



## UNM METALS Publications

**2023**

**Erdei E, Shuey C, Miller C, Hoover J, Cajero M, Lewis J.** Metal mixture exposures and multiplexed autoantibody screening in Navajo communities exposed to uranium mine wastes. *Journal of Translational Autoimmunity*. 2023 Jan 1;6:100201. <https://doi.org/10.1016/j.jtauto.2023.100201>

Quiambao J, Hess KZ, Johnston S, **El Hayek E**, Nouredine A, **Ali AM**, Spilde M, **Brearley A**, Lichtner P, **Cerrato JM**, Howe KJ, **Gonzalez-Estella, J.** Interfacial Interactions of Uranium and Arsenic with Microplastics: From Field Detection to Controlled Laboratory Tests. *Environmental Engineering Science*. 2023 Jun 12. <https://doi.org/10.1089/ees.2023.0054>

**Girlando, C., Lin, Y., Hoover, J., Woldeyohannes, T., Beene, D.,** Liu, Z. **Campen, M., MacKenzie, D., and Lewis, J.** 2023. Meteorological Data Source Comparison – a Case Study in Geospatial Modeling of Potential Environmental Exposure to Abandoned Uranium Mine Sites on Navajo Nation. *Environmental Monitoring and Assessment*. 195, 834. <https://doi.org/10.1007/s10661-023-11283-w>

**Erdei E, Zhou X, Shuey C, Ass' ad N, Page K, Gore B, Zhu C, Kanda D, Luo L, Sood A, Zychowski KE.** Serum autoantibodies and exploratory molecular pathways in rural miners: A pilot study. *Journal of Translational Autoimmunity*. 2023 Mar 9:100197. <https://doi.org/10.1016/j.jtauto.2023.100197>

**El Hayek E, Castillo E, In JG, Garcia M, Cerrato J, Brearley A, Gonzalez-Estrella J,** Herbert G, Bleske B, Benavidez A, Hsiao H. Photoaging of polystyrene microspheres causes oxidative alterations to surface physicochemistry and enhances airway epithelial toxicity. *Toxicological Sciences*. 2023 Mar 7:kfad023. <https://doi.org/10.1093/toxsci/kfad023>

Portman TA, Granath A, Mann MA, **El Hayek E**, Herzer K, **Cerrato JM, Rudgers JA.** Characterization of root-associated fungi and reduced plant growth in soils from a New Mexico uranium mine. *Mycologia*. 2023 Mar 3:1-3. <https://doi.org/10.1080/00275514.2022.2156746>

**Medina S, Zhang H, Santos-Medina LV, Yee ZA, Martin KJ, Wan G, Bolt AM, Zhou X, Stýblo M, Liu KJ.** Arsenite Methyltransferase Is an Important Mediator of Hematotoxicity Induced by Arsenic in Drinking Water. *Water*. 2023 Jan 22;15(3):448. <https://doi.org/10.3390/w15030448>

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Liu Z, Lin Y, Hoover J, **Beene D**, Charley PH, Singer N. Individual level spatial-temporal modelling of exposure potential of livestock in the Cove Wash watershed, Arizona. *Annals of GIS*. 2023 Jan 2;29(1):87-107. <https://doi.org/10.1080/19475683.2022.2075935>

Van Horne YO, Alcalá CS, Peltier RE, Quintana PJ, Seto E, **Gonzales M**, Johnston JE, Montoya LD, Quirós-Alcalá L, Beamer PI. An applied environmental justice framework for exposure science. *Journal of Exposure Science & Environmental Epidemiology*. 2023 Jan;33(1):1-1. <https://doi.org/10.1038/s41370-022-00422-z>

**Speer RM, Zhou X, Volk LB, Liu KJ, Hudson LG**. Arsenic and cancer: Evidence and mechanisms. *In Advances in Pharmacology* 2023 Jan 1 (Vol. 96, pp. 151-202). Academic Press. <https://doi.org/10.1016/bs.apha.2022.08.001>

## 2022

**Meza I, Gonzalez-Estrella J**, Burns PC, Rodriguez V, **Velasco CA**, Sigmon GE, Szymanowski JE, Forbes TZ, Applegate LM, **Ali AM**, Lichtner P, and **Cerrato JM**. Solubility and Thermodynamic Investigation of Meta-Autunite Group Uranyl Arsenate Solids with Monovalent Cations Na and K. *Environmental Science & Technology*. 2022 Dec 16. <https://doi.org/10.1021/acs.est.2c06648>

**Volk LB, Cooper KL**, Jiang T, Paffett ML, **Hudson LG**. Impacts of arsenic on Rad18 and translesion synthesis. *Toxicology and Applied Pharmacology*. 2022 Nov 1;454:116230. <https://doi.org/10.1016/j.taap.2022.116230>

**Medina S**, Zhang H, Santos-Medina LV, Wan G, **Bolt AM**, Zhou X, **Burchiel SW, Liu KJ**. Arsenic impairs the lineage commitment of hematopoietic progenitor cells through the attenuation of GATA-2 DNA binding activity. *Toxicology and applied pharmacology*. 2022 Oct 1;452:116193. <https://doi.org/10.1016/j.taap.2022.116193>.

**Schilz JR, Dashner-Titus EJ, Simmons KA, Erdei E, Bolt AM, MacKenzie DA, Hudson LG**. The immunotoxicity of natural and depleted uranium: From cells to people. *Toxicology and Applied Pharmacology*. 2022 Sep 21;116252. <https://doi.org/10.1016/j.taap.2022.116252>

Gong X, Lu Y, **Beene D**, Li Z, Hu T, Morgan M, Lin Y. Understanding public perspectives on fracking in the United States using social media big data. *Annals of GIS*. 2022 Sep 12:1-5. <https://doi.org/10.1080/19475683.2022.2121856>

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**Nozadi SS**, Aguiar A, **Du R**, Enright EA, Schantz SL, **Miller C**, Rennie B, **Quetawki M**, **MacKenzie D**, **Lewis JL**. Cross-cultural applicability of eye-tracking in assessing attention to emotional faces in preschool-aged children. *Emotion*. 2022 Sep 15. <https://doi.org/10.1037/emo0001124>

**Shaikh N**, Qian J, Kim S, Phan H, **Lezama-Pacheco JS**, **Ali AM**, Cwiertny DM, Forbes TZ, Haes AJ, **Cerrato JM**. U (VI) Binding onto Electrospun Polymers Functionalized with Phosphonate Surfactants. *Journal of Environmental Chemical Engineering*. 2022 Aug 17:108448. <https://doi.org/10.1016/j.jece.2022.108448>

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**DeVore, C.L., Rodriguez-Freire, L.**, Villa, N., Soleimanifar, M., **Gonzalez-Estrella, J.**, **Ali, A.M.S.**, **Lezama-Pacheco, J.**, Ducheneaux, C. and **Cerrato, J.M.**, 2022. Mobilization of As, Fe, and Mn from Contaminated Sediment in Aerobic and Anaerobic Conditions: Chemical or Microbiological Triggers?. *ACS Earth and Space Chemistry*. 2022 Jun 28;6(7):1644-54. <https://doi.org/10.1021/acsearthspacechem.1c00370>

**Beene, D.**, Collender, P., Cardenas, A., Harvey, C., Huhmann, L., **Lin, Y.**, **Lewis, J.**, Lolacono, N., Navas-Acien, A., Nigra, A. and Steinmaus, C., 2022. A mass-balance approach to evaluate As intake and excretion in different populations. *Environment International*, p.107371. <https://doi.org/10.1016/j.envint.2022.107371>

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**Gao X**, **Li L**, **Luo L**. Decomposition of the total effect for two mediators: A natural mediated interaction effect framework. *Journal of causal inference*. 2022 Jan 1;10(1):18-44. <https://doi.org/10.1515/jci-2020-0017>

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**Cooper KL, Volk LB**, Dominguez DR, Duran AD, **Liu KK, Hudson LG**. Contribution of NADPH oxidase to the retention of UVR-induced DNA damage by arsenic. *Toxicology and Applied Pharmacology*. 2022 Jan 1;434:115799. <https://doi.org/10.1016/j.taap.2021.115799>

## 2021

**Miller C**. Marginal probabilities and point estimation for conditionally specified logistic regression. *Communications in Statistics-Simulation and Computation*. 2021 Dec 2;50(12):4338-63. <https://doi.org/10.1080/03610918.2019.1643478>

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[https://link.springer.com/chapter/10.1007/978-3-030-53893-4\\_6](https://link.springer.com/chapter/10.1007/978-3-030-53893-4_6)

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**Schilz JR, Dashner-Titus EJ, Luo L, Simmons KA, MacKenzie DA, Hudson LG**. Co-exposure of sodium arsenite and uranyl acetate differentially alters gene expression in CD3/CD28 activated CD4+ T-cells. *Toxicology Reports*. 2021 Nov 27. <https://doi.org/10.1016/j.toxrep.2021.11.019>

**Velasco CA, Brearley AJ, Gonzalez-Estrella J, Ali AM, Meza MI**, Cabaniss SE, Thomson BM, Forbes TZ, **Lezama Pacheco JS, Cerrato JM**. From Adsorption to Precipitation of U (VI): What is the Role of pH and Natural Organic Matter?. *Environmental Science & Technology*. 2021 Nov 19. <https://doi.org/10.1021/acs.est.1c05429>

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**El Hayek E**, **Medina S**, Guo J, Nouredine A, Zychowski KE, Hunter R, Velasco CA, Wiesse M, Maestas-Olguin A, Brinker CJ, Brearley A, ... & Cerrato J. Uptake and Toxicity of Respirable Carbon-Rich Uranium-Bearing Particles: Insights into the Role of Particulates in Uranium Toxicity. Environmental Science & Technology. 2021 Jul 8. <https://doi.org/10.1021/acs.est.1c01205>

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**Begay, J.**, Sanchez, B., Wheeler, A. Baldwin F., Lucas, S., Herbert, G., Ordonez Suarez J., **Shuey, C.**, Klaver, Z. Harkema, Wagner, J.G., Morishita, M., Bleske, B., **Zychowski, K.E.**, & **Campen, M.J.** (2021) Assessment of particulate matter toxicity and physicochemistry at the Claim 28 uranium mine site in Blue Gap, AZ, *Journal of Toxicology and Environmental Health, Part A*. 2021 January 2;84(1):31-48. <https://doi.org/10.1080/15287394.2020.1830210>

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**Rodriguez-Freire, L., DeVore, C.L., El Hayek, E.**, Berti, D., **Ali, A.S., Lezama Pacheco, J.S.**, Blake, J.M., Spilde, M.N., **Brearley, A.J., Artyushkova, K., and Cerrato, J.M.** (2020). Entrapment of uranium-phosphorous nanocrystals inside root cells of Tamarix plants from a mine waste site. *Environmental Science: Processes and Impacts*. Dec 16. <https://doi.org/10.1039/D0EM00306A>

**Dashner-Titus, E.J., Schilz, J.R., Simmons, K.A., Duncan, T.R.**, Alvarez, S. C., & **Hudson, L. G.** 2020. Differential response of human T-lymphocytes to arsenic and uranium. *Toxicology Letters*, 333, 269-278. <https://doi.org/10.1016/j.toxlet.2020.08.013>

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## 2019

**Velasco, C.A., Artyushkova, K., Ali, A.M.S., Osburn, C.L., Gonzalez-Estrella, J., Lezama-Pacheco, J.S., Cabaniss, S.E. and Cerrato, J.M.,** 2019. Organic functional group chemistry in mineralized deposits containing U (IV) and U (VI) from the Jackpile Mine in New Mexico. *Environmental science & technology*, 53(10), pp.5758-5767.  
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**El Hayek, E., Brearley, A.J.,** Howard, T., Hudson, P., Torres, C., Spilde, M.N., Cabaniss, S., **Ali, A.M.S. and Cerrato, J.M.,** 2019. Calcium in Carbonate Water Facilitates the Transport of U (VI) in Brassica juncea Roots and Enables Root-to-Shoot Translocation. *ACS Earth and Space Chemistry*, 3(10), pp.2190-2196.  
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**Luo, L., Hudson, L.G., Lewis, J. and Lee, J.H.**, 2019. Two-step approach for assessing the health effects of environmental chemical mixtures: application to simulated datasets and real data from the Navajo Birth Cohort Study. *Environmental Health*, 18(1), p.46.

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**Nozadi, S.S., Li, L., Clifford, J., Du, R., Murphy, K., Chen, L., Navajo Birth Cohort Study Team, Seanez, P., Burnette, C., MacKenzie, D. and Lewis, J.L.**, 2019. Use of Ages and Stages Questionnaires™ (ASQ) in a Navajo population: Comparison with the US normative dataset. *Child: care, health and development*, 45(5), pp.709-718.

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2018

**El Hayek, E.**, Torres, C., **Rodriguez-Freire, L.**, Blake, J.M., **De Vore, C.L.**, **Brearley, A.J.**, Spilde, M.N., Cabaniss, S., **Ali, A.M.S.** and **Cerrato, J.M.**, 2018. Effect of calcium on the bioavailability of dissolved uranium (VI) in plant roots under circumneutral pH. *Environmental science & technology*, 52(22), pp.13089-13098.  
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