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DISEASE DETECTIVES

This month our researcher focus features Jennifer Dillon and Ellen O'Donovan, two undergraduates who have been involved in ongoing research in disease detection at the UCD School of Veterinary Medicine

Jennifer and Ellen have been working together for the past year and a half on a research project addressing the detection of diseases, such as cancer, through the use of a powerful imaging technique called fluorescence lifetime imaging microscopy (FLIM). Jennifer says: "We demonstrated the extensive capabilities of FLIM in early diagnostics, offering a superior alternative to the traditional diagnostic methods still commonly used today." Ellen notes: "We are very fortunate to be guided step-by-step through the world of research by Dr Sourav Bhattacharjee from the School's Veterinary Biosciences Section. We had the privilege of collaborating with researchers from the Royal College of Surgeons in Ireland (RCSI) and the UCD Conway Institute. Under Sourav's mentorship, we have gained hands-on experience with advanced equipment, such as the Leica Stellaris 8 STED/FLIM/confocal system located in RCSI!"

A passion for veterinary medicine

Jennifer Dillon was born in Dublin although she has lived most of her life in Athlone. She recalls: "From a young age, my dream was to become a vet. I always felt comforted by the company of animals. In my own home, we have a rescue border collie, a rescue cat and five rescue hens. "Over the years, I have developed a passion for veterinary medicine as I was always interested in the health of our pets. I was conscious of my lack of knowledge and skills when the need to help them arose. I live in a rural area and I have often encountered injured wildlife. Seeing animals suffer and being unable to help them had a profound effect on me. This led to my decision to apply for veterinary medicine at UCD." Apart from her academic studies, Jennifer also plays music: "I play violin and piano and recently I have started learning drums. Later this month, I will be participating in a fundraising concert, 'Christmas in June,' for the Brain Tumour Ireland charity."

Country life inspires career path

Ellen O'Donovan spent the first five years of her life in Cork City before moving to West Cork. If her family hadn't relocated to the countryside, she doesn't think she would be on her current path to becoming a vet. "My father is a farmer who breeds Limousin cattle, and my mother is a medical doctor. I've essentially combined their two careers and arrived at the veterinary discipline." Growing up, her hobbies included playing the fiddle and sea swimming. In addition, Ellen excelled in rowing, winning two All-Ireland medals, but her true passion, she says, has always been horseback riding. Ellen's interest in research was sparked in transition



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year at secondary school when she undertook her first research project titled "The Relationship Between Diet and Perceived Stress in Secondary School Students". Her work, carried out under the supervision of Professor Ted Dinan at University College Cork and Professor Helene McNulty at Ulster University, won awards at the BT Young Scientist and SciFest competitions. She comments: "This experience strengthened my desire to study biology at university. However, the opportunity to practise clinical medicine and interact with patients was what ultimately led me into veterinary medicine."

Jennifer and Ellen's research journey has provided them with the opportunity to present their work at various events. Jennifer explains: "We presented our findings at the Dean's Lunchtime Clinical Club in the School of Veterinary Medicine, and in January 2024, we were honoured to deliver a talk at Microscopy Ireland's Annual Conference at the University of Limerick."

In conclusion, Ellen adds: "We would both highly recommend that anyone with even a slight interest in veterinary research contact staff in the UCD School of Veterinary Medicine to inquire about research opportunities for students. They are incredibly helpful and can offer some amazing opportunities."