

In association with



**Sourav Bhattacharjee**  
Lecturer and Assistant Professor, School of Veterinary Medicine.

## EXPLORING NANOMEDICINE'S “INFINITE POTENTIAL”

Sourav Bhattacharjee is an Assistant Professor in Veterinary Anatomy at UCD's School of Veterinary Medicine and is working to develop his own niche of research encompassing a broad range of nanobiotechnology and advanced microscopy tools for effective diagnostic and drug delivery platforms

Sourav was born and raised in Kolkata, India. “As a teenager, I was a keen footballer, cricketer and kite-flyer (still a popular pastime in India). I was also brought up with a great respect for the medical profession, and following a very competitive exam, I entered the historical Medical College of Kolkata, graduating in 2004 with a Bachelor of Medicine and Surgery degree (Honours grade in ENT). When not in the classroom studying medicine, I was highly involved in student union politics. Upon receiving my medical degree, I did a Residential House Surgeonship in Orthopaedic Surgery at the Medical College of Kolkata.”

### International experience

By this time, Sourav had also developed a keen interest in biomedical research and wanted to travel abroad to gain international experience. “This brought me to the Vrije Universiteit Amsterdam (Netherlands) in 2006 to do an MSc degree in Biomolecular Sciences with Cell Biology. As part of this two-year research-intensive degree, I was able to spend an entire year doing an internship and Master's thesis project at Napier University, Edinburgh.”

In 2008, Sourav returned to the Netherlands to pursue a PhD degree at Wageningen University. He recalls: “It was serendipitous that I entered the field of nanomedicine and I quickly realised the infinite potential that this niche area would bring to applied medicine, including therapeutics and biomedical imaging.

“The research focus of my PhD project was to evaluate the biosafety profiles of different nanomaterials, particularly

those used in food products, and their uses in drug delivery by nanoparticle encapsulation. I defended my PhD thesis in 2012 and then completed a year of Postdoctoral Research at the University of Twente (Netherlands), trying to develop a human lung-on-a-chip model for in vitro investigation on the toxicity of nanomaterials.”

### Thriving research community

Sourav notes: “Coming to Ireland and UCD was not on my radar until I found out about its thriving community engaged in nanomedicine research.” Sourav was offered a post-doctoral position with Professor David Brayden's group at the UCD School of Veterinary Medicine, working in a European consortium (TRANS-INT) to develop oral nano-formulations for insulin delivery in diabetes patients.

In February 2016, Sourav joined the School of Veterinary Medicine as an Assistant Professor with a major academic role in anatomy teaching and learning. “Currently, I coordinate two anatomy modules for pre-clinical years while expanding my research areas in anatomy, bio-photonics, and nanomedicine (including drug delivery and biomedical diagnostics). I lead an active research group of young talent, with students of the MVB programme often participating in the lab work.”

Sourav has recently written a book, *Principles of Nanomedicine*, that has been well-received within the research community. In his spare time, Sourav says he loves to travel to exotic destinations and to indulge in his secret hobby of solving mathematical problems!