Jagadeesh Puvvula
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Experience

August 2022 – Present | Postdoctoral researcher
University of Pennsylvania, Philadelphia, PA
Mentor: Aimin Chen
- Environmental mixture analysis of brominated flame retardants.
- Perinatal exposures and early life neurodevelopmental outcomes.

July 2021 – August 2022 | Graduate Research Fellow
University of Nebraska Medical Center, Omaha, NE
Mentor: Jesse E. Bell & Jill A. Poole
- Evaluating associations between air pollutant mixtures (ambient & occupational personal exposures) and asthma.
- Evaluating the role of structural/social determinants of health on pediatric health.
- Evaluating association between Flint Hills prescribed burn emissions and pediatric asthma exacerbations.

January 2021 – August 2022 | Student Researcher
Water, Climate, and Health Program, Daugherty Water for Food Global Institute, Omaha, NE
Mentor: Jesse E. Bell & Kelly Smith
- Exploring interactions between human vulnerabilities and drought.

January 2020 – June 2020 | Intern
Models of Infectious Disease Agent Study, Pittsburgh, PA
Mentor: Wilbert Van Panhuis
- Assisted in COVID-19 data curation.

January 2019 – June 2021 | Student Fellow
Daugherty Water for Food Global Institute, Lincoln, NE
Mentor: Jesse E. Bell, & Kathryn Conlon
- Attributing human health risks associated with climate change.
- Characterizing sensitivity of early heat health warning systems.

August 2018 – December 2018 | Intern – Big Data to Knowledge lab
University of Nebraska Medical Center, Omaha, NE
Mentor: Walter S. Campbell, Apar Ganti, & Ketki Tendulkar
- Exploratory cancer risk assessment among chronic kidney disease patients.

April 2018 – August 2018 | Antimicrobial stewardship
Nebraska Medicine, Omaha, NE
Mentor: Scott J. Bergman
- Risk/benefit assessment of a novel Cephalosporin among solid organ transplant recipients.

January 2018 – December 2018 | Graduate Research Assistant
University of Nebraska Medical Center, Omaha, NE
Mentor: Eleanor G. Rogan
- Evaluating associations between agrichemicals and pediatric health.

March 2017 – September 2017 | Research Assistant
United Way of Midlands, Omaha, NE
Mentor: Charles Peterson
- Assisted in developing food insecurity and vulnerability mapping.

December 2014 – November 2016 | Scientist - Pharmacoepidemiology
Bioclinica, India – For Merck KGaA
- Causal assessment of product side effects for regulatory submissions.

September 2012 – October 2014 | Intern
Gleneagles Global Hospitals, India
Mentor: Sachin Jadhav

- Medication Therapy Management practice.

Education

January 2019 – July 2022
Environmental Health & Toxicology | PhD | GPA 3.83/4
University of Nebraska Medical Center

- Dissertation: Environmental exposures and human health challenges: Evidence based insights from health surveillance systems.
- Research interests: Environmental & occupational epidemiology
- Coursework: Epidemiology (advanced methods, mental health, cancer, infectious diseases, injuries), Environmental and occupational health (exposure assessment, industrial hygiene, agricultural health & safety), Biostatistics (Frequentist & Bayesian), Machine learning, Programming (R & Python), Research grant proposal development.

January 2017 – December 2018
Epidemiology | MPH | GPA 3.7/4
University of Nebraska Medical Center

- Capstone: Characterization of cancer risk among chronic kidney disease patients.
- Coursework: Applied public health research, public health administration, health behavior, epidemiology (methods & applied), biostatistics (frequentist), SAS programming.

August 2011 – October 2014
Pharmacy | PharmD | GPA 3.95/4
Rajiv Gandhi University of Medical Sciences, India

- Rotations: General medicine, emergency care, gastroenterology, bone-marrow transplant, orthopedic/sports medicine.
- Coursework: Pharmacotherapy, clinical pharmacy, biopharmaceutics, clinical research, biostatistics.

August 2006 – February 2011
Pharmacy | Bachelor's degree | GPA 3.05/4
TamilNadu Dr. M.G.R. Medical University, India

- Thesis: Effect of sodium channel modulator pre-treatment on animal models of epilepsy.
- Coursework: Pharmacology, pharmaceutics, chemistry (medicinal / analytical).

Publications

- **Puvvula, J**., Poole, J.A., Gwon, Y., Rogan, E.G., Bell, J.E. Role of Social Determinants of Health in differential respiratory exposure and health outcomes among children. *BMC Public Health* **23**, 119 (2023). https://doi.org/10.1186/s12889-022-14964-2
- **Puvvula, J**., Poole, J.A., Gonzalez, S., Rogan, E.G., Gwon, Y., Rorie, A.C., Ford, B.L., Bell, J.E. Joint association between ambient air pollutant mixture and pediatric asthma exacerbations. *Environmental Epidemiology*, October 2022 - Volume 6 - Issue 5 - p e225 https://doi.org/10.1097/EE9.0000000000000225
- **Puvvula, J.**; Abadi, A.M.; Conlon, K.C.; Rennie, J.J.; Jones, H.; Bell, J.E. Evaluating the Sensitivity of Heat Wave Definitions among North Carolina Physiographic Regions. *Int. J. Environ. Res. Public Health,* 2022, *19*, 10108. https://doi.org/10.3390/ijerph191610108
- **Puvvula, J.**, Abadi, A. M., Conlon, K. C., Rennie, J. J., Herring, S. C., Thie, L., et al. (2022). Estimating the Burden of Heat-related illness morbidity Attributable to Anthropogenic Climate Change in North Carolina. *GeoHealth*, 6, e2022GH000636. https://doi.org/10.1029/2022GH000636
- Fard B.J., **Puvvula, J**., Bell J.E. (2022). Evaluating changes in health risk from drought over the contiguous United States. *Int. J. Environ. Res. Public Health*, 19(8), 4628. https://doi.org/10.3390/ijerph19084628.

- Ouattara, B.S., **Puvvula, J**., Abadi, A., Munde, S., Kolok, A.S., Bartelt-Hunt, S., et al. (2022). Geospatial distribution of age-adjusted incidence of the three major types of pediatric cancers and waterborne agrichemicals in Nebraska. *GeoHealth*, 6, e2021GH000419. https://doi.org/10.1029/2021GH000419
- **Puvvula, J**., Baccaglini, L., Johnson, A., Du, Y., Bell, J. E., & Rautiainen, R. H. (2022). Prevalence and Risk Factors for Pulmonary Conditions among Farmers and Ranchers in the Central United States. *Journal of Agromedicine*, 1–13. Advance online publication. https://doi.org/10.1080/1059924X.2021.2025180
- **Puvvula, J**., Bartelt-Hunt S.L., Ouattara B.S., Kolok A.S., Bell J.E., Rogan E.G. (2021). Association between aqueous atrazine and pediatric cancer in Nebraska. *Water*, 2727 (13). https://doi.org/10.3390/w13192727
- Du, Y., Baccaglini, L., Johnson, A., **Puvvula, J**., & Rautiainen, R. H. (2021). Factors Associated with Musculoskeletal Discomfort in Farmers and Ranchers in the U.S. Central States. *Journal of Agromedicine*, 27(2), 232-244. https://doi.org/10.1080/1059924X.2021.1893880

Scientific reports

- Bell, J., **Puvvula, J**., & Abadi, A. (2021). Determining the role of anthropogenic climate change on human health outcomes: A case study on heat related illness attribution. Society of Actuaries. Available at: https://www.soa.org/globalassets/assets/files/resources/research-report/2021/determining-role-climate-change.pdf

Presentations

- Fard, B.J., **Puvvula, J**., & Bell, J.E., (December 2021). Cluster analysis of health risks of droughts in US counties for 2010-2014 and 2015-2019. American Meteorological Society Annual Meeting. https://doi.org/10.1002/essoar.10509706.1
- **Puvvula, J**., Abadi, A., & Bell, J.E. (January 2020). Evaluating heatwave definitions using heat-related health outcomes. American Meteorological Society Annual Meeting. Available at: https://ams.confex.com/ams/2020Annual/meetingapp.cgi/Paper/367591
- **Puvvula, J**., Abadi, A., Bell, J.E., Rennie, J.J., & Gwon, Y. (December 2019). Using extreme weather event attribution to determine the impacts of climate change on human health. American Geophysical Union Fall Meeting. Available at: https://ui.adsabs.harvard.edu/abs/2019AGUFMGH13B1056P
- **Puvvula, J**., Ouattara, B.S., Abadi, A., Bartelt-Hunt, S.L., Kolok, A.S., Bell, J.E., & Rogan, E.G. (December 2019). Atrazine exposure and pediatric cancer incidence: An ecologic study in Nebraska. American Geophysical Union Fall Meeting. Available at: https://ui.adsabs.harvard.edu/abs/2019AGUFMGH12A..02P
- **Puvvula, J**., Campbell, W. S., Ganti, A. K., & Tendulkar, K. (May 2019). Incidence of cancer in chronic kidney disease patients. American Journal of Kidney Diseases. 739-739 (73). https://doi.org/10.1053/j.ajkd.2019.03.370
- Henry, M., **Puvvula, J**., Schoen, J. J., Puzniak, L., Raddatz, J., Van Schooneveld, T., & Bergman, S. (April 2019). Treatment of Pseudomonas Infection with Beta-Lactams Including Ceftolozane-Tazobactam in Solid Organ Transplant Recipients. American Journal of Transplant. 732-732 (19). https://doi.org/10.1111/ajt.15404
- **Puvvula, J**., Corley, B., Bartelet-Hunt, S.L., Rogan, E.G., Coulter, D., Sparks, J., Baccaglini, L., & Kolok, A.S., (April 2018). In GIS & Water Resources X – Spatial Analysis of Watersheds: Ecological, Hydrological and Societal Responses.

Invited talks
- SDoH, air quality and pediatric asthma exacerbations – August 2022 – Omaha Public Power District – Board of Directors meeting.

Awards

- Berndt travel award [March 2022 | $ 400]
- UNMC predoctoral Fellowship [July 2021 – August 2022 | $ 52,000]
- Barcelona Institute for Global Health [August 2021 | € 100]

- Carruth J. Wagner, MD Scholarship [May 2021 | $ 2,500]
- ODSC Academic Diversity Scholarship [October 2020 | $ 800]
- Carruth J. Wagner, MD Scholarship [May 2020 | $ 1,600]
- Chancellor Robert D. Sparks Award [May 2020 | $ 2,500]
- Alteryx Inspire – Student scholarship [May 2019 | $ 1,250]
- Daugherty Global Institute, Water for Food – Student Fellowship [January 2019 – June 2021 | $ 35,000]
- UNMC Merit scholarship [January 2016 | $ 5,317]

Skills

- Statistical programming using R 4.x & Python 3.x
- Practicing reproducible research using GitHub for version control/collaboration
- Developing data analysis pipelines and deploying projects on High Performance Computing clusters using Bash/Slurm
- Scientific writing and grant proposal development
- Conducting systematic reviews and meta-analysis using PRISMA
- Tableau certified desktop specialist (Candidate ID: 1003298)
- Expertise in using ArcGIS pro 2.x, Tableau Prep, SQL, RevMan, EndNote
- Limited expertise in chromatography and spectrophotometry

Professional development

- September 2022 | 34th Annual ISEE conference
- August 2022 | Environmental Justice bootcamp – Columbia University, New York, NY
- July 2022 | Exposome bootcamp – Columbia University, New York, NY
- October 2021 | Certificate program - Scientific writing – EQUATOR, Oxford University, UK
- September 2021 | Peer review workshop – Salis Institute, Australia
- September 2021 | Certificate program - Advanced methods in Global Health (Health Impact Assessment, Planetary health, Biomedical data science & Machine learning) – Barcelona Institute of Global Health, Spain
- August 2021 | Environmental mixture analysis – Columbia University, New York, NY
- July 2021 | Causal mediation analysis – Columbia University, New York, NY
- June 2021 | Bash programming & high-performance computing – University of Nebraska, Lincoln, NE
- January 2020 | Python programming – American Meteorological Society, Boston, MA

Reviewer

- 2023 – ISEE NAC conference – Abstract reviewer
- 2023 – Society of Epidemiology – Mid-year meeting – Abstract reviewer
- International Journal of Health Geographies
- International Journal of Hygiene and Environmental Health
- International Journal of Environmental Research and Public Health