



PhD Opportunity

A 4-year PhD position is available within Professor McCann's group in the UCD Conway Institute of Biomolecular and Biomedical Science UCD, in the area of Comparative Oncology, a core aspect of *One Health*. Our lab's research theme is focused on chemoresistance mechanisms in Triple Negative Breast Cancer (TNBC). Specifically, biological nanoparticles called exosomes and their role in linking chemoresistance in TNBC with tumour recurrence and the setting up of *premetastatic niches*. Cancer in the domestic cat occurs spontaneously and in the case of feline mammary adenocarcinomas (FMAs), displays a clinical presentation and pathophysiology comparable to human TNBC, affording a unique potential to acquire novel information that is more relevant to human disease than induced cancer in rodent models.

You will have an opportunity to become involved in the "Patient Voice in Cancer Research Committee" [PVCRC] PPI public engagement and outreach initiative in UCD founded by Professor McCann during your PhD.

Project Outline:

A "Comparative Oncology" approach to monitoring triple negative breast cancer (TNBC) treatment response and disease progression. The applicant will investigate the resistance mechanisms involved in TNBC to multiple chemotherapeutic regimes with an emphasis on the exosomal population's role in both human TNBC and feline TNBC like FMAs patient cohorts. The successful applicant will develop an *exosome-based* blood test for women with a diagnosis of TNBC that will accurately predict the likelihood of the development and location of a secondary cancer, ahead of it being detectable on an image or scan. Using tissue obtained from naturally occurring feline TNBC like FMAs in collaboration with veterinary oncologists in Spain we aim to use comparative oncology to further study the exosomal chemoresistance phenomenon.

Minimum Educational requirement and eligibility:

Honours Bachelor's degree in biomedical science, biotechnology, medicine or veterinary medicine. Demonstration of excellent standards of academic achievement (2.1 or first-class honours degree) a requirement. Candidates selected will have good communications necessary for inter-disciplinary research, a general interest in the topic of "One Health" and commitment to academic excellence.

Supervisor/s:

Professor Amanda McCann PhD. UCD Conway Institute of Biomolecular and Biomedical Research, School of Medicine, UCD

Dr. Pamela Kelly, Assistant Professor Veterinary Pathology, UCD. BSc, MVB, FRCPath, DipECVP, MRCVS.

Closing Date:

Please register your interest via amanda.mccann@ucd.ie and pamela.kelly@ucd.ie with your CV (max 2 pages) and expression of interest/cover letter (max 250 words) no later than **5pm Friday 31st May 2019**.

Following Shortlisting Interviews expected to take place during June.