Grantee Spotlight: Luis G. Carvajal-Carmona, PhD

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Luis G. Carvajal-Carmona, PhD, is an Associate Professor at the University of California, Davis, and currently has an Exploratory Grant Award to Promote Workforce Diversity in Basic Cancer Research (R21) from CRCHD. He specializes in cancer genetics, epidemiology, and cancer health disparities.

Human and Cancer Genetics Research

Carvajal-Carmona's lab's primary focus is "gene hunting," studying patients', families', and healthy individuals' genetics to find out why some people develop cancer and why some do not. In a recent study, his research team—which includes a graduate student supported by a diversity supplement—recently developed an efficient way to study genes that increase cancer risk in humans using an innovative genome editing method.

Also of great interest to his lab is the study of cancer health disparities, and more specifically, the genetics and epidemiology of cancer in Hispanics. He and his team are working to develop cohorts and tumor models to help us understand why this population tends to have a higher incidence and mortality of certain cancers.

With the support from his R21 award, Carvajal-Carmona is studying the genetic diversity of stomach tumors. He is also developing animal models that will help test possible drug combinations that can help treat these tumors better. Ultimately, this research may help reduce health disparities through better molecular diagnostics and genomic-guided precision treatments.

"This CURE R21 award is providing Carvajal-Carmona with the critical time and support needed to eventually develop a R01-type award exploring relationships between tumor characteristics and drug responses," shared Abigail Soyombo, PhD, MBA, CRCHD program director.

Reflections on Establishing an Independent Research Career

The path to an independent research career is not a short one, particularly for underrepresented investigators. A variety of experiences—career-based experiences like those provided by the R21

award as well as interpersonal—is needed to become a competitive researcher.

> “The diversity R21 has been an excellent springboard to launch
> and develop my career as an independent scientist.”
> —Luis G. Carvajal-Carmona

Carvajal-Carmona was inspired to pursue a research career because of an innate curiosity, a long-standing interest in biology, and a deeply personal drive to finding better ways to prevent and treat cancer after losing his father to pancreatic cancer at a young age. He is also quick to share that he has been fortunate to have supportive mentors beginning in elementary school and throughout his career.

These mentors helped him develop confidence in himself and his abilities to navigate challenges and gave him the freedom to pursue his research ideas. His positive experiences have led him to advise other underrepresented researchers to look constantly for mentors and supporters who will help them grow as scientists.

He also recommends taking advantage of available resources—whether it be reaching out to CRCHD when you are interested in a funding opportunity or participating in the grantsmanship, leadership, and professional skills development training programs that are offered by so many local institutions.

Advice for Underrepresented Students and Trainees

Carvajal-Carmona also offered these final thoughts for other underrepresented researchers: it is important to be positive and turn challenges into opportunities—and celebrate when those opportunities turn into scientific achievements, no matter how small they seem to be.

“We are the future of the country and being “different” gives us unique perspectives on how to solve many important problems in our society. Keep studying and working hard because si se puede [yes we can],” offered Carvajal-Carmona.

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