Daniel J. Panyard, PhD
Curriculum Vitae

Department of Genetics
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EDUCATION

University of Wisconsin-Madison, Madison, WI   2015 – 2020
  PhD, Department of Population Health Sciences (awarded August 23, 2020)
  Dissertation: Leveraging Genomic Data to Study the Cerebrospinal Fluid Metabolome in
  Brain-Related Phenotypes
  Mentors: Drs. Corinne Engelman and Qiongshi Lu

  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   2006 – 2010
  BS, Physiology, College of Natural Science
  Specialization: Bioethics, Humanities, & Society

RESEARCH

Postdoctoral Research Fellow, Stanford University, Palo Alto, CA   2020 – Present
  Longitudinal, precision health multiomics of autism; microsampling-derived omics
  measurement (Dr. Michael Snyder)

Research Assistant, University of Wisconsin-Madison, Madison, WI   2019 – 2020
  Genomics, metabolomics, and proteomics of Alzheimer's disease (Dr. Corinne
  Engelman)

Trainee, University of Wisconsin-Madison, Madison, WI   2017 – 2019
  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)

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. Sunduz Keles)

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

1. **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

2. 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 PMCID: PMC6274604

3. 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 PMCID: PMC5832900

4. **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 PMCID: PMC5769155

5. 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 PMCID: PMC5590221

6. 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

7. 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

[†] Denotes joint senior authorship
[*] Denotes joint first authorship

WORK IN PROGRESS

1. McKetney J[*], **Panyard DJ**[*], Johnson SC, Carlsson C, Engelman CD, and Coon JJ. Proteomic analysis of cerebrospinal fluid in Alzheimer's disease. *Proteomics*. Manuscript in journal review.

2. Bartels CM, Johnson L, Ramly E, **Panyard D**, Johnson HM, McBride, Li Z, Sampene E, Lauver DR, Lewicki K, Piper M. Impact of a rheumatology clinic protocol on tobacco cessation quit line referrals. Manuscript in journal review.

3. **Panyard DJ**, Deming YK, Darst BF, Carlsson CM, Johnson SC, Asthana S, Engelman CD[†], Lu Q[†]. Liver-specific polygenic risk score is more strongly associated than genome-wide score with Alzheimer's disease diagnosis. Manuscript in coauthor review.

PRESENTATIONS

1. **Panyard DJ**, Kim KM, Darst BF, Deming YK, Engelman CD, 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.

2. **Panyard DJ**, Darst BF, Lu Q, Engelman CD. Genome-wide association study of the cerebrospinal fluid metabolome. International Genetic Epidemiology Society Annual Meeting. Poster Presentation, October 14, 2019. Houston, TX.

3. **Panyard D**, 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.

4. **Panyard D**, 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.

5. **Panyard D**, Darst B, Koscik 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.

6. Ramly E, **Panyard D**, Lauver D, Sampene E, Li Z, Johnson H, McBride P, Lewicki KS, Bartels CM. 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.

7. **Panyard D**, Ramly E, Lauver D, Gilmore A, Adsit R, Skora A, Maxcy C, Bartels CM. 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.

8. Bartels CM**, Panyard D**, Lauver D, Sampene E, Li Z, Adsit R, McBride P, Johnson H, Lewicki KS, 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.

9. Bartels CM, Gilmore A, **Panyard D**, 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

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 2017 – 2019
Bio-Data Science Training Program (T32LM012413-02).

NIH T32 Trainee, University of Wisconsin, Madison, WI 2016 – 2017
Interdisciplinary Training Program in Cardiovascular and Pulmonary Biostatistics (5T32HL83806-10).

TEACHING

Lab practical supervisor, University of Wisconsin, Madison, WI Fall 2019
PHS 849: Genetic Epidemiology.

Guest lecturer, University of Wisconsin, Madison, WI Fall 2019
"What happens after GWAS? Polygenic scores, Mendelian randomization, and other methods". PHS 849: Genetic Epidemiology.

Guest speaker, Homestead High School, Fort Wayne, IN Fall 2017
"Big data, science, and modern biomedical research". Math and science classes.

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

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

MENTORING

Autumn R. Morrow, University of Wisconsin, Madison, WI 2019 – 2020
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-Keean 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 MEMBERSHIPS

American Society of Human Genetics (ASHG)	2019 – 2020
International Genetic Epidemiology Society (IGES)	2019 – 2020
IGES Young Investigators Committee (Member)	2020 – Present
IGES Virtual Mentoring Program	2020 – Present
International Society to Advance Alzheimer's Research and Treatment (ISTAART)	2018 – 2019

SERVICE

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

INTEGSCI 100: Exploring Biology, University of Wisconsin, Madison, WI   Fall 2019
    Student poster reviewer

WORKSHOPS

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.

PREVIOUS EMPLOYMENT

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

SKILLS

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

REFERENCES

Available upon request