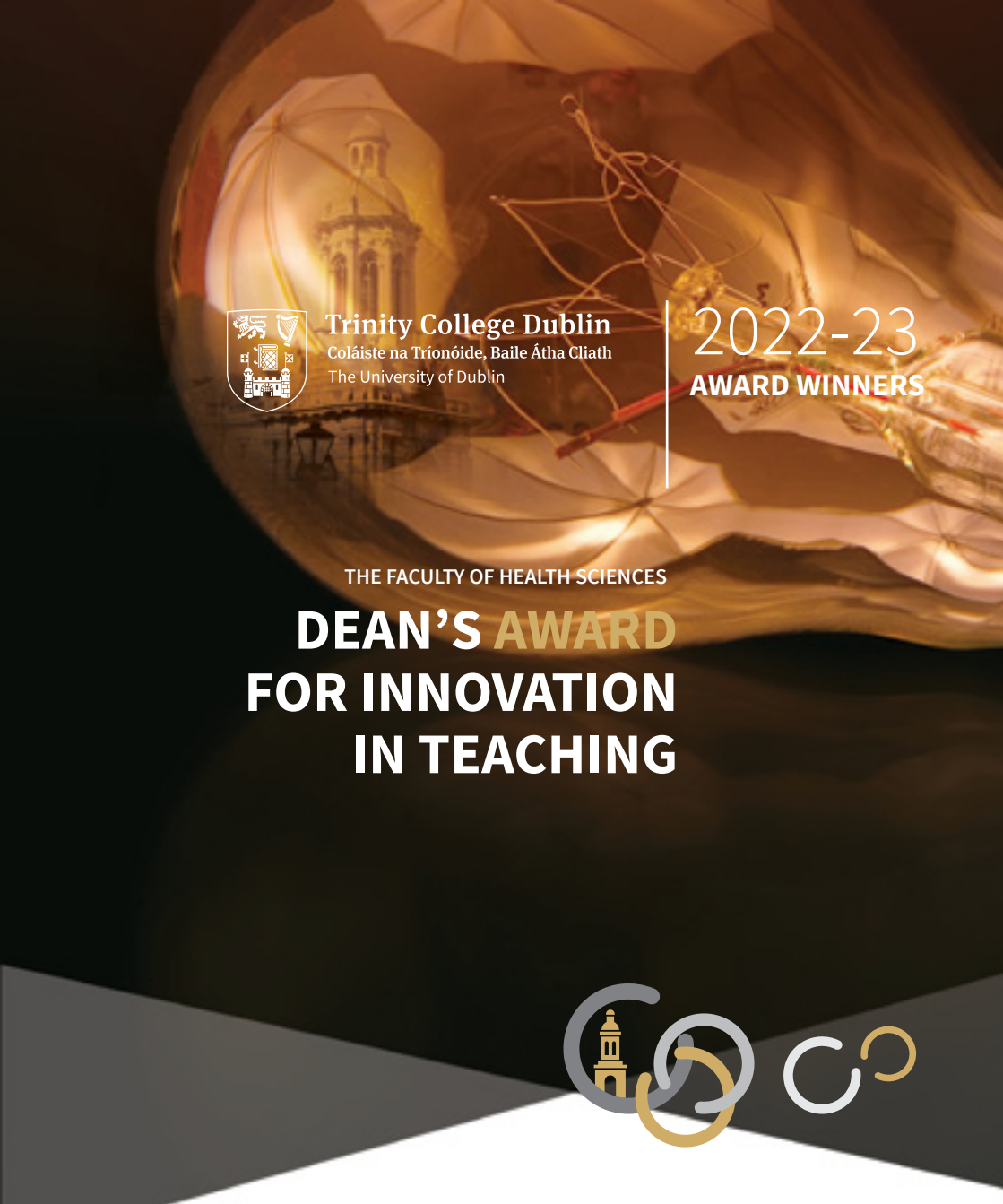

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

2022-23
AWARD WINNERS

THE FACULTY OF HEALTH SCIENCES

DEAN'S AWARD FOR INNOVATION IN TEACHING

Welcome

**Professor Brian O'Connell,
Dean of the Faculty of Health Sciences**

The spirit of the Dean's Award for Innovation in Teaching is to encourage teaching innovations within the Faculty of Health Sciences, where the outcomes will be shared with colleagues across the Faculty and beyond.

The Faculty of Health Sciences strives to embed the principles of Equity, Diversity and Inclusion (EDI) in all that we do. In a clear demonstration of our commitment to this, the 2022-23 call looked for evidence that EDI is embedded throughout the teaching innovations. We are very pleased with how the Faculty responded to this, and look forward to seeing these projects come to fruition in the coming year.

Dr Denis Barry, Assistant Professor, Discipline of Anatomy, School of Medicine
Project Team: Daniel Johnston, Eric Downer, Danielle Byrne, Mary O'Neill, Claire Murphy.

The goal of this proposal is to develop an e-learning platform to retain the extraordinary educational value of our annually donated human brains and promote their clinical value through radiological integration.

We will use 3D scanning technology to image the whole brains, brainstems, and brain sections in high definition, preserving unique anatomical and clinical insights before they are interred. The software will enable users to digitally rotate, pinch, and engage with each brain thereby appreciating its anatomy and aspect clinical relevance from each visual aspect and zoomed views. Hover points will enable specific structures to be highlighted by mouse-click or finger touch where a text box will appear displaying anatomical detail. Radiographic imagery will then be aligned to digitised brain sections promoting their vertical and clinical significance.

Students within the Faculty of Health Sciences are increasingly diverse, including students with care-giving responsibilities, student parents, students with employment responsibilities, mature students, disabled students, and neuro-diverse students. One key aim of this project is to provide more inclusive and equitable curricular access to all neuroanatomy students. Providing access to donor brains on this e-learning platform will enable neuroanatomy practical components to become accessible for independent study and revision, outside the anatomy dissection theatre, to a student's residence or study place of choice.

Dr Annemarie Bennett, Assistant Professor in Dietetics, Clinical Medicine, School of Medicine

This innovation will aim to reduce bias in the assessment of students and increase the suitability of practice education learning environments. Innovative aspects include using the student voice through sharing their stories of challenging learning environments to add authenticity to scripts, using near-peers and practising professionals in the development of the audio-visual components of the package, and through the use of the Trinity Simulation Suite for live-streaming video de-briefing to consolidate learning as part of practitioner training. Scenarios will be built on effective questioning, managing opposing personal characteristics, and supporting diverse learners.

These scenarios will be incorporated into training for practitioners and into placement preparation for students, to ensure that students especially are clear on how to attenuate feeling as though they are powerless in the face of their learning environment. Each scenario will be animated using 'Articulate Storyline' to highlight key moments where a student or practitioner can take action to manage the scenario constructively.

The innovation applies constructivist strategies to optimise the training of practitioners who teach as a relatively small and intermittent part of their professional role. The innovation will also aim to empower students to identify key actions they can take to manage their learning on placement.

Dr Eric Downer, Associate Professor, Discipline of Physiology, School of Medicine
Project Team: Paula Murphy, Denis Barry, Michelle Leech, Mary O'Neill, Jean Fletcher

Animation Teaching Tools in Medical Education (AtMED)
This project will develop a suite of advanced animations to enhance student learning of systems-based embryology (development of cardiovascular/respiratory systems).

This project will involve a collaborative team of current Human Health and Disease students and academics from three schools in two faculties. Our goal is to develop teaching supports based on student feedback which indicates that the animations we have developed to date are useful teaching tools, and that the tools create a supportive learning environment whereby the content is engaging for all students. The student cohorts targeted in this study are diverse demographically (Asia/North America/Africa/Europe) and are from diverse backgrounds.

Students will be able to access the tools for study on any device that is personal, or importantly on the college computers, hence with no additional cost. The animations will be developed using the principles of Mayer's cognitive theory of multi-media learning, and therefore the delivery of information will be both visual and auditory with supports for non-native English speakers. Animations will facilitate individual learning needs in terms of learning styles.

Dr Michelle Leech, Associate Professor, Discipline of Radiation Therapy, School of Medicine

The aim of the Chat-Right project is to equip radiation therapy students with the skills to work alongside Artificial Intelligence (AI) systems upon graduation.

In this proposal, the AI chatbot will become another peer with which the student can discuss, debate and enhance their critical thinking skills. The Trinity graduate attributes include critical thinking and continuous development. Health sciences graduates need to be able to filter evidence to inform their practice, and develop continuously to determine how AI can assist them in their roles - such professionals will be working in the field into the 2060s, during which time period the complexity of AI will have increased exponentially.

This project is well placed to enhance inclusivity in the radiation therapy curriculum. Evidence to demonstrate the potential of AI to support student collaborative learning, scaffold student learning objectives and support multisensory engagement has previously been articulated as well as its ability to enhance engagement among minority students, broadening their participation in learning activities. It can also be considered as an add-on tool to constructive writing and rephrasing of text, which can assist students who struggle with executive functioning due to a disability, as well as assisting those students whose first language may not be English. The proposed use of Chatbots in this project aligns with this literature.

Clare Whelan, Clinical Skills Tutor, Department of Surgery, School of Medicine
Project Team: Clare Whelan, Triona Flavin, Erika Keane, Olive Killoury, Helena O Neill, Jennifer Conlan

This project seeks to increase representation of the diverse population found within Irish Healthcare in simulated teaching sessions, and to ensure learners can identify with some of the patients/providers represented in the clinical skills teaching resources.

Inclusive simulation will ensure our learners feel represented in their own educational experiences, create a safe, accepting learning environment, and enhance engagement. It will also work to help identify and potentially remove barriers for minority population groups accessing healthcare in the future by preparing healthcare students to care and treat these groups throughout their undergraduate curriculum. This is a valuable opportunity to enhance equity, diversity & inclusion that is currently being missed.

This initiative also promotes staff professional development through all current School of Medicine Clinical Skills Tutors completing EDI training, incorporating new equipment and adapting teaching and learning practices to enhance transparency of Equity, Diversity and Inclusion within the Fundamentals of Clinical and Professional Practice module.