Ireland's National Dermatology Research & Education Centre

UCD School of Medicine
Scoil an Leighis UCD
Charles Institute of Dermatology

The Charles Institute Seminar Series

Wednesday 2nd February 2022@12PM

Charles Seminar Room & Online via Zoom

RELIFE MENARINI group

Advanced biomaterials for controlled delivery of therapeutics for enhanced wound healing

Fergal O'Brien, PhD, FAS, FEAMBES, CEng, FIEI, MRIA

Royal College of Surgeons Ireland

BIO: Fergal J. O'Brien is Deputy Vice Chancellor for Research & Innovation and Professor of Bioengineering & Regenerative Medicine in RCSI. He is a leading innovator in the development of advanced biomaterials for the repair of damaged organs and tissues. He has trained over 40 PhD students to completion and published >250 articles in leading journals. His research has seen numerous patent filings, formation of an RCSI spin-out company and translation of technologies for bone and cartilage repair to the clinic. He is a recipient of numerous awards including a €3million Advanced Grant from the European Research Council. He was elected to Membership of the Royal Irish Academy in 2018.

Abstract: His lab focusses on the development of natural polymer cell and biomaterial-based therapeutics for tissue engineering and regenerative medicine applications targeting a variety of tissues. A major ongoing research is to functionalize these scaffolds for use as delivery systems for biomolecules such as nucleic acids to enhance their therapeutic potential. While non-viral vectors are typically inefficient at transfecting cells, his group have had significant success in this area using a scaffold-mediated gene therapy approach for regenerative applications. In addition, they have demonstrated how scaffold-mediated delivery of siRNAs and miRNAs can be used to silence specific genes associated with reduced repair or pathological states. This presentation will provide an overview of ongoing research in his lab in this area with a particular focus on gene-activated biomaterials for promoting nerve and wound repair.

*The Charles Institute Seminar Series is kindly supported by RELIFE. RELIFE had no input into the content of the Series.