sinha, K., Lai, K. W. C., Yang, R., **Panyard, D.**, Zhang, J., Xi, N., & Sinha, A. A. (2010). Investigation of human keratinocyte cell adhesion using atomic force microscopy. *Nanomedicine: Nanotechnology, Biology and Medicine*, 6(1), 191–200. <https://doi.org/10.1016/j.nano.2009.05.008>

WORK IN PROGRESS

1. Shen X.^{*}, Kellogg R.^{*}, Hornburg D.^{*}, **Panyard D. J.**^{*}, Bararpour N.^{*}, Delfarah A., Ubellacker J., Erazo K. P., Lee-McMullen B., Ganz A., Contrepolis K., Basil M., Edfors F., Hober A., Kotol D., Hulen M., Snyder M.P. Multiomic microsampling captures health perturbations in lifestyle context. Manuscript in preparation.
2. Ubellacker J. M., Reschke A., Cornell T., Ramakrishna S., Frank M., Johnsrud A., Gera K., Rosenberg-Hasson Y., Kellogg R., Michael B., **Panyard D. J.**, Bararpour N., Snyder M. P. Feasibility of real-time plasma cytokine and metabolomics analysis in patients treated with CAR T-cell therapy. Manuscript in preparation.

PRESENTATIONS

1. **Panyard, D. J.**, Deming, Y. K., Darst, B. F., Van Hulle, C. A., Zetterberg, H., Blennow, K., Kollmorgen, G., Suridjan, I., Carlsson, C. M., Johnson, S. C., Asthana, S., Engelman, C. D., and Lu, Q.

Tissue-specific functional annotations highlight association of liver polygenic risk score with Alzheimer's disease and related biomarkers. American Society of Human Genetics (ASHG) Annual Meeting. Poster presentation. October 18-22, 2021. Virtual.

2. **Panyard, D. J.**, Deming, Y. K., Darst, B. F., Van Hulle, C. A., Zetterberg, H., Blennow, K., Kollmorgen, G., Suridjan, I., Carlsson, C. M., Johnson, S. C., Asthana, S., Engelman, C. D., and Lu, Q. Tissue-specific functional annotations highlight association of liver polygenic risk score with Alzheimer's disease and related biomarkers. International Genetic Epidemiology Society (IGES) Annual Meeting. Poster presentation. October 13-15, 2021. Virtual.
3. **Panyard D. J.** Cerebrospinal fluid metabolomics: GWAS, prediction, and TWAS-like applications to disease. TOPMed Metabolomics Working Group. Invited oral presentation. May 19, 2021. Houston, TX (virtual).
4. **Panyard D. J.**, Snyder M. P. A multiomics, precision health pilot study of autism spectrum disorder. 14th Annual Stanford Autism Update. Invited oral presentation, March 20, 2021. Stanford, CA (virtual).
5. **Panyard D. J.**, Kim K. M., Darst B. F., Deming Y. K., Engelman C. D., Lu Q. Metabolome-wide association study identifies altered cerebrospinal fluid metabolites in Alzheimer's disease. American Society of Human Genetics Annual Meeting. Poster presentation, October 16, 2019. Houston, TX.
6. **Panyard D. J.**, Darst B. F., Lu Q, Engelman C. D.. Genome-wide association study of the cerebrospinal fluid metabolome. International Genetic Epidemiology Society Annual Meeting. Poster presentation, October 14, 2019. Houston, TX.
7. **Panyard D. J.**, Darst B., Johnson S., Engelman C., Lu Q. A genome-wide association study of the cerebrospinal fluid metabolome. National Library of Medicine Informatics Training Conference. Oral presentation, June 25, 2019. Indianapolis, IN.
8. **Panyard D. J.**, Engelman C., Lu Q. Genetic correlation of the ATN and V categories. Alzheimer's Disease Center Clinical Core Leaders Meeting. Oral presentation, May 3, 2019. Philadelphia, PA.
9. **Panyard D. J.**, Darst B., Kosciuk R., Clark L., Johnson S., Engelman C., Lu Q. Tissue-specific polygenic risk scores predict amyloid biomarkers. Alzheimer's Association International Conference. Oral presentation, July 24, 2018. Chicago, IL.
10. Ramly E., **Panyard D. J.**, Lauver D., Sampene E., Li Z., Johnson H., McBride P., Lewicki K. S., Bartels C. M. Sustained Improvement in Follow-up of Hypertension in Rheumatology Patients: Results of an intervention sustainability assessment. American College of Rheumatology national meeting. Oral presentation, November 16, 2016. Washington, DC.
11. **Panyard D. J.**, Ramly E., Lauver D., Gilmore A., Adsit R., Skora A., Maxcy C., Bartels C. M. Developing a staff-driven electronic smoking cessation referral program in rheumatology clinics. Poster presentation, American College of Rheumatology annual meeting, November 13, 2016. Washington, DC.
12. Bartels C. M., **Panyard D. J.**, Lauver D., Sampene E., Li Z., Adsit R., McBride P., Johnson H., Lewicki K. S., Ramly E. Feasibility of a Rheumatology Staff Protocol for Tobacco Cessation Counseling and Quit Line Electronic Referral. American College of Rheumatology national meeting. Poster presentation November 13, 2016. Washington, DC.

13. Bartels C. M., Gilmore A., **Panyard D. J.**, Maxcy C., Adsit A., Ramly E. “I Never Had the Verbiage”: Engaging Clinic Staff to Adapt a Tobacco Cessation e-Referral Protocol for Rheumatology Clinics. Accepted abstract for EULAR Meeting (European League Against Rheumatism). June 8-11, 2016. London, U.K.

FUNDING

- SFARI Director Award**, Stanford University, Stanford, CA 2021
 “COUNT: The Precision Autism Project, Phase 1”. Authored the grant on behalf of the lab. Proposal approved, pending award letter.
Award amount: \$250,000.56
- NIH T32 Trainee**, University of Wisconsin, Madison, WI 2017 – 2019
 Bio-Data Science Training Program (T32LM012413-02).
- NIH F31 Fellowship Application**, University of Wisconsin, Madison, WI 2018
 “Integrative analysis of genomics and cerebrospinal fluid metabolomics in Alzheimer’s disease”. Impact score: 46. Invited to revise and resubmit but graduated before resubmission was feasible.
- NIH T32 Trainee**, University of Wisconsin, Madison, WI 2016 – 2017
 Interdisciplinary Training Program in Cardiovascular and Pulmonary Biostatistics (5T32HL83806-10).

CONSORTIA AND CONTRIBUTIONS

- GWAS Catalog** 2021
 Provided complete GWAS summary statistics for 338 cerebrospinal fluid metabolites.
- The Consortium of Metabolomics Studies (COMETS)** 2019-2020
 Cleaned, imputed, conducted, and contributed the results from 865 linear mixed model plasma metabolite GWAS on behalf of the Wisconsin Registry for Alzheimer’s Prevention (WRAP) study.
- Alzheimer’s Disease Metabolomics Consortium (ADMC)** 2019-2020
 Cleaned, processed, and contributed data on 390 cerebrospinal fluid metabolites and 1,138 plasma metabolites to the consortium on behalf of the Wisconsin Alzheimer’s Disease Research Center (ADRC) and related researchers.

TEACHING

- Guest lecturer**, Stanford University, Stanford, CA Winter 2022
 EPI 224/GENE 230: Genetic Epidemiology
- Lab practical supervisor**, University of Wisconsin, Madison, WI Fall 2019
 PHS 849: Genetic Epidemiology. “Metabolomics and proteomics”.
- Guest lecturer**, University of Wisconsin, Madison, WI Fall 2019

PHS 849: Genetic Epidemiology. “What happens after GWAS? Polygenic scores, Mendelian randomization, and other methods”.

Guest speaker, Homestead High School, Fort Wayne, IN Fall 2017
Multiple STEM courses. “Big data, science, and modern biomedical research”.

Guest speaker, Sun Prairie High School, Sun Prairie, WI Spring 2017
Calculus. “Epidemiology, big data, and calculus”.

Guest speaker, University of Wisconsin, Madison, WI Spring 2017
Nutritional Science 203: Intro to Global Health. “Epidemiology and Population Health Science”.

MENTORING

Thuy-Mi (Mimi) Nguyen, Stanford University, Stanford, CA 2021 – 2022
Mentor in genomic data analysis, statistical programming, and computation. Genetic counselor.

Autumn R. Morrow, University of Wisconsin, Madison, WI 2019 – 2022
Undergraduate research mentor, BIO 152 mentor. BS in Neurobiology and Genetics. BS expected 2022.

Dong Fang, University of Wisconsin, Madison, WI Fall 2019
Undergraduate research mentor. BS in Computer Sciences and Statistics. BS expected 2021.

Alexandra Spicer, University of Wisconsin, Madison, WI Summer 2019
Research mentor. MS in Biomedical Data Science. MS expected 2020.

Kyeong Mo (Roy) Kim, University of Wisconsin, Madison, WI Spring 2019
Undergraduate research mentor. BS in Bioengineering & Biotechnology, International Academic Program. BS expected 2020 (Yonsei University).

AWARDS AND HONORS

UW Madison Teaching Academy Affiliate Member (2019)	UW-Madison
Catherine Allen Memorial Outstanding Student Poster Award (2017)	UW-Madison
Outstanding New Student Scholarship	UW-Madison
Durr-Kean Scholarship	Loyola Stritch
Board of Trustees Award	Michigan State
MSU Distinguished Scholarship	Michigan State
Department of Physiology Award for Academic Excellence	Michigan State
Dean's List (all semesters)	Michigan State
MSU Honors College	Michigan State

PROFESSIONAL SERVICE AND MEMBERSHIPS

American Society of Human Genetics (ASHG) 2019 – Present

International Genetic Epidemiology Society (IGES)	2019 – Present
IGES Annual Meeting Poster Session Co-Moderator	2021
IGES Annual Meeting Lightning Talks Session Co-Moderator	2021
IGES Young Investigators Committee (Member)	2020 – Present
IGES Virtual Mentoring Program	2020 – Present
Population Health Sciences Student Organization, University of Wisconsin, Madison, WI	2017 – 2020
Department Committee student representative	2019 – 2020
Junior student mentor	2019 – 2020
PHS Welcome Day current student panel member	Spring 2019
Epidemiology Steering Committee student representative	2018 – 2019
Wrote PHSSO grant for professional development	Fall 2018
Curriculum Committee student representative	2017 – 2018
PHS Welcome Day Poster Session Abstract Review Committee	2017 – 2019
International Society to Advance Alzheimer’s Research and Treatment (ISTAART)	2018 – 2019
INTEGSCI 100: Exploring Biology, University of Wisconsin, Madison, WI	Fall 2019
Student poster reviewer	

JOURNAL REFEREE

Lipids in Health and Disease
Science Advances

WORKSHOPS AND COURSES

Genetic Epidemiology Foundations	Winter 2021 – 2022
Six-week Coursera course on the foundational concepts of Genetic Epidemiology. Organized by the University of Colorado Denver, the Vanderbilt Genetics Institute at the Vanderbilt University Medical Center, and the International Genetic Epidemiology Society.	
The Postdoc Academy: Succeeding as a Postdoc	Fall 2020
Six-week edX course on finding success as a postdoc, drafting an actionable career plan, developing resilience, and working effectively in an intercultural environment. Certificate awarded.	
Teaching Academy Learning Environment and Pedagogics (TA-LEaP) workshop	Summer 2018
Two-day workshop on pedagogy from the University of Wisconsin Teaching Academy as part of the process to become a Teaching Academy Affiliate.	

PREVIOUS EMPLOYMENT

Technical Services, Epic Systems Corporation, Verona, WI	2012 – 2015
-----------------------------------------------------------------	-------------

SKILLS

R, bash, Unix, python, SAS, Java, C++, Epic EHR

REFERENCES

Professor Michael Snyder
Postdoctoral Advisor
Chair, Department of Genetics
Stanford University
(650) 723-4668
mpsnyder@stanford.edu

Professor Corinne Engelman
PhD Co-Advisor
Vice Chair, Department of Population Health Sciences
University of Wisconsin-Madison
(608) 265-5491
cengelman@wisc.edu

Professor Qiongshi Lu
PhD Co-Advisor
Department of Biostatistics and Medical Informatics
University of Wisconsin-Madison
(608) 262-2392
qlu@biostat.wisc.edu