



TEXAS TECH UNIVERSITY

Davis College

Plant & Soil Science™

May 16, 2024

Dear Davis College Selection Committee,

This letter is offered as formal nomination for Dr. Matthew Siebecker for the Davis College International Impact Award. Matt is an Assistant Professor of Applied Environmental Soil Chemistry in the Department of Plant and Soil Science, and he has already developed a strong international collaborative and leadership network that is benefiting scientists and residents throughout the world. I think you will find him a strong candidate for this award, and I strongly support his nomination.

Matt's international accomplishments fall into two primary projects. One has been identifying the impacts of arsenic-affected water on children and others in Costa Rica and Panama, and the other has been collaborating to biofortify sweet potato with selenium and iodine in degraded soils in Brazil. His work is leading to quantifiable health benefits to residents of these countries.

In Costa Rica and Panama, Matt spent three years identifying species of arsenic in Central American soils, followed by work from 2021 to present where he and collaborators are correlating the distribution of arsenic with local health outcomes. He and his group are also comparing exposure to heavy metals with kidney damage in children in an effort to prevent chronic kidney disease among the population. His work was recently published in *Journal of Hazardous Materials* and *Geosciences*:

Izaditame, F., LeMonte, J. J., Siebecker, M. G., Yu, X., Fischel, M., Tappero, R., & Sparks, D. L. (2024). Sea- Level Rise and Arsenic- Rich Soils: A Toxic Relationship. *Journal of Hazardous Materials*, 134528.

Valdés-Rodríguez, B., Montero-Campos, V., & Siebecker, M. G. (2023). Causes of Chronic Kidney Disease of Non-Traditional Origin in Central America: An Approach Based on Medical Geology. *Geosciences*, 13(12), 360.

We are proud of Dr. Siebecker and the impact he is having on communities throughout the world. His accomplishments in international leadership and collaboration will likely reach far beyond the scope of his role at Texas Tech University, and I therefore highly recommend him for this award.

Respectfully,

Glen L. Ritchie, Ph.D.

Chair, Department of Plant and Soil Science