

# £1million boost for innovative medical research

**Research into innovative medical technology which could change the way gene therapies are designed and delivered has been boosted by grants of over £1million to scientists at the University.**

Two research groups at the University have each been granted more than £500,000 through the Medical Research Council's prestigious Milstein Fund Award.

The Milstein awards are given to UK-based researchers with a strong research history who have demonstrated highly innovative ideas and approaches to contemporary challenges in medical research.

Professor Angus Lamond, in the College of Life Sciences received his grant for research into the development of new technologies, which it is anticipated, will have far-reaching implications for the design of new drugs and cures for genetic disorders.

A joint project between Professor Irwin McLean, who heads the newly-formed Division of Molecular Medicine at the College of Life Sciences, and Dr Paul Campbell, Reader in Physics within the College of Art, Science & Engineering, received their award to develop a revolutionary new medical device to deliver new experimental gene therapies into the skin.

"I am delighted to have received the Milstein Award, which is specially designed to support new research that, if successful, will help to greatly advance the field," said Professor Lamond.

"We will use this funding to help us develop a new technology we have invented for controlling the expression of human genes. Our aim is to improve methods for testing the suitability of new drugs for clinical use and we hope our technology may also open up applications for gene therapy to cure genetic disease in humans."

Inherited skin disorders such as epidermolysis bullosa simplex (EBS) and pachyonychia congenita (PC), cause highly painful and debilitating skin blistering for hundreds of people in Scotland and hundreds of thousands globally. The McLean-Campbell multidisciplinary research team may hold the key to treating these rare incurable conditions and, if successful, the new therapy system they are developing could be applied to more common skin diseases such as eczema, psoriasis and skin cancer, affecting many millions worldwide.

"We are very grateful to the MRC for this prestigious award which allows us the opportunity to carry out a high-risk research project that would not normally be able to attract grant funding," said Professor McLean. "These supposedly high-risk projects very often lead to the most exciting results that can have the biggest impact on society. In particular, this award allows us to work with our colleagues in Physics for the first time to develop a new medical device that hopefully will help us treat incurable genetic skin disorders."

Dr Campbell said the award was a real boost to efforts to encourage multi-disciplinary research.

"I am thrilled that our team has managed to get a Milstein Award from the MRC, coming within only the first year of us throwing our lots in together with the newly formed Division of Molecular Medicine," said Dr Campbell. "This sends a clear message about the real and tangible value of developing strategic multi-disciplinary teams of physicists and life scientists."

"Personally, I am savouring the prospect of addressing the critical scientific questions that we outlined within the grant proposal, and which on the one hand will provide significant new understanding of microscopic processes underpinning mechanism, and on the other, will guide the way towards overcoming the technological challenges associated with delivering therapeutic molecules into the skin. We have outlined several concepts from very different approaches to drug delivery, and the hope is that achieving an effective marriage of their individual virtues will allow us to produce a practical and efficacious prototype that can really make an impact on patients' quality of life."

The Milstein Fund was developed by the MRC in 2006, specifically to support original research ideas with potential for high impact. Named after César Milstein, who was honoured with a Nobel Prize in 1984 for his pioneering work on the production of monoclonal antibodies, the Fund supports, in particular, research involving a diverse range of disciplines which is deemed too novel, or at too early a stage to meet the usual review and assessment criteria of other mainstream grants.