



UNM METALS TRAINEE Publications

(Trainee names in red)

DeVore, C.L., El Hayek, E., Busch, T., Long, B., Mann, M., Rudgers, J.A., Ali, A.S., Howard, T., Spilde, M.N., Brearley, A.J., Ducheneaux, C., and Cerrato, J.M. (2021). Arsenic Accumulation in Hydroponically Grown *Schizachyrium scoparium* (Little Bluestem) Amended with Root-Colonizing Endophytes. *ACS Earth and Space Chemistry*, Accepted.

<https://pubs.acs.org/doi/10.1021/acsearthspacechem.0c00302>

Hoover J.H., Bolt A.M., Burchiel S.W., Cerrato J.M., Dashner-Titus E.J., Erdei E., Gonzalez Estrella J., El Hayek E., Hudson L.G., Luo L., MacKenzie D., Medina S., Schilz J.R., Velasco C.A., Zychowski K., Lewis J.L. A transdisciplinary approach for studying uranium mobility, exposure, and human health impacts on tribal land sin the southwest, United States. In Malcolm Siegel, Olle Selinus and Robert Finkelman (Eds.), *Practical Applications of Medical Geology 2021*; Springer, ISBN 978-3-030-53892-7, Accepted.

DeVore, C.L., El Hayek, E., Busch, T., Long, B., Mann, M., Rudgers, J.A., Ali, A.M.S., Howard, T., Spilde, M.N., Brearley, A. Ducheneaux, C., and Cerrato, J. (2021). Arsenic Accumulation in Hydroponically Grown *Schizachyrium scoparium* (Little Bluestem) Amended with Root-Colonizing Endophytes. *ACS Earth and Space Chemistry*.

<https://doi.org/10.1021/acsearthspacechem.0c00302>

Zhou X., Xue B., Medina S., Burchiel S.W., Liu, K.J. (2021) Uranium directly interacts with the DNA Repair Protein 1 Poly (ADP-ribose) Polymerase 1, *Toxicology and Applied Pharmacology* 115360.

<https://doi.org/10.1016/j.taap.2020.115360>

Medina S., Zhou X., Lauer F.T, Zhang H., Liu K.J., Lewis J., Burchiel S.W.(2021) Modulation of PARP Activity by Monomethylarsonous (MMA+3) Acid and Uranium in Mouse Thymus, *Toxicology and Applied Pharmacology*. 15;411:115362.

<https://doi.org/10.1016/j.taap.2020.115362>

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):3148.

<https://doi.org/10.1080/15287394.2020.1830210>

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>

Shankar P., Dashner-Titus E.J., Truong L., Hayward K., Hudson L.G., Tanguay, R.L. (2020) Developmental Toxicity in Zebrafish (*Danio rerio*) Exposed to Uranium: A Comparison with Lead, Cadmium, and Iron. *Environmental Pollution*, 116097.

<https://doi.org/10.1016/j.envpol.2020.116097>

Updated 6/21/2021



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>

Gonzalez-Estrella, J., Meza, I., Burns, A.J., Ali, A.M.S., Lezama-Pacheco, J.S., Lichtner, P., Shaikh, N., Fendorf, S. and Cerrato, J.M., 2020. Effect of Bicarbonate, Calcium, and pH on the Reactivity of As (V) and U (VI) Mixtures. *Environmental science & technology*, 54(7), pp.3979-3987.
<https://doi.org/10.1021/acs.est.9b06063>

Avasarala, S.; J. Brearley, A.; Spilde, M.; Peterson, E.; Jiang, Y.-B.; Benavidez, A.; Cerrato, J.M. Crystal Chemistry of Carnotite in Abandoned Mine Wastes. *Minerals* 2020, 10, 883.
<https://doi.org/10.3390/min10100883>

Lin, Y., Hoover, J., Beene, D., Erdei, E. and Liu, Z., 2020. Environmental risk mapping of potential abandoned uranium mine contamination on the Navajo Nation, USA, using a GIS-based multi-criteria decision analysis approach. *Environmental Science and Pollution Research International*. 27, 30542–30557.
<https://doi.org/10.1007/s11356-020-09257-3>

Sanchez, B., Zhou, X., Gardiner, A.S., Herbert, G., Lucas, S., Morishita, M., Wagner, J.G., Lewandowski, R., Harkema, J.R., Shuey, C., Campen, M.J. and Zychowski, K.E., 2020. Serum-borne factors alter cerebrovascular endothelial microRNA expression following particulate matter exposure near an abandoned uranium mine on the Navajo Nation. *Particle and Fibre Toxicology*, 17(1), pp.1-14.
<https://doi.org/10.1186/s12989-020-00361-3>

Medina, S., Lauer, F.T., Castillo, E.F., Bolt, A.M., Ali, A.M.S., Liu, K.J. and Burchiel, S.W., 2020. Exposures to uranium and arsenic alter intraepithelial and innate immune cells in the small intestine of male and female mice. *Toxicology and Applied Pharmacology*, p.115155.
<https://doi.org/10.1016/j.taap.2020.115155>

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.
<https://doi.org/10.1021/acs.est.9b00407>

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.
<https://doi.org/10.1021/acsearthspacechem.9b00171>

Blake, J.M., Avasarala, S., Ali, A.M.S., Spilde, M., Lezama-Pacheco, J.S., Latta, D., Artyushkova, K., Ilgen, A.G., Shuey, C., Nez, C. and Cerrato, J.M., 2019. Reactivity of As and U co-occurring in Mine Wastes in northeastern Arizona. *Chemical geology*, 522, pp.26-37.
<https://doi.org/10.1016/j.chemgeo.2019.05.024>



Avasarala, S., Torres, C., Ali, A.M.S., Thomson, B.M., Spilde, M.N., Peterson, E.J., Artyushkova, K., Dobrica, E., Lezama-Pacheco, J.S. and Cerrato, J.M., 2019. Effect of bicarbonate and oxidizing conditions on U (IV) and U (VI) reactivity in mineralized deposits of New Mexico. *Chemical Geology*, 524, pp.345-355.
<https://doi.org/10.1016/j.chemgeo.2019.07.007>

Wong, C.P., **Dashner-Titus, E.J.**, Alvarez, S.C., Chase, T.T., Hudson, L.G. and Ho, E., 2019. Zinc deficiency and arsenic exposure can act both independently or cooperatively to affect zinc status, oxidative stress, and inflammatory response. *Biological trace element research*, 191(2), pp.370-381.
<https://doi.org/10.1007/s12011-019-1631-z>

Bolt, A.M., Medina, S., Lauer, F.T., Liu, K.J. and Burchiel, S.W., 2019. Minimal uranium immunotoxicity following a 60-day drinking water exposure to uranyl acetate in male and female C57BL/6J mice. *Toxicology and applied pharmacology*, 372, pp.33-39. <https://doi.org/10.1016/j.taap.2019.04.003>

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.
<https://doi.org/10.1111/cch.12704>

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.
<https://doi.org/10.1021/acs.est.8b02724>

Zychowski, K.E., Kodali, V., Harmon, M., Tyler, C.R., Sanchez, B., Ordonez Suarez, Y., Herbert, G., Wheeler, A., **Avasarala, S.**, Cerrato, J.M., Kunda, N.K., Muttill, P., Shuey, C., Brearley, A., Ali, A.M.S., Lin, Y., Shoeb, M., Erdely, A. and Campen, C. 2018. Respirable uranyl-vanadate-containing particulate matter derived from a legacy uranium mine site exhibits potentiated cardiopulmonary toxicity. *Toxicological Sciences*, 164(1), pp.101-114. <https://doi.org/10.1093/toxsci/kfy064>

Dashner-Titus, E.J., Hoover, J., Li, L., Lee, J.H., Du, R., Liu, K.J., Traber, M.G., Ho, E., Lewis, J. and Hudson, L.G., 2018. Metal exposure and oxidative stress markers in pregnant Navajo Birth Cohort Study participants. *Free Radical Biology and Medicine*, 124, pp.484-492.
<https://doi.org/10.1016/j.freeradbiomed.2018.04.579>

Bolt, A.M., Medina, S., Lauer, F.T., Xu, H., Ali, A.M., Liu, K.J. and Burchiel, S.W., 2018. Minimal uranium accumulation in lymphoid tissues following an oral 60-day uranyl acetate exposure in male and female C57BL/6J mice. *PloS one*, 13(10), p.e0205211.
<https://doi.org/10.1371/journal.pone.0205211>

Avasarala, S., Lichtner, P.C., Ali, A.M.S., González-Pinzón, R., Blake, J.M. and Cerrato, J.M., 2017. Reactive transport of U and V from abandoned uranium mine wastes. *Environmental science & technology*, 51(21), pp.12385-12393.
<https://doi.org/10.1021/acs.est.7b03823>



Ding, X., Zhou, X., Cooper, K.L., **Huestis, J.**, Hudson, L.G. and Liu, K.J., 2017. Differential sensitivities of cellular XPA and PARP-1 to arsenite inhibition and zinc rescue. *Toxicology and applied pharmacology*, 331, pp.108-115.
<https://doi.org/10.1016/j.taap.2017.05.031>