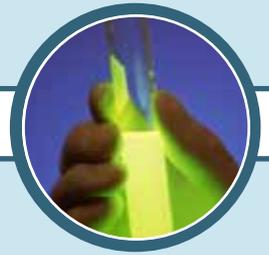
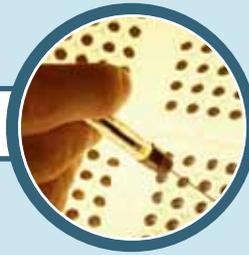




science foundation ireland  
fondúireacht eolaíochta éireann



**ANNUAL REPORT & ACCOUNTS 2003**



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## SCIENCE FOUNDATION IRELAND *THE NATIONAL FOUNDATION FOR EXCELLENCE IN SCIENTIFIC RESEARCH*

### VISION

Through strategic investments in the people, ideas and partnerships essential to outstanding research in strategic areas, Science Foundation Ireland will help build in Ireland research of globally recognised excellence and nationally significant economic importance.

### MISSION

SFI will build and strengthen scientific and engineering research and its infrastructure in the areas of greatest strategic value to Ireland's long-term competitiveness and development.



**1. Dr. Patrick Fottrell**  
*Chairperson*



**2. Dr. William C. Harris**



**3. Dr. Frank McCabe**  
*Deputy Chairperson*



**4. Mr. Ned Costello**



**5. Dr. Jane Grimson**



**6. Dr. Jackie Hunter**

## Board of Directors

***Dr Patrick Fottrell (Chairperson), Former President, National University of Ireland (NUI), Galway.***

A former Professor of Biochemistry at NUI Galway, Dr Fottrell also served as Chairman of the Dublin Institute of Technology, the Irish Council of Bioethics and the Ireland-USA Fulbright Commission. Dr Fottrell is currently Chairman of Westgate Biological. He is a member and former Vice-President of the Royal Irish Academy. Dr Fottrell obtained a B.Sc. and M.Sc. from University College Cork, a Ph.D. from the University of Glasgow, and a D.Sc. from the National University of Ireland. He has been a visiting professor at Harvard, Munich, and Asahikawa Universities.

***Dr William C. Harris (Director General), SFI.***

Dr Harris's career includes service as the Director for the mathematical and physical sciences directorate of the US National Science Foundation (NSF), and as founding president and executive director of Columbia University's Biosphere 2 Centre (B2C) in Arizona, and as Vice President for Research and Professor of Chemistry at the University of South Carolina

(USC). Dr Harris is also an elected fellow of the American Association for the Advancement of Science.

***Dr Frank McCabe (Deputy Chairperson), SFI.***

Former Vice President, Intel Corporation. Dr McCabe joined Intel in 1994 as Vice President of technology and manufacturing, based in Co. Kildare, and retired in 1999 following a career in which he held various industrial leadership posts. His early career was with ASEA in Sweden, after which he started up General Electric Semiconductor in Ireland, which went on to employ 1,800 people.

***Mr Ned Costello (Assistant Secretary General), Science, Technology and Intellectual Property Division, Department of Enterprise, Trade and Employment.***

Ned Costello is responsible for the development, promotion and co-ordination of Ireland's Science, Technology and Innovation Policy and Ireland's policy in International Research Activities. He is Chair of the Interdepartmental Committee on Science, Technology and Innovation.

***Dr Jane Grimson (Vice Provost of Trinity College Dublin).***

Dr Grimson was Dean of the Faculty of Engineering and Systems Sciences from 1996-1999, Pro Dean of Research from January to August 2001, and was appointed Vice Provost of Trinity College Dublin (T.C.D.) in September, 2001. Dr Grimson was also the first female President of the Institute of Engineers of Ireland (1999-2000).

***Dr Jackie Hunter (Senior Vice President and Head of Neurology & GI Centre of Excellence for Drug Discovery, GlaxoSmithKline.)\****

Dr Hunter has an excellent record of achievement as a researcher in both academia and industry. Before taking up her current role at GlaxoSmithKline (GSK), she was Vice-President and Head of Biology, Neurology & GI Centre of Excellence for Drug Discovery. Prior to this she was Group Director for Neurobehavioural Research at SmithKline Beecham and Director of Neurology Research for the same organisation.



7. Dr. Kristina Johnson



8. Mr. Erich Bloch



9. Dr. Martina Newell-McGloughlin



10. Dr. Jim Mountjoy



11. Dr. Don Thornhill



12. Mr. John Travers

***Dr Kristina Johnson (Dean of the School of Engineering) Duke University, North Carolina.***

Dr Johnson is an internationally known expert in optics, signal processing and computing and Director Emeritus of the Optoelectronics Computing Systems Centre at the University of Colorado. Dr Johnson holds approximately 30 patents. She has also co-founded two companies.

***Mr Erich Bloch (Principal), Washington Advisory Group.***

Mr Bloch is a former Director of the U.S. National Science Foundation (NSF). Previously, he served at IBM in roles including head of the Solid Logic Technology Programme, which produced the microelectronic technology for IBM's System/360 computer. An elected member of the US National Academy of Engineering, Mr Bloch has also received the USA's most prestigious science award, the Presidential Medal for Science and Technology.

***Dr Martina Newell-McGloughlin (Director of the Biotechnology Research and Education Program at the University of California (UCBREP))***

Dr Newell-McGloughlin, an internationally recognised authority on biotechnology, directs the UCBREP, which covers all ten campuses and the three national Laboratories. She is also co-director of a (US) National Institutes of Health Training Grant in Biomolecular Technology, one of only three in California, the others being at UC Berkeley and Stanford University.

***Dr Jim Mountjoy (Chairman) Prospectus Consultancy Group.***

Dr Mountjoy founded Euristix, an innovative supplier of advanced network management software solutions for the telecommunications industry. Euristix became a market leader and was sold to Fore Systems for US \$80 million in February 1999, a value that increased to US\$175 million in two months when Fore Systems was acquired by Marconi. Dr Mountjoy is currently involved in a non-executive capacity with a number of software companies.

***Dr Don Thornhill (Chairman) Higher Education Authority (HEA).***

Prior to his appointment as full-time Chairman of the HEA\*\*, Dr Thornhill was Secretary General of the Department of Education and

Science. Dr Thornhill has extensive experience of building the higher level research infrastructure in Ireland having overseen the development and implementation of the HEA's Programme for Research in Third Level Institutions.

***Mr John Travers (Business and Economic Consultant and former CEO of Forfás and SFI).***

As CEO of Forfás, Mr Travers led the State's policy and advisory board for industrial development, science, and technology, and the body in which the main legal powers for State industrial promotion and technology development are vested. In 2000-01, he also acted as CEO of SFI during its startup phase.

*\*Prof. Anita Jones, Department of Computer Science, University of Virginia, was appointed as an SFI Board Member on 25th July 2003 and resigned on the 28th August 2003. Dr Jackie Hunter was appointed as a replacement Board Member.*

*\*\*Dr Thornhill retired as Chairman of the HEA in January 2005.*

# 1. Chairperson's Statement



The year 2003 has proven to be a very important year in the development of Science Foundation Ireland (SFI). Apart from the substantial increase in investment in research projects, the most significant event was the establishment of SFI as a separate statutory body under the Industrial Development (Science Foundation Ireland) Act, 2003. The enactment of this legislation and the associated financial allocation under the Estimates process (€70m in 2003 – and a further increase to €113.7m in 2004) is testimony of the commitment to SFI in building Ireland as a modern knowledge based economy. This on-going support by the Government to the national strategic remit of Science Foundation Ireland has been greatly appreciated by myself as Chairman as well as the Board of SFI.

As a result of this level of commitment and support, SFI continued in 2003 to build on the substantial investments in research projects which meet the quality and excellence required in the areas of Information and Communication Technologies (ICT) and Biotechnology (BioT).

At the end of 2003, SFI had awarded funding commitments of €320m. SFI, in consultation with the Board, has developed a broad range of high quality research programmes which is establishing Ireland as a prime location to carry out modern research. These programmes are geared towards funding world class researchers as individuals and teams in projects of strategic importance aimed at developing the people, ideas and partnerships, which will be vital to the success of SFI in a national economic context. The most

significant and notable investments in 2003 have been made under the Centres for Science, Engineering and Technology (CSET) Programme. The objectives of this CSET programme and the details in relation to each project are set out in this report. The creation of such collaborations through research partnerships with scientists and engineers in industry will enhance our objective to become an international leader in research and compete on the global market. It will also allow Ireland to capitalise economically on its growing research base.

Partnership will be a key element in achieving success for SFI. Ireland now stands out as an international example of a country committed to excellent scientists and research and promoting creative ideas and innovation. It is imperative, therefore, in a national context that institutions and agencies benefiting from this support should co-operate to achieve the maximum national benefit. We have already promoted greater inter-institution collaboration among the research bodies in the higher education sector. Equally so, SFI is actively developing tangible links and partnerships with its sister agencies in industrial development - Forfás, IDA Ireland, and Enterprise Ireland - as well as with other research funding bodies. This collaboration will encourage overseas companies to establish research operations in Ireland and also expand the indigenous ICT and BioT sectors.

Following the enactment of the legislation, a new 12 person Board was appointed by the Tánaiste in July 2003. The SFI Board is comprised of leaders in the engineering and the scientific research communities, as well as senior business and public service personnel.

The SFI Board has urged SFI to contribute ideas to a national dialogue that can help establish Ireland as a leader of innovation and discovery. In this context, SFI



has launched the new Science Teacher Assistant Researchers (STARS) initiative which facilitates teachers to work in SFI laboratories and enables them to participate in cutting edge research. The benefit of this exciting project is that teachers can then pass on their new skills and knowledge to their students, who will be the scientists and engineers of the future.

The Board is fully aware that the substantial investment by the Government in SFI represents an important commitment in creating a knowledge-based economy. Now that it has been established on a statutory basis, SFI will build on its efforts to date to ensure that a world class research system is developed and sustained in Ireland in the future.

I would like to thank the Board members and the staff in SFI for ensuring that SFI has established both a national and international reputation for funding research excellence. I am satisfied that we now have a solid basis for the future progress of the Foundation and to make a profound impact on the economy.

Against this overall background, I am honoured to present this first Annual Report for SFI.

Patrick Fottrell,  
*Chairperson*

## 2. Director General's Statement



In its funding and investments made to date, SFI is contributing to Ireland becoming one of the most attractive countries in the world to conduct research. Our goal is to maintain that desirability:

to reclaim the scientific heritage that produced the chemist Robert Boyle in the 17th century, and the mathematician William Hamilton, the astrophysicist Agnes Mary Clerke and the inventor of Boolean logic, George Boole, in the 19th Century. We aim to make Ireland's culture once again one of innovation and of knowledge.

We are creating a base of world-class research in a country already advantageously positioned for such a transformation. We are attracting researchers internationally, helping to attract industrial research projects through initiatives such as the Centres for Science Engineering and Technology (CSET) programme. We are also strengthening educational opportunities by means of the Science Teachers Assistant Researchers (STARS) Programme.

SFI recognises that the one sure way of increasing domestic productivity is increasing domestic innovation. This can only be achieved by building and sustaining a reservoir of globally competitive research talent here in Ireland that is skilled in the disciplines underpinning BioT and ICT. Our researchers will be able to pass on these skills to other members of this society in the future.

Furthermore, now that SFI has assumed responsibility for the Basic Research Grant Programme (BRGP), since renamed the Research Frontiers Programme, we now have even greater opportunity to build the foundations for national prosperity and for world class research in Ireland.

SFI is contributing towards ongoing efforts to enhance and transform our educational institutions and universities, and to strengthening the links with the public and with Irish business. We are doing this by prudent and responsible investments in research projects that can enhance our national skills base and, in turn, our prosperity in a sustainable manner.

In addition, the establishment of the Ireland-China Research Collaboration Fund Agreement will build links between Irish academic research leaders and their Chinese counterparts with a view to encouraging and sustaining research excellence in fields of investigation that are vital to both China and Ireland.

Through the Industry Supplements programme, SFI is providing supplementary awards to our funded researchers to support collaborative projects with industry. This programme complements the ongoing campus-industry linkages created and sustained under the SFI CSET programme detailed in this report.

Our efforts reflect the guidance of a Board composed of gifted international and national industry and academic leaders, committed to creating a knowledge driven economy in Ireland that is built upon our already successful high-end manufacturing base.

I would also at this stage like to acknowledge the ongoing support of the Taoiseach, the Tánaiste, the current Minister for Enterprise, Trade and Employment and their colleagues in Government along with their colleagues in the Houses of the Oireachtas for our work. Finally, I would like to thank my colleagues at SFI for their ongoing commitment and effort over this past year.

A handwritten signature in black ink that reads "William C. Harris". The signature is written in a cursive style.

William C. Harris,  
Director General

### 3. Overview

In 2000, arising from Ireland's first ever Technology Foresight Study, Ireland initiated the largest investment in scientific research and engineering in its history by founding SFI. Ireland thereby joined the growing number of countries that have recognised that major investments in these activities are required to keep modern economies competitive.

Ireland's commitment to this goal builds upon ten years of unprecedented growth and development, which has been achieved through partnership with the European Union, strong historical ties to the United States, the skills of its well-educated population, and focussed Government policy. At the same time, science, technology and knowledge-driven enterprises have become increasingly important to economic success in a global society. To ensure that Ireland continues to benefit from its competitive advantages, the Government, through the National Development Plan 2000-2006, made an unprecedented national commitment to support scientific research, technological development and innovation. In 2000, the Government established SFI as a sub-board within Forfás, the National Policy and Advisory Board for Enterprise, Trade, Science, Technology and Innovation. In July 2003, SFI was established on a statutory basis under the Industrial Development (Science Foundation Ireland) Act, 2003.

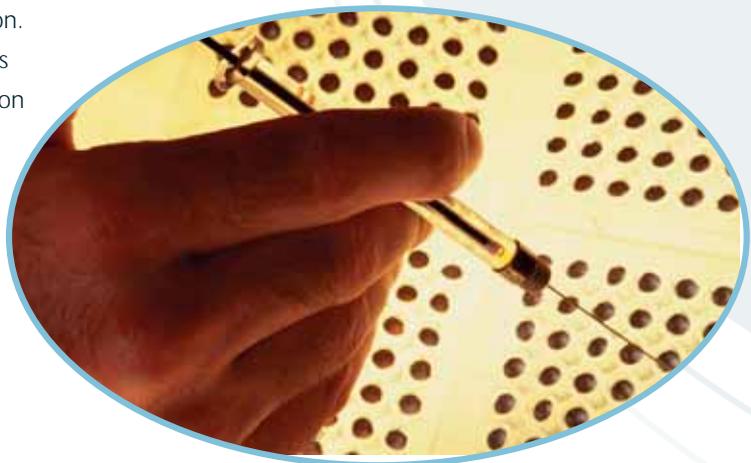
The Technology Foresight Advisory Group on Implementation specified, in its report of July 2000, that SFI should invest in funding research that

- Is of intrinsic excellence and acknowledged internationally.
- Is of a sufficient scale and critical mass to facilitate, promote and sustain intellectual interchange and discourse amongst those engaged in the research in Ireland and top-class researchers internationally.

- Strengthens the scientific foundations on which to develop high-productivity, high-technology, market-driven, knowledge-intensive investments, including start-ups, in Ireland's industrial and services sectors.

Research of this kind will strengthen the Irish economy, attract and develop companies within Ireland, produce skilled professionals in areas of national technological urgency, expand indigenous technology-based enterprises, and establish in Ireland research and educational opportunities widely recognised as entrepreneurial and innovative.

In 2003, SFI was given responsibility for the Basic Research Grants Programme (BRGP), subsequently renamed the Research Frontiers Programme, which was previously administered by Enterprise Ireland. With this programme SFI is now also making investments in critically important fields including mathematics and the physical and earth sciences. These are areas vital to a modern knowledge-driven economy and our new investments will broaden and deepen our commitments to funding the best in Irish science and engineering.



## 4. SFI Achievements 2003

- Funding more than 168 research groups based in Ireland with grants that will total more than €320 million over the next five years.
- Proactively encouraging industry to locate their research laboratories in Ireland in partnership with the IDA.
- Facilitating Irish research institutions to recruit and retain research leaders from around the world to Ireland.
- Supporting government agencies and departments with scientific advice and consultations.
- Raising both the amount and the quality of the scientific research being undertaken by all members of the Irish research community.
- Establishing connections between SFI Funded researchers, secondary school science teachers and industry researchers.
- Funding collaborative projects with China under the Ireland-China Research Collaboration Fund Agreement.

Following consultation with the research community throughout Ireland and the approval of the SFI Board, SFI has established a flexible grants and awards portfolio. This structure includes

- The Fellow Awards and Investigator Programme Grants to support individual scientists and research teams conducting research in Ireland. SFI Fellows will be investigators of particularly distinguished international reputations.
- The Centres for Science, Engineering and Technology (CSET): Campus-Industry Partnership Grants to link academic and industrial researchers together on significant research programmes.



- The E.T.S. Walton Visitor Awards to support leading scientists who visit Ireland for research for up to one year.
- The SFI Workshop and Conference Grants Programme to support significant international scientific meetings in Ireland.

SFI makes grants and awards to successful researchers after a process of international peer review involving distinguished scientists who apply the criteria approved by the SFI Board. The Board also expects SFI to be proactive in helping Irish institutions recruit scientists so that Ireland can shorten the time it takes to build the necessary base of superb research excellence. The criteria for grants focus on the following attributes, which are elaborated upon in SFI's calls for proposals:

- Quality of the idea,
- Quality of the recent track record of the researcher,
- Strategic relevance of the research.

SFI award recipients include outstanding researchers from Ireland, Australia, Belgium, Canada, England, Germany, Japan, Scotland, Slovakia, South Africa, Switzerland and the USA.

SFI's major investments at the end of 2003 are in five Centres for Science, Engineering and Technology. A profile of the groups funded under our CSET programme is provided below along with an overview of our other initiatives – Investigator Cluster Programmes and the Fellows-Research Professorships programme.

## SFI Centres for Science, Engineering and Technology

In 2003, SFI allocated over €110 million to fund the first five Centres for Science, Engineering and Technology (CSETs).

The awards went to researchers in Irish universities who can make Ireland an international leader in key strategic areas through collaborations with scientists and engineers in industry. The themes underlying these investments are collaborations and excellence.

CSET investments will create a set of research partnerships connecting Irish universities with their counterparts from world leading research corporations and some of Ireland's most promising ICT and biotechnology companies.

## Digital Enterprise Research Institute (DERI) – National University of Ireland Galway

**Research Activity:** DERI focuses its research and innovation around new methods for eWork and eCommerce. The objective is to bring current web technology to its full potential via the Semantic Web, Web Services, and Semantic Web Services.

**Centre Director:** Dieter Fensel

**Industrial Collaboration:** Hewlett Packard

## Regenerative Medicine Institute (REMEDI) CSET – National University of Ireland Galway

**Research Activity:** Researchers at REMEDI will work together to combine the technologies of gene therapy and adult stem cell therapy with the aim of regeneration and repair of tissues.

**Centre Director:** Tim O'Brien

**Industrial Collaboration:** Medtronic and Charles River Labs

## Alimentary Pharmabiotic Centre (APC) – University College Cork

**Research Activity:** The Centre has set out to examine how intestinal bacteria and probiotics can impact on gastrointestinal disorders such as Crohn's disease, colitis and colon cancer. The plan is to explore opportunities for the commercial exploitation of its research findings by the food and pharmaceutical sectors.

**Director:** Fergus Shanahan

**Industrial Collaboration:** Proctor & Gamble, Alimentary Health, Teagasc

## CRANN (Centre for Research on Adaptive Nanostructures and Nanodevices) Trinity College Dublin

**Research Activity:** CRANN will develop tools and techniques to build new structures and devices atom by atom with endless possibilities for BioT and ICT. Examples of the impact of this technology include next generation microelectronics technologies and new drug delivery systems.

**Centre Director:** John Pethica

**Industrial Collaboration:** Intel Ireland

## Centre for Human Proteomics – Royal College of Surgeons of Ireland

**Research Activity:** Core activity is the study of human proteins with a view to achieving an early diagnosis of auto immune diseases such as MS (Multiple Sclerosis) and cancer.

**Centre Director:** Dolores Cahill

**Industrial Collaboration:** Servier, Deerrac, Protagen

## SFI Investigator Cluster Teams

Computer science embraces many disciplines. The subject covers topics such as software engineering, information systems, artificial intelligence, multi-media, theory of computation, hardware design, and networking, and as such has applications in scientific and commercial areas and sits in the overlap between our software and hardware categories. Recognising this important interface, SFI funded a “cluster team” of researchers at DCU and UCD.

The team, which includes Prof Mark Keane at the Department of Computer Science, UCD, and Prof Dermot Diamond from DCU, focuses on adaptive information technologies. This means developing software that can filter and ‘personalise’ the increasing amounts of information we currently receive through channels like the Internet or mobile phones. The team has a €5.6 million grant from SFI; its research covers both the hardware and software components of ICT.

The significance and commercial potential of the team’s research has attracted the interest of Irish-based companies, including Ericsson, IBM, Changing Worlds and Mitsubishi Electric Research Laboratories in Cambridge Massachusetts, USA. These firms will collaborate closely with the team to resolve key issues

in bringing adaptive information technologies to the market.

## Photonics Systems Research Group

SFI also succeeded in attracting to Ireland a group of four scientists comprising the most advanced photonics research group in the world. They are lead by Prof David Cotter, who has established the Photonics Systems Research Group at UCC, enabled by an SFI Investigator cluster award worth €11.1 million. Their research focusses on ultra high-speed communications, optical data-routing and optical information-processing. The Photonics Systems Research Group was recruited to UCC from England.

The group is an acknowledged leader in photonics research, which harnesses light and other forms of energy for use in computers, fibre-optics, and wireless transmission; technologies vital to the information age.

SFI was able to move decisively to bring an especially talented group of researchers to Ireland. With Prof Cotter’s group now working in Ireland, the country is perfectly positioned to exploit opportunities that will arise when the market for telecoms and telecoms-related investments strengthens. Our research competitiveness in the important field of photonics has been substantially strengthened.

## SFI Fellows/Research Professors

The SFI Fellows-Research Professorships programme is designed to assist Irish Research Bodies in attracting outstanding researchers (SFI Fellows) to their institutions from outside the State.

In August 2003, Prof Jochen Prehn was recruited from the Johann Wolfgang Goethe University Clinic, Frankfurt, Germany to the RCSI.

Prof Prehn is an international authority on the single-cell analysis and the molecular control of nerve cell death. Prof Prehn's funding of €650,000 per annum for five years will enable him to build a team of talented researchers, which will include molecular physiologists, biophysicists and physicists with high levels of experience in both academia and the biotechnology industry.

The programme has also attracted Prof John Atkins, a world renowned biosciences researcher from the University of Utah. Prof Atkins, a former colleague of James Watson, the co-discoverer of DNA, is based at the BioSciences Institute at UCC, where he served as a College Lecturer in the early 1980s. At UCC, Prof Atkins will continue his work on the consequences for protein synthesis of non-standard genetic decoding and its implications for human disease. His research could impact on treatments for diseases such as cancer.

## Other Developments

### US-All Ireland R&D Task Force

During 2003, SFI joined a US - All Ireland Research and Development Task Force co-chaired by Dr Elias Zerhouni, Director, U.S.A. National Institutes of Health and Dr Rita Colwell, Director, National Science Foundation, USA in 2002.

The Task Force consisted of representatives from the US, the Republic of Ireland and Northern Ireland. This Task Force had responsibility for devising a strategy and work plan to identify new avenues for collaboration, create a US-All Ireland Research Partnership to further technology transfer and promote and foster a world class capability for research and development in ways that are mutually beneficial to all parties.

The Task Force organised two Expert Workshops in 2003:

- The BIO Sciences (BioT) workshop in January 2003 was hosted by NIH (Dr Elias Zerhouni). This workshop examined the potential collaboration on the basis of the already existing cancer consortium in the areas of diabetes and cystic fibrosis.
- The second workshop held in February 2003 was hosted by Dr Rita Colwell at the National Science Foundation in Washington. The workshop examined collaborative opportunities in the Information Computer Technology side under the topics of software engineering, sensors and bioinformatics.

The overall Task Force finalised a report of its activities in November 2003 which set out a strategy for the future operation of the Partnership.

### China-Ireland Research Collaboration Fund Agreement

Ireland and China signed a joint research collaboration agreement in December 2002. Under this agreement, a joint Science and Technology Research Collaboration Fund has been established for the period 2003-2006, with a budget of €1 million provided jointly by SFI and the Chinese Ministry of Science and Technology (MOST). This provides for the exchange of leading researchers at third level institutions in Ireland and China working in the fields underpinning BioT, ICT and New Materials Technology. SFI has asked the Royal Irish Academy to review and manage the programme on its behalf. In September 2003, the first eight research partnership awards were made under the fund.

## 5. Statutory and Other Notices

### Board Members

The Board operates to the best practice corporate governance principles and in line with the guidelines set out in the code of practice for the governance of State Bodies, as issued by the Department of Finance, both in its activities and in its use of committees. In accordance with these guidelines, SFI Board members register their interests in other undertakings with the Secretary.

### Ethics in Public Office Acts, 1995 and 2001

During 2003, SFI was not formally prescribed under the Ethics in Public Office Acts 1995 and 2001.

### Freedom of Information Act, 1997 and Freedom of Information (Amendment) Act, 2003.

SFI has not been prescribed under the Freedom of Information Act 1997 and the Freedom of Information (Amendment) Act 2003. However, SFI provides information when requested, in compliance with the provision of these Acts.

### Prompt Payments of Accounts Act, 1997

SFI comes under the remit of the Prompt Payments of Accounts Act, 1997, which came into effect on 2nd January 1998, and the European Communities (Late Payment in Commercial Transactions) Regulations 2002, which came into effect on the 7th August 2002.

The payment practices of SFI, as required by the Act, are reported on below for the year ended 31 December 2003. It is the policy of SFI to ensure that all invoices are paid promptly. Specific procedures are in place that enable it to track all invoices and ensure that payments are made before the due date. Invoices are registered daily and cheques are issued as required to ensure timely payments.

There was one late payment during 2003 that exceeded the due payment date by 2 days. The value of this late payment was €113.29. The total penalty interest paid by SFI was €0.06.

### Equality

SFI wholeheartedly supports the principle of equal opportunities in employment. It opposes all forms of discrimination on the grounds of colour, race, nationality, sexual orientation, ethnic or national origin (and/or area of origin), religion, gender, marital status, age or disability. SFI's commitment to implementing equal opportunities is reflected in its policies, practices and procedures, e.g. recruitment, promotion, training, use of non-discriminatory language in company documents and publications. The objective is to ensure that all staff are selected and treated only on the basis of their abilities, knowledge and qualifications.

### Safety, Health and Welfare at Work Act, 1989

In accordance with the above Act, SFI implements appropriate measures to protect the safety, health and welfare of all employees and visitors within its offices.

### Science Foundation Ireland Publications 2003

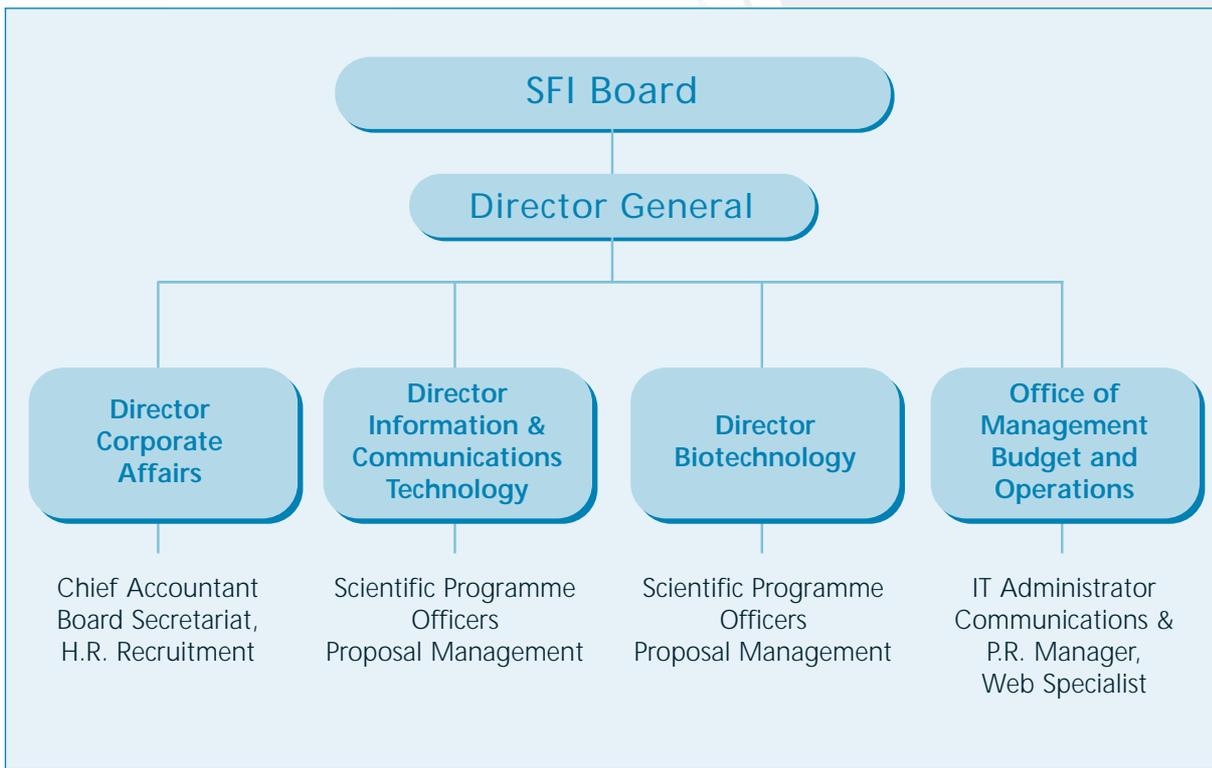
The Scientists and Engineers of Science Foundation Ireland.

Vision 2003-2007 People, Ideas and Partnerships for a Globally Competitive Irish Research System.

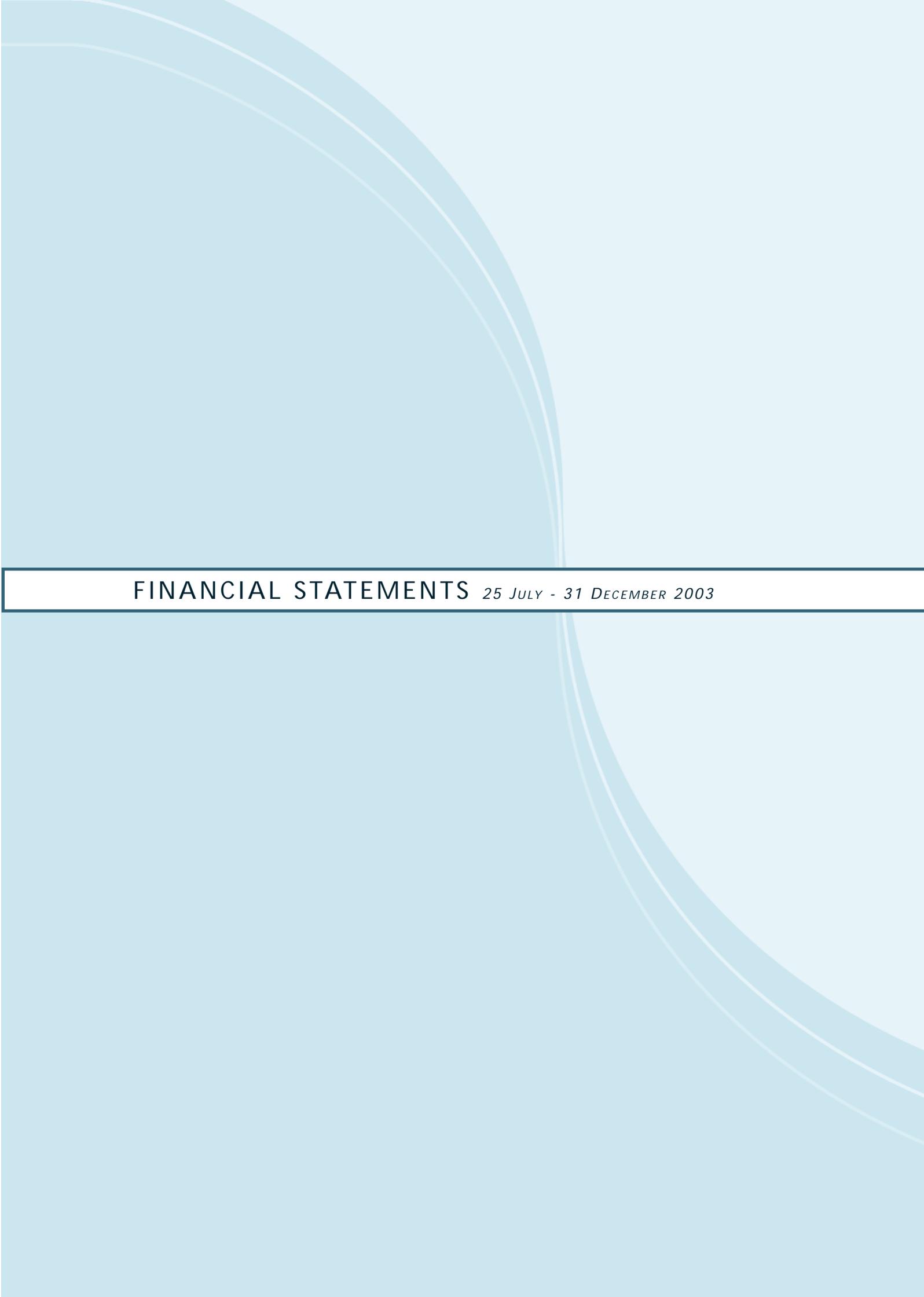
The Centres for Science, Engineering & Technology Grants Programme of Science Foundation Ireland.

## Organisation Structure 2003

(SFI had sanction for a staffing structure of 30 posts)







**FINANCIAL STATEMENTS** *25 JULY - 31 DECEMBER 2003*

# Report of the Comptroller and Auditor General for presentation to the Houses of the Oireachtas

I have audited the financial statements on pages 17 to 24 under the Industrial Development (Science Foundation Ireland) Act, 2003.

## Respective Responsibilities of the Board and the Comptroller and Auditor General

The accounting responsibilities of the Board are set out on page 1. It is my responsibility, based on my audit, to form an independent opinion on the financial statements presented to me and to report on them.

I review whether the statement on the system of internal financial control on page 2 reflects the Board's compliance with applicable guidance on corporate governance and report any material instance where it does not do so, or if the statement is misleading or inconsistent with other information of which I am aware from my audit of the financial statements.

## Basis of Audit Opinion

In the exercise of my function as Comptroller and Auditor General, I conducted my audit of the financial statements in accordance with auditing standards issued by the Auditing Practices Board and by reference to the special considerations which attach to state bodies in relation to their management and operation.

An audit includes examination, on a test basis, of evidence relevant to the amounts and disclosures in the financial statements. It also includes an assessment of

the significant estimates and judgements made in the preparation of the financial statements, and of whether the accounting policies are appropriate to Science Foundation Ireland's circumstances, consistently applied and adequately disclosed.

I planned and performed my audit so as to obtain all the information and explanations that I considered necessary to provide me with sufficient evidence to give reasonable assurance that the financial statements are free from material misstatement whether caused by fraud or other irregularity or error. In forming my opinion I also evaluated the overall adequacy of the presentation of information in the financial statements.

## Opinion

In my opinion, proper books of account have been kept by Science Foundation Ireland and the financial statements, which are in agreement with them, give a true and fair view of the state of affairs of Science Foundation Ireland at 31 December 2003 and of its income and expenditure and cash flow for the period ended.



John Purcell  
*Comptroller and Auditor General*

May 2005

## Statement of Board Members' Responsibilities

*For 2003 Annual Financial Statements*

Section 24 (2) of the Industrial Development (Science Foundation Ireland) Act, 2003 requires Science Foundation Ireland to keep, in such form as may be approved of by the Minister for Enterprise, Trade & Employment with the consent of the Minister for Finance, all proper and usual accounts of money received and expended by it and, in particular, shall keep in such form as aforesaid all special accounts as the Minister may from time to time direct. In preparing those financial statements, Science Foundation Ireland is required to:

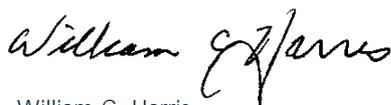
- select suitable accounting policies and apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that Science Foundation Ireland will continue in operation;
- disclose and explain any material departures from applicable Accounting Standards.

The Board is responsible for keeping proper books of account which disclose with reasonable accuracy at any time its financial position and which enables it to ensure that the financial statements comply with the overall requirements of Section 24 of the Industrial Development (Science Foundation Ireland) Act, 2003. These books of account are located at the Foundation's headquarters, Wilton Park House, Wilton Place, Dublin 2. The Board is also responsible for safeguarding its assets and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

On behalf of the Board:



Patrick Fottrell  
*Chairperson*



William C. Harris  
*Director General*

## Statement of Internal Financial Control

On behalf of the Board of Science Foundation Ireland I acknowledge our responsibility for ensuring that an effective system of internal financial control is maintained and operated.

The system can only provide reasonable and not absolute assurance that assets are safeguarded, transactions authorised and properly recorded, and that material errors or irregularities are either prevented or would be detected in a timely period.

The Board has taken steps to ensure an appropriate control environment is in place by:

- *Clearly defining management responsibilities and powers;*
- *Establishing formal procedures for monitoring the activities and safeguarding the assets of the organisation;*
- *Developing a culture of accountability across all levels of the organisation.*

The Board has established processes to identify and evaluate business risks by:

- *Working closely with Government and various Agencies to ensure that there is a clear understanding of Science Foundation Ireland goals and support for the Agencies' strategies to achieve those goals.*
- *Requiring senior management to put in place a risk assessment and risk management processes for the Audit Committee.*

The system of internal financial control is based on a framework of regular management information, administration procedures including segregation of duties, and a system of delegation and accountability. In particular it includes:

- *A comprehensive budgeting system with an annual budget which is reviewed and agreed by the Board;*
- *Regular reviews by the Board of periodic and annual financial reports which indicate financial performance against forecasts;*
- *Setting targets to measure financial and other performance;*
- *Formal project management disciplines.*

Science Foundation Ireland has an outsourced internal audit function, which operates in accordance with the Framework Code of Best Practice set out in the Code of Practice on the Governance of State Bodies and which reports directly to the Audit Committee. The Audit Committee was established in September 2003 and the first meeting took place in November 2003. The Committee will meet quarterly to review reports prepared by Internal Audit and other departments. The Audit Committee in turn keeps the Board informed of the matters that it has considered.

No formal review of the effectiveness of the system of internal financial control was carried out for 2003. SFI was established as a separate statutory body on 25th July 2003, and the first meeting of the new Board took place on the 19th September 2003. The Board and subsequently the Audit Committee, was fully informed on the financial processes and procedures in operation in the organisation.

Signed on behalf of the Board



Patrick Fottrell  
Chairman

# Accounting Policies

## (1) BASIS OF ACCOUNTING

The Financial Statements have been prepared under the historical cost convention in the form approved by the Minister for Enterprise, Trade & Employment with the consent of the Minister for Finance under the Industrial Development (Science Foundation Ireland) Act 2003. The Financial Statements are prepared on an accruals basis, except where stated below and are in accordance with generally accepted accounting practice. Financial Reporting Standards, recommended by the Accounting Standards Board, are adopted as they become effective.

## (2) INCOME RECOGNITION

Income from Oireachtas Grant represents actual cash receipts in the year.

## (3) FIXED ASSETS

Fixed Assets comprise tangible fixed assets which are owned by Science Foundation Ireland and includes assets that were acquired prior to the establishment of SFI as an independent agency of Forfás on 25 July 2003. Fixed assets are stated at cost less accumulated depreciation. Depreciation is calculated in order to write off the cost of fixed assets over their estimated useful lives (see Note 5).

## (4) CAPITAL ACCOUNT

The Capital Account represents funds utilised for the acquisition of Fixed Assets and is written down in line with depreciation and revaluation policies for these assets.

## (5) FOREIGN CURRENCIES

Monetary assets and liabilities denominated in foreign currencies are translated at the exchange rates ruling at the Balance Sheet date. Revenues and costs are translated at the exchange rates ruling at the dates of the underlying transactions.

## (6) SUPERANNUATION

Under Section 2 and 3 of the Second Schedule of the Industrial Development Act, 1993, Forfás is responsible for all employee pension entitlements. Forfás prepares and administers pension schemes for the granting of pension entitlements to its staff including staff seconded to Science Foundation Ireland.

## (7) OPERATING LEASES

The rentals under operating leases are accounted for as they fall due.

## (8) RESEARCH GRANT PAYMENT

Amounts paid to Research Bodies on foot of research grants are charged to the I&E account in the year of issue.

# Income and Expenditure Account

For 25 July to 31 December 2003

	Notes	2003 €'000
<b>Income</b>		
Oireachtas Grant	1	49,159
Other	2	15
		49,174
<b>Expenditure</b>		
Administration and General Expenses	3	1,840
Depreciation	5	49
Grants	4	47,386
		49,275
Net Movement for Period		(101)
Balance transferred from Forfás	13	187
Transfer to Capital Account	6	(103)
<b>Balance at end of Year</b>		<b>(17)</b>

There are no recognised gains or losses, other than those dealt with in the Income and Expenditure Account.

The Accounting Policies, Cash Flow Statement and Notes 1 to 14 form part of these Financial Statements.

On behalf of the Board



Patrick Fottrell  
Chairperson



William C. Harris  
Director General

# Balance Sheet

For 25 July to 31 December 2003

	Notes	2003 €'000
<b>Fixed Assets</b>		
Tangible Fixed Assets	5	243
<b>Current Assets</b>		
Accounts Receivable	7	3
Interagency Balance	7	12
		15
<b>Accounts Payable</b>	8	32
<b>Net Current Assets</b>		(17)
<b>Net Assets</b>		226
<b>Represented By:</b>		
<b>Capital Account</b>	6	243
<b>Income and Expenditure Account</b>		(17)
		226

The Accounting Policies, Cash Flow Statement and Notes 1 to 14 form part of these Financial Statements.

On behalf of the Board:



Patrick Fottrell  
Chairperson



William C. Harris  
Director General

# Cash Flow Statement

For 25 July to 31 December 2003

	Notes	2003 €'000
<b>Reconciliation of Net Movement for Year to Net Cash Flow from Operations Net Movement for Year</b>		(101)
Bank Interest		(15)
(Profit)/Loss on Disposal of Assets		2
Depreciation Charge:		
- Tangible Fixed Assets	5	49
(Increase)/Decrease in Accounts Receivable	7	172
Increase/(Decrease) in Accounts Payable		32
<b>Net Cash Flow from Operations</b>		<b>139</b>
<b>Net Cash Flow from Operations</b>		139
<b>Returns on Investment and Servicing of Finance</b>		
Bank Interest		15
<b>Cash Flow before Capital Expenditure</b>		<b>154</b>
<b>Capital Funding</b>		
Sale of Tangible Fixed Assets		-
Purchase of Tangible Fixed Assets	5	(154)
<b>Cash Flow after Capital Expenditure</b>		<b>-</b>
Contribution to Exchequer		-
<b>Increase in Cash</b>		<b>-</b>
<b>Reconciliation of Increase in Cash to Cash at Bank</b>		
Movement in Cash for the Year		-
Cash at Bank at 25 July		-
<b>Cash at Bank at 31 December</b>		<b>-</b>

# Notes to the Accounts

For 25 July to 31 December 2003

## (1) Oireachtas Grant

SFI was established on a statutory basis as an independent agency of Forfás with effect from 25 July 2003

	2003 €'000
Administration and General Expenses	1,893
Research Grants	47,266
<b>Total</b>	<b>49,159</b>

Under Section 35 of the Industrial Development (Science Foundation Ireland) Act, 2003, the aggregate amount of grants made by the Minister to Forfás and its Agencies, to enable them to discharge their obligations and liabilities shall not exceed €3,400,000,000. At 31 December, 2003 the aggregate amount so provided was €2,006,533,485.

## (2) Other Income

	2003 €'000
Bank Interest	15
<b>Total</b>	<b>15</b>

## (3) Administration and General Expenses

	2003 €'000
(3a) Board Members' Remuneration and Expenses	78
Pay Costs	400
Other Personnel Costs	26
Travelling Expenses	81
Specialised and Professional Services	358
Consultancy and Studies	418
Rents, Rates, Repairs and Maintenance	170
Other Operating Expenses	299
Audit Fee	10
<b>Total</b>	<b>1,840</b>
Pay Costs comprise:	
Wages and Salaries	370
Social Welfare Costs	29
Superannuation Costs	1
<b>Total</b>	<b>400</b>

(3b) The services of the Director General (DG) of SFI are provided by a United States based corporation under a 5 year consultancy contract. The contract provides for payment for his services together with a potential bonus. The payment is designed to cover a basic fee, retirement contributions and relocation costs. The potential bonus is equivalent to that approved by the Review Body on Higher Remuneration in the Public Sector for the CEOs of the State Industrial Development Agencies.

The cost of the remuneration package is charged to consultancy in the financial statements and amounted to €163,150 plus VAT which brings the total to €204,264. The full year cost for 2003 is calculated to be €391,560 plus VAT amounting to an overall total of €473,788.

#### (4) Grants

	2003 €'000
Bio Grants	13,342
ICT Grants	19,628
Multi Grants	14,416
<b>Total</b>	<b>47,386</b>

Grants are payable to Irish third level institutions to carry out world class basic research projects in the Biotechnology and Information and Communications Technologies (ICT) sectors. At 31 December 2003, €217m of grants were committed.

#### (5) Tangible Fixed Assets

	Computer Equipment	Motor Vehicles €'000	Fixtures & Fittings €'000	System Development €'000	Total €'000
<b>COST</b>					
At 25 July 2003	84	50	130	-	264
Additions	64	-	-	90	154
Disposals	(3)	-	-	-	(3)
At 31 December 2003	145	50	130	90	415
<b>DEPRECIATION</b>					
At 25 July 2003	45	32	47	-	124
Charge for Year	33	5	11	-	49
Disposals	(1)	-	-	-	(1)
At 31 December 2003	77	37	58	-	172
<b>NET BOOK AMOUNT</b>					
At 25 July 2003	39	18	83	-	140
Net Movement for Year	29	(5)	(11)	90	103
At 31 December 2003	68	13	72	90	243

The cost of Tangible Fixed Assets is written off by equal installments over their expected useful lives as follows:

- |                           |         |
|---------------------------|---------|
| (i) Computer Equipment    | 3 years |
| (ii) Motor Vehicles       | 4 years |
| (iii) Fixtures & Fittings | 5 years |

## (6) Capital Account

	€'000
At 25 July 2003	140
Movement on Tangible Fixed Assets (Note 5):	
- Cost Additions	154
- Cost Disposals	(3)
- Depreciation Additions	(49)
- Depreciation Disposals	1
Net Movement for period	103
<b>At 31 December 2003</b>	<b>243</b>

## (7) Accounts Receivable

	31 December 2003 €'000	25 July 2003 €'000
General Debtors and Prepayments	3	-
Interagency Balances	12	187
<b>Total</b>	<b>15</b>	<b>187</b>

Interagency Balance relates to the balance owing to Science Foundation Ireland from Forfás at 31 December 2003, being the difference between the amount of money paid to Forfás by Science Foundation Ireland and the actual money spent by Forfás on behalf of Science Foundation Ireland.

## (8) Accounts Payable

	2003 €'000
General Creditors and Accruals	32
<b>Total</b>	<b>32</b>

## (9) Commitments under Operating Leases

A net total of €221,220 has been charged in respect of operating leases on buildings in the accounts of Science Foundation Ireland. Science Foundation Ireland has commitments of €220,000 to pay during 2004 in respect of leases expiring as follows:

	€'000
(i) 2004	220
(ii) 2005 - 2008	-
(iii) 2009 Onwards	-

## (10) Taxation

Section 227 of the Taxes Consolidation Act, 1997, exempts SFI from further taxation on Case IV and Case V rental income in excess of that deducted at source.

### (11) Board Members - Disclosure of Transactions

In the normal course of business, Science Foundation Ireland may enter into contractual arrangements with undertakings in which Science Foundation Ireland Board Members are employed or otherwise interested. Science Foundation Ireland has adopted procedures in accordance with the guidelines issued by the Department of Finance in relation to the disclosure of interests by Board Members and these procedures have been adhered to by Science Foundation Ireland during the year.

During 2003, no business came before the Board regarding payment to an organisation in which a Board Member declared an interest, in respect of services provided by that organisation to the Agency.

### (12) Contingencies and Legal Actions

There are no contingencies or legal actions which require specific provision in the Financial Statements.

### (13) Science Foundation Ireland & Technology Foresight

The Government approved the establishment of the Technology Foresight Fund in February 2000 as an important initiative to provide significant resources for investment in basic research projects. Science Foundation Ireland (SFI) was established as the mechanism for the management, allocation, disbursement and evaluation of this Fund and operated as a sub-committee of Forfás until the 24 July 2003. Up to this date, SFI accounting information was included as a note in the Forfás Financial Statements.

As at the 25 July 2003 €140,000 in Fixed Assets were taken over to the Accounts of SFI as set out in Note 5. Unexpended Oireachtas Grants of €187,000 was also transferred from Forfás as set out below.

	€'000
<b>Oireachtas Grant Received to 24 July 2003</b>	20,261
<b>Administration and General Expenses</b>	
<b>Note 8 under Forfás Financial Statements ( 01/01/2003 - 24/07/2003)</b>	
Board Members' Remuneration and Expenses	167
Pay Costs	553
Other Personnel Costs	54
Travelling Expenses	74
Award Programme Management	-
Specialised and Professional Services	770
Consultancy and Studies	329
Rents, Rates, Repairs and Maintenance	186
Other Operating Expenses	290
<b>Total</b>	<b>2,423</b>
Grants	17,608
<b>Total Technology Foresight Expenditure</b>	<b>20,031</b>
Balance	230
<b>Oireachtas Grant Balance 01 January 2003</b>	<b>(43)</b>
<b>Oireachtas Grant Balance transferred from Forfás</b>	<b>187</b>

### (14) Approval of Financial Statements

The Financial Statements were approved by the Board of Science Foundation Ireland on 19th April 2004.

