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Tropical disease research leads microbiologist to Peru

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Tropical disease research leads microbiologist to Peru

When Circe McDonald, '13 reflects on her time at Dominican, she credits the University's service-learning program for making her "a more well-rounded and caring person."

McDonald works as a microbiologist at the Centers for Disease Control and Prevention, developing new assays to improve the monitoring of *Onchocerca volvulus*, a neglected tropical disease and second leading infectious cause of blindness. She has conducted field work in Peru and worked on projects with public health workers in Latin America and Africa.

"Dominican's [service-learning program](#) really affected my life," she recalls. "This course introduced me to philosophy and ethics, which inspired me to minor in philosophy while at Dominican which forced me to look beyond myself and inspired me to spend my life focused on my community and society."

"I am really happy to be using science to improve the health of those who could benefit so greatly and to have such a diverse group of colleagues and collaborators."

Circe was an all-state musician at her performing arts high school in Las Vegas. While she shifted her focus to science upon entering Dominican, she was still able to continue her passion for music by playing flute with the Dominican Chamber Ensemble. Indeed, Circe was able to immerse herself in a wide variety of interests throughout her four years at Dominican.

"If you are curious about the world, you end up doing a little bit of everything and sometimes going in different directions," says Circe, who graduated with honors, earning a bachelor's degree in biology with an emphasis in molecular cell biology and minors in chemistry and philosophy.

"When I went to college I thought I'd leave the humanities behind me, but I was inspired by the passion of my professors in my GE courses and became very involved in ethics and philosophy."

Her freshman year, Circe quickly gained recognition as an outstanding student in the [Department of Natural Sciences and Mathematics](#) in the [School of Health and Natural Sciences](#). Circe decided pursue a career in biomedical research after working alongside faculty mentor Dr. Mohammed El Majdoubi the second semester of her freshman year. Circe quickly began contributing to studies on neural differentiation of embryonic stem cells and carcinomas.

Her experiences conducting laboratory research at Dominican helped her earn competitive internships throughout her undergraduate years. She was an Amgen Scholar at the University of Washington during summer 2011 and a Research Assistant at BioMarin from 2010 to 2012. During summer 2012, Circe participated in the Research Experience for Undergraduates program in Colorado State University's Department of Biochemistry and Molecular Biology. In September 2012 she began working at the Buck Institute for Research on Aging, working in the Kennedy Lab on research focused on diabetes.

"Circe is an enthusiastic, bright, driven, free-thinking, and hard-working individual with a diverse set of interests in and out of science," Dr. Majdoubi says. "She has shown immense interest in science and ability to take on this area's unique challenges in order to complete tasks and understand complex ideas. Further, she is unafraid to ask questions, make mistakes, and speak up. Circe has a strong foundation in biology and often makes the stretch between the sciences and other disciplines."

President of Beta Beta Beta and Alpha Chi honor societies, Circe also was co-editor of the Pulse, the Department of Natural Sciences and Mathematics' newsletter. One spring she worked for a health clinic in Tijuana, Mexico. She also hosted a radio show on Dominican Radio.

An active member of the Marin community, Circe has volunteered for the National Park Service, Marin AIDS Project, Bridge the Gap, Wildcare, and the Marine Mammal Center. She also has presented her

research in the humanities and science at national and international conferences. She also was awarded a [Lillian L.Y. Wang Yin Ph.D. Scholarship](#).

Circe is returning to school this fall earn a MPH before heading to veterinary school.