NIH Fellowship Supports Malaria Research in Uganda

Today Huezo is enrolled in Dominican's Master's in Biological Sciences program, working alongside Cooper on research focused on understanding the molecular mechanism of drug action and resistance in the human malaria parasite.
Last summer, thanks to an internal grant from Dominican's Strategic Initiative Fund, Huezo joined Cooper and a team of researchers from the University of California San Francisco (UCSF) on clinical trials at the Tororo District Hospital in eastern Uganda. Funded by the National Institutes of Health, the ongoing trails are examining the impact of monthly anti-malaria drugs on Ugandan children.

Huezo will return to Uganda this summer after being awarded a prestigious Global Health Disparities Research Fellowship. The fellowship is funded by the NIH through the University of California Berkeley Minority Health and Health Disparities International Research Training (MHIRT) Program. Cooper, Associate Professor in Dominican's Department of Natural Sciences and Mathematics, is a faculty participant in the MHIRT program.
Cooper credits Huezo's undergraduate training at Dominican for preparing her to work alongside the research team in Uganda. Science majors at Dominican have an important edge in their advancement of their education and careers. While at many universities, students don't get to work in the lab until their junior or senior year, at Dominican students are able to join a research team beginning their freshman year.

This laboratory experience gives students the advantage of knowing how to structure an experiment, use laboratory equipment, record results, analyze data, and present their findings for peer review. They gain professional credentials by presenting research findings at peer conferences, and co-authoring scientific papers with Dominican faculty for publication and presentation at professional meetings.

The day after receiving her bachelor's degree in biology in spring 2012, Huezo flew to Uganda to spend 12 weeks working alongside Cooper and the UCSF team, collecting data and parasite specimens to study how the genetics of malaria parasites are changing in response to new drug therapies introduced to Africa.

The MHIRT program allows U.S. universities to offer 10-12 week international training opportunities in health research for undergraduate and graduate students in the health sciences. Students who are from health disparity populations and/or are underrepresented in basic science, biomedical clinical, or behavioral health research career fields are eligible for funding.

"It is great getting Dominican University students involved in these high-level research programs," Cooper said. "Stephanie will work side-by-side with Berkeley and UCSF students and doctors, together with the local Ugandan practitioners and staff."

Working in Uganda last summer left a lasting impression on Stephanie.

"When people think of Uganda, many people think of the negatives. I kept an open mind going in and I found that the place was just amazing – there were so many happy people there. It was

also nice to see that our research was so important. Seeing data being produced and seeing the professor and the researchers getting excited about results was really exciting."

Cooper notes Huezo scored high marks from the research team in Uganda.

"I was giving a presentation at UCSF the other day about the Uganda project, and one of the doctors came up to me and said 'your student there was fantastic. She worked so hard, collected great data, and was clearly there for the science,'" he said.

Dominican's MS in Biological Sciences is a research intensive program designed to train students for scientific careers. Her work in Uganda last summer gave Huezo a jumpstart on her master's research project, Cooper said.

"Those three months she was able to collect data she will need for her master's degree," Cooper said. "She received a major head start in a way that most students – even in big research universities – do not get."

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