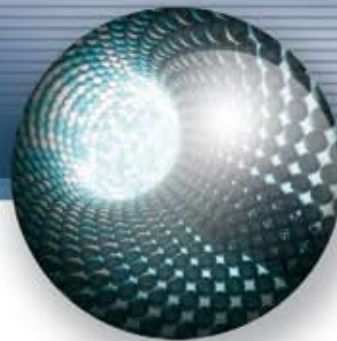
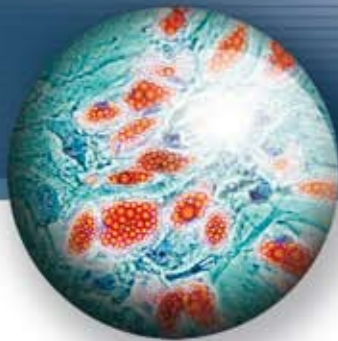
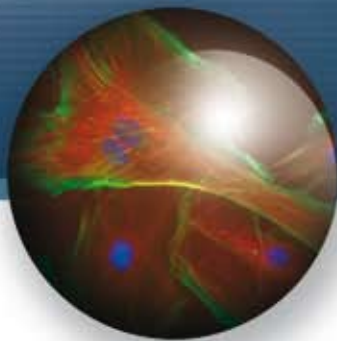


Science Foundation Ireland (SFI)



Investing in Biotechnology Research



Research for Ireland's Future

Investing in Biotechnology Research

Science Foundation Ireland (SFI) invests in academic research and research teams that generate new knowledge, leading-edge technologies and competitive enterprises in the fields of science and engineering underpinning Biotechnology, Information & Communications Technology, and Sustainable Energy & Energy-Efficient Technologies.

Since its establishment, SFI has contributed to the development and growth of a critical mass of individual investigators and research groups in these broad areas.

Today, SFI funds over 300 Principal Investigators across multiple diverse disciplines and continues to encourage growth in these numbers to deliver the targets set out in the Irish Government's Strategy for Science, Technology & Innovation 2006-2013. Through these investments, Ireland's research landscape has become diverse, yet highly interconnected.

SFI Centres for Science, Engineering & Technology (CSETs) and Strategic Research Clusters (SRCs) bring together researchers in diverse disciplines such as physics, chemistry, engineering, material science, and biochemistry, and serve as examples of the opportunities for interdisciplinary work and cross-fertilisation of ideas that are presented across the sectors supported by SFI.

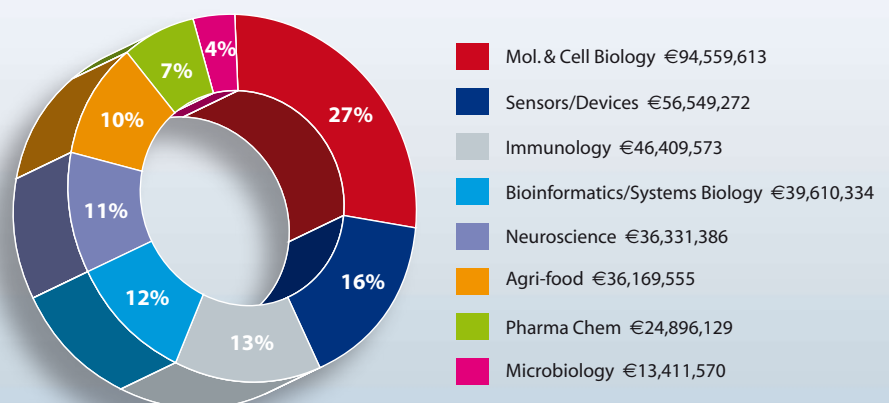
The addition of new researchers, the growth of collaborative activity and the development of convergence will continue to ensure that new research opportunities are captured effectively to bring economic and social benefits to Ireland.

Irish life science research continues to break new ground in a number of areas, such as molecular cell biology, human genetics and functional genomics, glycobiology, immunology and cancer. Irish work in these areas is globally competitive, and is increasingly extending beyond fundamental basic research towards commercial application via a highly productive interface with Ireland's large industrial and pharmaceutical sectors.

Particularly encouraging progress has been made in areas that impact human health, including pharmaceutical formulation technology, medical diagnostics, and the underpinning science of biosensor research. A large number of research groups have also embraced new platforms for genomic and proteomic research that are already facilitating major strides in the study of a range of human diseases.

SFI Biotechnology Investment*

* Total funding as of November 2008 under key award programmes, i.e., CSETs, SRCs, PI, PIYRA and Research Professor.



SFI Centres for Science, Engineering and Technology (CSETs)

The SFI Centres for Science, Engineering & Technology (CSETs) help link scientists and engineers in partnerships across academia and industry to address crucial research questions, foster the development of new and existing Irish-based technology companies, attract industry that could make an important contribution to Ireland and its economy, and expand educational and career opportunities in Ireland in science and engineering. CSETs must exhibit outstanding research quality, intellectual breadth, active collaboration, flexibility in responding to new research opportunities, and integration of research and education in the fields that SFI supports.

SFI currently funds nine CSETs, three under the SFI Biotechnology remit and six under Information and Communications Technology.

Biotechnology CSETs



Alimentary Pharmabiotic Centre
Interfacing Food and Medicine

Alimentary Pharmabiotic Centre (APC)

University College Cork

www.ucc.ie/research/apc

The Alimentary Pharmabiotic Centre (APC) was established in October 2003, through a five year CSET grant from SFI. The goals of the APC include investigating the means by which intestinal bacteria influence health and disease; developing new therapies for debilitating gastrointestinal diseases (such as gastroenteritis, *C. difficile*, ulcerative colitis and Crohn's disease); exploring commercial opportunities in both the pharma and functional food sector; and positioning Ireland at the forefront of this exciting new area. Building on the successes of the first five years, the APC was awarded another five year grant by SFI in December 2008, following rigorous international scientific peer review.

The APC is headquartered in University College Cork, where its scientist and clinician members span the College of Medicine and Health and the College of Science, Engineering and Food Science.

APC Director: Prof Fergus Shanahan is Professor of Medicine and Chairman of the Department of Medicine at University College Cork, National University of Ireland. He has published over 250 peer reviewed articles and is co-editor of three text books on inflammatory bowel disease and/or mucosal immunology. His work is funded by grants from the Higher Education Authority of Ireland, the Health Research Board of Ireland, the European Union and SFI.

Collaborating partners: Alimentary Health, GlaxoSmithKline and Teagasc (the Irish agriculture and food development authority).





Biomedical Diagnostics Institute (BDI) Dublin City University

www.bdi.ie



 inverness medical innovations



Established in 2005, BDI is carrying out cutting-edge research to develop the next-generation of biomedical devices that will directly affect the quality of people's lives worldwide over the next decades. The diagnostic devices and sensors will aim to detect minute concentrations of disease related molecules in biological samples like blood, saliva and breath.

BDI Director: Prof Brian MacCraith holds a personal Chair in Physics at Dublin City University and has developed a strong international reputation for his innovative research in the field of optical chemical sensors and biosensors, especially in the area of fluorescence-based biochips.

In 1999, Prof. MacCraith became founding Director of the National Centre for Sensor Research, from which the BDI emanated. His awards and accomplishments include the DCU President's Research Award in 2001, Fellowship of the Institute of Physics in 2001, membership of the Royal Irish Academy in 2007 and the inaugural DCU Education Trust Leadership Award in 2007.

Collaborating Partners : Becton Dickinson and Co, Analog Devices Inc, Hospira Inc, Inverness Medical Innovations Inc, Enfer Technologies Ltd, Åmic AB (now part of J&J Ortho Clinical Diagnostics) and Biosurfit.



Regenerative Medicine Institute (REMEDI) National University of Ireland, Galway

www.remedi.ie



Medtronic
When Life Depends on Medical Technology

The Regenerative Medicine Institute (REMEDI) is a world class biomedical research centre focusing on gene therapy and stem cell research. In state of the art facilities, researchers work together to combine the technologies of gene therapy and adult stem cell therapy with the aim of regeneration and repair of tissues. The unique feature of the research carried out at REMEDI is the novel integration of both therapies in a complementary research and development programme.

Based in the National University of Ireland, Galway, REMEDI was established in January 2004 through a Science Foundation Ireland (SFI) Centre for Science Engineering and Technology (CSET) award and industry funding.

REMEDI Director: Professor Timothy O'Brien established REMEDI at NUI, Galway in 2003. He is also the Head of Medicine and Consultant Endocrinologist, NUI Galway and Galway University Hospital. Prof O'Brien's principal research interest is in the development of gene and cell therapy approaches to vascular disease with a special focus on the augmentation of nitric oxide bioavailability.

Collaborating Partners: Medtronic

SFI BIO Research Scientists

Agri-food	
Dr. Nora O'Brien	University College Cork
Dr. Vincent O'Flaherty	NUI Galway
Dr. Frank Wellmer	Trinity College Dublin
Prof. Alexander Evans, (SRC) Reproductive Biology Research Cluster	University College Dublin
Dr. Douwe Van Sinderen	University College Cork
Prof. Fergus Shanahan, (CSET) Alimentary Pharmabiotic Centre (APC)	University College Cork
Bioinformatics/Systems Biology	
Dr. Mario Fares	Trinity College Dublin
Dr. Jens Erik Nielsen	University College Dublin
Prof. Michael J. Dunn	University College Dublin
Dr. Aoife McLysaght	Trinity College Dublin
Dr. Pavel Baranov	University College Cork
Prof. Mark Achtman	University College Cork
Prof. Ken Wolfe	Trinity College Dublin
Prof. Keith Tipton	Trinity College Dublin
Prof. Desmond Higgins	University College Dublin
Immunology	
Prof. Kay Ohlendorf	NUI Maynooth
Dr. Jarlath Nally	University College Dublin
Dr. Caroline Jeffries	Royal College of Surgeons in Ireland
Dr. Clair Gardiner	Trinity College Dublin
Dr. Brendan Loftus	University College Dublin
Dr. Mojgan Naghavi	University College Dublin
Dr. James O'Donnell	Trinity College Dublin
Prof. Kingston Mills	Trinity College Dublin
Dr. Padraic Fallon	Trinity College Dublin
Dr. Andrew Bowie	Trinity College Dublin
Dr. Thomas Ritter	NUI Galway
Prof. Luke O'Neill	Trinity College Dublin
Prof. Kingston Mills, (SRC) Immunology Research Centre (IRC)	Trinity College Dublin
Prof. Paul Moynagh	NUI Maynooth
Microbiology	
Dr. Billy Bourke	University College Dublin
Prof. Colin Hill, Prof. Paul Ross & Dr. Paul Cotter	University College Cork
Prof. Charles Dorman	Trinity College Dublin
Dr. John Maxwell Dow	University College Cork
Prof. Fergal O'Gara	University College Cork
Dr. Paul O'Toole	University College Cork
Prof. Timothy J. Foster	Trinity College Dublin
Prof. Kevin Devine	Trinity College Dublin
Mol. & Cell Biology	
Dr. Breandan Kennedy	University College Dublin
Dr. Trudee Fair	University College Dublin
Prof. Peter Humphries & Dr. G. Jane Farrar & Dr. Paul Kenna	Trinity College Dublin
Prof. Geraldine Butler	University College Dublin
Prof. John Atkins	University College Cork
Prof. Timothy O'Brien (CSET), Regenerative Medicine Institute (REMEDI)	NUI Galway
Prof. Mohamed Al-Rubeai	University College Dublin
Dr. Fiona Doohan	University College Dublin
Dr. Emmeline Hill	University College Dublin
Dr. Derek Sullivan	Trinity College Dublin
Prof. Finian Martin	University College Dublin
Dr. David J. Brayden	University College Dublin
Dr. Noel Caplice	University College Cork
Dr. Michael Scott	University College Dublin
Dr. Laurence J. Egan	NUI Galway
Dr. Daniela Zisterer	Trinity College Dublin
Dr. Vincent P. Kelly	Trinity College Dublin
Dr. Marguerite Clyne	University College Dublin
Prof. Kevin Francis Sullivan	NUI Galway
Dr. Afshin Samali	NUI Galway
Dr. Stephen Keely	Royal College of Surgeons in Ireland
Dr. Mary W McCaffrey	University College Cork
Dr. Orina Belton	University College Dublin
Prof. Marek Radomski	Trinity College Dublin
Prof. James Roche & Prof. Maurice Boland	University College Dublin

Mol. & Cell Biology (continued)	
Prof. Therese B Kinsella	University College Dublin
Dr. Derek Walsh	Dublin City University
Dr. Oliver Blacque	University College Dublin
Dr. Emma Teeling	University College Dublin
Prof. Robert Lahue	NUI Galway
Dr. Richard K. Porter	Trinity College Dublin
Dr. Helen Roche	University College Dublin
Prof. Harry Holthofer	Dublin City University
Prof. Catherine Godson	University College Dublin
Prof. Matthew Dallas Griffin	NUI Galway
Prof. Rosemary O'Connor	University College Cork
Dr. Thomas Francis Moore	University College Cork
Dr. Karen Keeshan	University College Cork
Dr. Stephen Rea	NUI Galway
Prof. Thomas G. Cotter	University College Cork
Prof. Cormac Taylor	University College Dublin
Dr. Uri Frank	NUI Galway
Dr. Brian McStay	NUI Galway
Prof. Noel Lowndes	NUI Galway
Dr. Ciaran Morrison	NUI Galway
Dr. Amir Rafiq Khan	Trinity College Dublin
Prof. Raymond Stallings	Royal College of Surgeons in Ireland
Prof. Martin Clynes	Dublin City University
Dr. Leonie Young & Prof. Arnold Hill	Royal College of Surgeons in Ireland
Prof. Michael Keane	University College Dublin
Prof. Hartmut Luecke	Trinity College Dublin
Neuroscience	
Prof. James Oliver Dolly	Dublin City University
Dr. David P. Finn	NUI Galway
Prof. Michael Rowan	Trinity College Dublin
Prof. Roger Anwyl	Trinity College Dublin
Prof. Mani Ramaswami	Trinity College Dublin
Dr. Juan Pablo Labrador	Trinity College Dublin
Prof. Marina Lynch	Trinity College Dublin
Dr. Kevin Mitchell	Trinity College Dublin
Prof. John Waddington	Royal College of Surgeons in Ireland
Prof. Ciaran Regan	University College Dublin
Dr. John O'Doherty	Trinity College Dublin
Dr. David Henshall	Royal College of Surgeons in Ireland
Dr. Aidan Corvin & Prof. Michael Gill	Trinity College Dublin
Pharma Chem	
Prof. Mathias O. Senge	Trinity College Dublin
Prof. Rory More O'Ferrall	University College Dublin
Prof. Anita Maguire	University College Cork
Prof. Paul Engel	University College Dublin
Dr. Mary Frances Heaney	NUI Maynooth
Prof. Stefan Oscarson	University College Dublin
Prof. Kieran Hodnett (SRC) Solid State Pharmaceuticals Cluster	University of Limerick
Prof. David Brayden (SRC) The Irish Drug Delivery Research Network (IDDN)	University College Dublin
Dr. Damien Arrigan	Tyndall National Institute
Prof. Paul Murphy	University College Dublin
Sensors/Devices	
Dr. Fergal O'Brien	Royal College of Surgeons in Ireland
Prof. Brian MacCraith (CSET) Biomedical Diagnostics Institute (BDI)	Dublin City University
Dr. Tia Keyes	Dublin City University
Prof. Patrick Prendergast	Trinity College Dublin
Prof. Kenneth Dawson (SRC) BioNanoInteract	University College Dublin
Prof. Suzanne Jarvis	University College Dublin
Prof. Abhay Pandit (SRC) Network of Excellence for Functional Biomaterials (NFB)	NUI Galway
Prof. James MD MacElroy (SRC) Advanced Biomimetics for Solar Energy Conversion	University College Dublin
Prof. Robert James Woods	NUI Galway
Dr. Daniel Kelly	Trinity College Dublin
Prof. Martin Caffrey	University of Limerick
Prof. Dmitri Papkovsky	University College Cork
Dr. Andreas Heise	Dublin City University
Prof. Gil U. Lee	University College Dublin

SFI Awards

SFI has established a flexible grants and awards portfolio for investing in research that occurs within Ireland. SFI chooses recipients through peer/merit review by distinguished scientists. The grants portfolio includes:

SFI Principal Investigator (PI) Programme

Supports those fields of science and engineering that underpin biotechnology, information and communications technology, and sustainable energy and energy-efficient technologies. PI grants may range from €100,000 to €1,000,000 per year and may be three to five years in duration.

SFI Centres for Science, Engineering and Technology (CSET)

Help link scientists and engineers in partnerships across academia and industry to address crucial research questions, foster the development of new and existing Irish-based technology companies, attract industry that could make an important contribution to Ireland and its economy, and expand educational and career opportunities in Ireland in science and engineering. Grants normally range from €1 to €5 million per year for five years.

SFI Strategic Research Clusters (SRCs)

Designed to facilitate the clustering of outstanding researchers to carry out joint research activities in areas of strategic importance to Ireland, while also giving the time and resources to attract and cultivate strong industry partnerships that can inform and enhance their research programmes. Awards are for up to five years duration and up to €1,500,000 per annum.

SFI Research Professor Recruitment Awards

Aim to attract to Ireland outstanding researchers, with particularly distinguished international reputations, awards normally ranging up to €500,000 per annum for up to two years.

SFI President of Ireland Young Researcher Award (PIYRA)

Recognises outstanding engineers and scientists who, early in their careers (no more than five years since PhD), have already demonstrated or shown exceptional potential for leadership at the frontiers of knowledge. Awards are normally up to €1 million over five years.

SFI Starting Investigator Research Grants (SIRG)

Support excellent early-career-stage investigators to carry out independent research in the fields of science and engineering that underpin biotechnology, information and communications technology, and sustainable energy and energy-efficient technologies. SIRG awards are up to €500,000 for a period of four years.

SFI Principal Investigator Career Advancement Award (PICA)

Supports outstanding researchers returning to active research after a prolonged absence. PICA awards may range from €100,000 to €1,000,000 per year for a three to five year period.

SFI Research Frontiers Programme (RFP)

Supports the very best research in a broad range of disciplines in Science, Mathematics and Engineering. Awards may be up to €250,000 and may be up to four years duration.

SFI E.T.S. Walton Visitor Awards

Support leading international scientists who wish to visit Ireland to undertake research for up to 12 months. Awards normally range up to €200,000.

SFI Workshops and Conferences Grants

Support international meetings held in Ireland for intensive inquiry and collaboration on topics of timely scientific importance. Awards range from €500 to €50,000.

For a full list of SFI award programmes and current deadlines see www.sfi.ie

Learn more about SFI and our programmes at www.sfi.ie

Science Foundation Ireland

Wilton Park House,
Wilton Place,
Dublin 2, Ireland

Tel: 353 1 607 3200 Fax: 353 1 607 3201
E-mail: info@sfi.ie

