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# ENHANCING SUSTAINABILITY IN UCD'S RESEARCH LABS



Dr Mary Sekiya

Dr Mary Sekiya is chief technical officer in the Pathobiology-Microbiology and Parasitology Section of the School of Veterinary Medicine (SVM), UCD, with a particular interest in veterinary clinical microbiology and clinical parasitology. In recent years, she has also become involved with the work of the Sustainable Research Initiative and its efforts to drive excellence in sustainability practices in UCD's research labs

Mary's interest in biology was sparked by investigating the ponds, trees and wildlife in the forest preserve near where she grew up. "I am from Chicago which is well known for its skyscrapers. It is less well known that good city planning ensures that there is still plenty of green space."

Mary studied biology at the University of Chicago. "To earn some much-needed rent money, I worked as a student research assistant, thus beginning my career working in biology labs. My first position was in a neurobiology lab and then a plant molecular biology lab. I found plant biology much more interesting and, after receiving my bachelor's degree, I went south to sunny Florida, studying for an MSc at the University of Florida in Gainesville, working on a viral disease of citrus trees."

The University of Florida had a diverse graduate school where Mary met a lot of international students there. "They included a random guy from Ireland, who turned out to be my future husband. Spoiler alert! This is how I ended up in Dublin. I went back up north to do my PhD, studying plant pathology at Cornell University. After completing my PhD, I worked as a postdoc in the Agricultural Experiment Station in Geneva, NY, on *Agrobacterium tumefaciens*, a causative agent of gall disease in grapevine."

## Moving to Dublin

During the height of the Celtic Tiger, Mary and her husband had the opportunity to move to Dublin. "The late 1990s was likely a high point for Irish research funding, so work was relatively plentiful. My first job in Ireland was in plant pathology at UCD. I then did a second postdoc at NUI Maynooth, working on plant transformation for expression of foreign proteins, so if you are counting, this is the seventh lab I worked in."

Mary went on to work at DCU with Professor John Dalton, who had established a very productive working relationship with Professor Grace Mulcahy (UCD School of Veterinary Medicine) researching liver fluke biology and vaccine

development. "Shortly after I joined the group, John announced that he was moving to Australia, and the research group was restructured. Several of us relocated to the UCD School of Veterinary Medicine and I am still here today, although my role has changed over the years. Initially, I was involved in various research projects, primarily concerning liver fluke. Over time, I found myself becoming more involved in laboratory management."

## Enhancing sustainability

Mary was appointed chief technical officer in the School of Veterinary Medicine Pathobiology Section, (Microbiology & Parasitology) in 2018. "In 2020, Dr Ana Vale, Assistant Professor in Veterinary Public Health, SVM suggested we could look at enhancing sustainability in the research labs. We decided we should work towards the My Green Lab (MGL) certification, as a few research groups in UCD had already completed this programme and it seemed achievable. With the support of the School's Associate Dean for Research, Innovation & Impact, Professor Simon More, we achieved gold level certification in March 2023. "Along with colleagues from the Research Office, UCD Green Campus, the Conway Institute, Lyons Farm, the School of Biology & Environmental Science, and the School of Biomolecular & Biomedical Science in the College of Science, we formed the Sustainable Research Initiative (SRI). The group began with support from the College of Health & Agricultural Sciences, and shortly after this, the UCD Sustainability Unit was launched, under the direction of our new UCD VP for Sustainability, Professor Tasman Crowe. The SRI is now an affiliated group with the UCD Sustainability Unit."

The SRI is in its third year and, Mary reports, has made significant progress addressing waste management and recycling in laboratories, promoting supplier take-back programmes, recycling of polystyrene boxes, and the KimTech nitrile glove recycling programme.