



J. Grey Monroe, USDA-NIFA Fellow
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Dear Professors,

Please find my application materials for the advertised position of Assistant Professor of Climate Adaptation: Plant Genomics in the Department of Plant Sciences. I am a plant geneticist who focuses on climate adaptation and I would love to become a colleague among the excellent community of plant scientists at UC Davis.

My research is centered on connecting functional genomic diversity with plant traits and the climate components that drive their evolution. As a graduate student with John McKay at Colorado State University, I contributed to understanding the causes and consequences of plant climate adaptation with an emphasis on uncovering the role of adaptive loss-of-function alleles in drought adaptation. I also led an interdisciplinary research group interested in the evolution of carbon cycling traits in the context of climate change. To prepare for an independent research career, I have received grants and fellowships and cultivated collaborations with researchers at external institutions, including a recently accepted post-doctoral research position with Detlef Weigel at the Max Planck Institute.

The tools I use include functional annotation of genomic diversity and gene-editing to identify causal loci at genomic scales and functional molecular resolutions. I also employ remote sensing and function-valued trait approaches to study the environmental drivers, physiology, and ecosystem consequences of genome-environment interactions. I believe the key to a mechanistic understanding of climate adaptation lies in multidisciplinary syntheses connecting genomes, traits, and environments. As a researcher at UC Davis, I am excited about the opportunities for collaboration to achieve this goal.

I also believe success in any science lies in training the next generation of scientists. Toward this goal, I led CSU graduate student mentors during a program to advance diversity in science. I applied these principles through my own mentorship of undergraduate and high school students who earned awards and authorship for their work. In the classroom, for a senior genetics course, I developed lesson plans connecting course material with real life examples to inspire students interests and facilitate their learning of functional genomics. At UC Davis, I propose teaching a course titled "Functional Plant Genomics," which emphasizes experiential learning to teach core genetics concepts, critical thinking, and practical skills.

I believe that the position, department, and UC Davis as a whole would be an excellent fit. Thank you for taking the time to consider my application. Please do not hesitate to contact me with questions about my record or future plans.

Sincerely,

A handwritten signature in black ink, appearing to read "John G. Monroe". The signature is fluid and cursive, with the first name "John" and last name "Monroe" clearly distinguishable.

J. Grey Monroe