



49th Annual Review 2016/17

Today's research ~ Tomorrow's health

Who We Are

Tenovus Scotland is one of Scotland's leading medical research charities providing pilot grants and scholarships across the full range of medicine and healthcare

We make a difference to scientific progress

- We fund early 'pilot' studies, the vital first steps towards scientific progress. These projects produce evidence that then attracts longer term support from major external funders, leading to further research and development

We help early career researchers

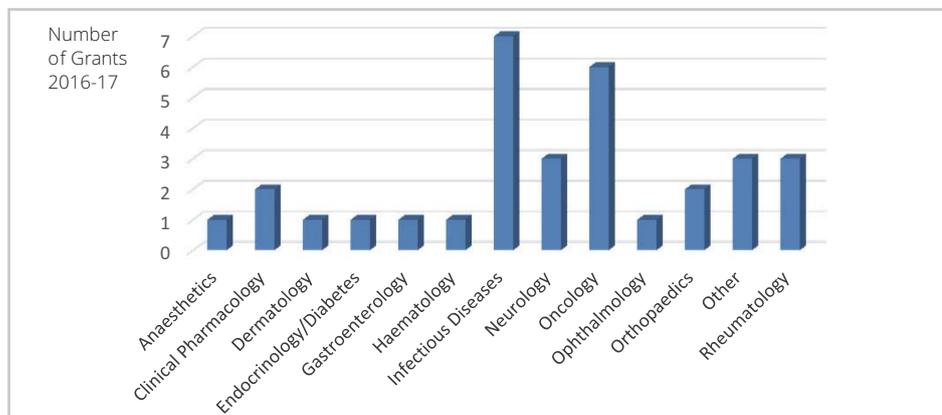
- We often provide the first financial support for new investigators helping them to start and develop their research careers
- We fund PhD scholarships

We support medical research in Scotland

- We spend funds in the region where they are raised, supporting medical research in the academic institutions and clinical centres of Edinburgh, Grampian, Strathclyde and Tayside
- We recognise exceptional achievement with regular awards and prizes

2016/17 at a Glance

- 27 Small Pilot grants and 2 PhD scholarships were awarded totalling £0.5m
- 3 Large Pilot grants were awarded totalling £0.2m
- Administration costs were only 6% of research grants which continued the 4% trend of the last 6 years
- Grants were across the full range of medicine and healthcare



- Professor Iain McInnes (University of Glasgow) was awarded The Lady Margaret MacLellan Award for outstanding contributions to Immunology/Inflammation research in Scotland
- Dr Helge Dorfmueller (University of Dundee) was awarded The Sir Robin MacLellan Award for the most outstanding Final Report received in the year

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Survey

- Carried out annually to determine the achievements of pilot grants which were awarded 5 years previously
- Results of last six surveys (2005/6 to 2011/12)
 - Nearly 50% of all pilot grants received longer term support from major external funders
 - External funding was 10 times the total of all grants awarded
 - Small pilot grants of £1.8m contributed to further external funding of £28m
 - Large pilot grants of £1.7m contributed to further external funding of £6m

Chairman's Comments

As we look forward to celebrating our Golden Jubilee, it is heartening to note that our 49th year saw grants of £753k awarded. Our annual survey of pilot grants awarded in 2011/12 was also extremely encouraging and confirmed the trend of previous years. 53% of pilot studies received further external funding amounting to 13 times the original funding of all pilot projects in that year. In the last six years surveyed, £3.5m of Tenovus Scotland grants contributed to £34m external funding.

Three Princess Royal Tenovus Scotland Medical Research Scholars are now in post. Anna Muriano is continuing her work on Huntingdon's Disease in Dundee, Angela Ianniciello is studying aspects of Chronic Myeloid Leukaemia in Glasgow, and Vasiliki Mallikourti has recently embarked on her studies of breast cancer in Aberdeen using magnetic resonance imaging (a technology which was pioneered in that University). A highlight of 2016 was a dinner at the Beatson Institute in Glasgow, graced by the presence of our Patron HRH The Princess Royal, which celebrated the establishment of this programme. During the dinner she presented Angela with her award.

Also present at that function was Mrs Freda Cutler who had celebrated her 90th birthday that week, an achievement on which she was warmly congratulated by everyone present, including our Patron. Freda had been a devoted supporter of Tenovus Scotland for more than 39 years as, successively, Treasurer, Vice Chairman, and Chairman of the Strathclyde Ladies Committee and then, from 1989 as a Trustee on the National Committee. We were, therefore, very saddened by her death just four months after that special birthday. Professor Sir Malcolm Macnaughton, our National Chairman from 1994 till 2004, also died last summer. He was a long standing stalwart of our charity and it was poignant that he died little more than a year after his successor as National Chairman, Professor Sir Roddy MacSween. The sad aspect of this report is completed by the death in March 2017 of Ted Read. Ted was the lynchpin of the organisation as General Secretary for 23 years. His courteous manner and cheerful enthusiasm for the work of the charity will long be remembered. Those four individuals epitomise the dedication shown by so many of the Tenovus Scotland family since its inception in 1967.

"We embark on our next fifty years in excellent spirits and robust financial health with the prospect of continuing to promote effective medical research and progress in Scotland"

Our core business is to help promising scientists and doctors to gain a footing on the research ladder as clinical and laboratory investigators. Many of these have rewarded the generous support of fundraisers and donors by becoming leading academic clinicians and scientists and making telling advances in medical knowledge and treatment of disease.

We also recognise exceptional achievement with regular awards and prizes. During the year under review, Professor Iain McInnes (University of Glasgow) was the recipient of The Lady Margaret MacLellan Award. This is awarded biennially for outstanding contributions to medical science in Scotland. This year's topic was 'Immunology/ Inflammation' and Professor McInnes's work has had a significant impact internationally on the understanding and treatment of rheumatoid arthritis. In May 2016, he was recognised for his outstanding contribution to the field of immunology when he was awarded The Sir James Black Prize Medal, one of the most prestigious awards in medicine.

Dr Helge Dorfmueller (University of Dundee) was awarded The Sir Robin MacLellan Award for the most outstanding Final Report on research work for the year. Her subject was 'Towards the discovery of chemical tools to prevent human infection caused by Streptococcus pyogenes bacteria'.

The Roddy MacSween Medal, endowed by donations in Roddy's memory and a very substantial contribution from Lady Marjory and the MacSween family, will be an annual monetary prize in pathology to a Glasgow medical student. This will be the first time we have rewarded undergraduates, appropriately in Roddy's own specialty and medical school.

As always the work of the charity has been crucially dependent on the commitment of the National and Regional Committees, not least the National Scientific Advisory Committee, which assesses and validates the huge number of grant applications. Behind all of this activity, the General Secretary, Iain McFadzean, and our Honorary Treasurer, Francis McCrossin, work tirelessly to ensure



the organisation runs smoothly. Once again, we are grateful to the Royal College of Physicians and Surgeons of Glasgow for so generously providing accommodation for our office.

And finally . . . a word about our impending Golden Jubilee Celebrations. Through Professor Kenneth Paterson, Chairman of the Strathclyde Committee, the Royal Scottish National Orchestra have generously agreed that the opening concerts of the new season in the Caird Hall in Dundee, the Usher Hall in Edinburgh, and the Glasgow Royal Concert Hall on 5th, 6th and 7th October 2017 will be Tenovus Scotland Gala Events. The soloist at all three concerts will be the wonderful Nicola Benedetti ensuring a memorable landmark in our history.

We embark on our next 50 years in excellent spirits and robust financial health with the prospect of continuing to promote effective medical research and progress in Scotland.

Professor Andrew Calder National Chairman

Donors

Our sincere thanks to all our donors

Anonymous
Ms C Cochrane
In honour of Mrs Freda Cutler's 90th birthday
In memory of Sir Malcolm Macnaughton
Mrs G Smith
Mr A L Tannahill

Research Grants & Awards 2016/17

Small Pilot Grants (up to £15,000)

Grampian

Dr James Hislop	Clinical Pharmacology	Reducing addiction by the prevention of dopamine receptor loss
Dr Alexandra M Johnstone	Gastroenterology	Diet, dementia and gut bacteria
Dr Andrew James Lamb	Infectious Diseases	A search for new antibiotics: A Scottish contribution to the global requirement for identification of new antibacterial drugs to tackle infections with antimicrobial resistant pathogens
Professor Susan J Duthie	Oncology	Impact of folic acid on inflammation in human colon cancer (disease prevention)
Dr Jiabao He	Oncology	Stratifying pre-surgical chemotherapy in breast cancer using multi-parametric magnetic resonance methods
Dr Isabel Crane	Ophthalmology	Use of near-infrared light to modulate immune system cells a potential therapy for sight-threatening Age-related Macular Degeneration
Dr Flora Groening	Orthopaedics	3D modelling of fibrous joint capsules benefitting arthritis and surgery

Strathclyde

Dr Jennifer Greaves	Dermatology	Investigating a novel therapeutic target for the treatment of aggressive skin cancer
Dr Lisa Hopcroft	Haematology	Exploring gene expression in individual CML stem cells to predict response to therapy in newly diagnosed patients
Dr Andreas Haag	Infectious Diseases	Sensing the environment: how does Staphylococcus aureus adapt, survive and cause infection? A molecular approach for the identification of novel antibiotic targets
Dr Georgia Perona-Wright	Infectious Diseases	Fighting infection by exploiting our immune system's need for sugar
Dr Christian Wozny	Neurology	Investigating a specific type of neuron in the lateral habenula to provide new insights into depression
Dr Neal I Millar	Orthopaedics	Danger signals in tendon disease
Dr Anne Crilly	Rheumatology	Determining how particles released from the soft tissue of the joint affect cartilage destruction in osteoarthritis: informing future drug development

Tayside

Dr Z Huang	Anaesthetics	Improving accuracy of anaesthetic needle placement to reduce nerve damage
Dr Nicola Torrance	Clinical Pharmacology	A health record linkage study of use and misuse of Gabapentin and Pregabalin
Dr Ify Mordi	Endocrinology/Diabetes	Using the Eyes as a Window to the Heart in Diabetic Patients: Investigating the Link Between Diabetic Eye Disease and Heart Disease
Dr Janet Cox-Singh	Infectious Diseases	Malaria parasites are large complex organisms that can cause severe and fatal disease. A method will be developed to unlock important information held in the parasite genetic information that will be used to discover what makes malaria parasites life-threatening
Dr Christina Paulus	Infectious Diseases	Understanding and Targeting 'Reactivation' of a Dormant Pathogenic Herpesvirus
Dr Samantha J Pitt	Infectious Diseases	A new approach to close down one of the major escapes route for antibiotics from multiresistant bacteria
Dr Jenni Harvey	Neurology	Investigating novel preventative therapies in Alzheimer's disease
Dr Kerr Grieve	Neurology	A new Tayside pilot of a research database of multiple sclerosis for the investigation of treatment in recently diagnosed patients

"As an Early Career Researcher, the award of a small project grant from Tenovus Scotland has been the critical first step towards me establishing my own independent research programme, in an area I am passionate about"

Dr Jennifer Greaves

"I think it is highly insightful that Tenovus specifically supports fledgling clinical scientists to develop their ideas and generate the data required for future project grants, as it is particularly difficult to set up de novo research otherwise"

Dr Kismet Hossain-Ibrahim

"Tenovus funding for this project will aid global efforts in unlocking the gate to tackling antibiotic resistance"

Dr Andrew James Lamb

"I was recently recruited back to Scotland after ten years in North America. Our Tenovus funding has enabled us to fly right from the beginning, generating exciting new data already and rapidly establishing us as present and productive in the Scottish research community"

Dr Georgia Perona-Wright

Tayside continued

Dr Pawel Leznicki	Oncology	Defining the role of deubiquitylating enzymes in cancer cell survival
Dr Alain-Pierre Petit	Oncology	Developing new drugs against gastric cancer by targeting the interface Net1/RhoA
Dr Sambit Nanda	Rheumatology	Understanding the causes of inflammatory diseases
Dr Simon Powis	Rheumatology	Investigating whether the pain relief drug celecoxib has an additional, previously undiscovered, benefit that could help patients with the spinal arthritis ankylosing spondylitis

Large Pilot Grants (up to £100,000)

Tayside

Dr David McEwan	Infectious Diseases	Understanding how shock-troops of the immune system cells combat infection
Dr Kismet Hossain-Ibrahim	Oncology	Designing novel combination therapies for malignant brain cancers
Dr Suzanne Grant	Other	Improving safety on medical admission wards: examining how best to use observation and video feedback to help teams work better together

The Princess Royal Tenovus Scotland Medical Research Scholarship (4 year PhD scholarship)

Grampian

Ms Vasiliki Mallikourti	Oncology	Development and Translation of Advanced Non-Invasive Metabolite Profiling Methods in Breast Cancer Using Magnetic Resonance Spectroscopy (MRS)
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The Moulton-Barrett Medical Research Scholarship (4 year PhD scholarship)

Grampian

Ms Elena Conti	Other	Mechanisms Underpinning the Links Between Diet, the Intestinal Microbiota and Health
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The 2016 Lady Margaret MacLellan Award

National

Professor Iain McInnes (University of Glasgow)	Awarded biennially by Tenovus Scotland for outstanding contributions to medical science in Scotland. This year's topic was 'Immunology/Inflammation' and Professor McInnes's work has had a significant impact internationally on the understanding and treatment of rheumatoid arthritis. In May 2016, Professor McInnes, was recognised for his outstanding contribution to the field of immunology when he was awarded The Sir James Black Prize Medal, one of the most prestigious awards in medicine. The Sir James Black Prize Medal was presented to him in recognition of his world-leading research and impact in his specialist field at The Royal Society of Edinburgh following a lecture he gave to a large and influential audience on 'Cures and Curiosities in Arthritis - towards a brighter future'
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The Sir Robin MacLellan Award

National

Dr Helge C Dorfmueller (University of Dundee)	Awarded annually for the most outstanding Final Report on research work for the year. Dr Dorfmueller's research was 'Towards the discovery of chemical tools to prevent human infection caused by Streptococcus pyogenes bacteria'
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"Thanks to Tenovus Scotland I can express myself in scientific research and I am having the opportunity to collaborate with experts and centres of excellence"

Ms Elena Conti

"The funding of pilot studies allows ideas to be developed to the point where they can be funded at a national level, driving forward understanding and also the careers of new research scientists"

Dr James Hislop

"The Tenovus Grant allowed me to develop my own research project and will play a fundamental role in establishing myself as independent researcher"

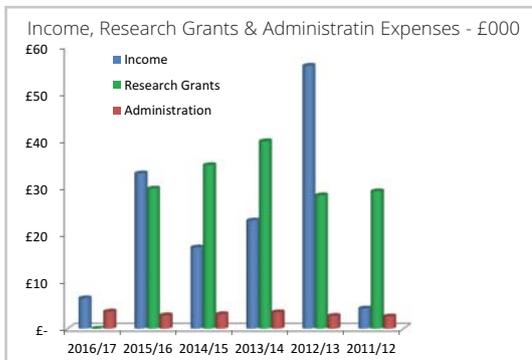
Dr Andreas Haag

"The Tenovus award has allowed us to explore a new technology, quantifying thousands of proteins at the same time in a single sample. This is going to be a step change in our approach to studying arthritis using both laboratory grown cells and real patient samples"

Dr Simon Powis

Edinburgh

“Professor Derek Bell has agreed that his name should go forward as my successor. Professor Bell is the current (and second term) President of the Royal College of Physicians of Edinburgh (RCPE)”



This is the last Chairman's report I shall write, as I shall be stepping down as Chairman after some seven years.

The Edinburgh Regional Committee has seen a number of changes over the past year. These will be described later in this report. The main concern of the Committee has been the dearth of funds and, consequently, the inability to fund new awards.

Applications Received and Project Reports

As it had been decided previously that the Edinburgh Regional Committee would move its grant application process from September to May, there were no new grant applications during the period covered by this report. The next application closing date will be 1st May 2017.

The Committee received two final reports during the year. Both were felt to be satisfactory, and one had led to significant further funding.

Income Generation and Events

Tenovus Scotland Edinburgh was represented by Professor Derek Bell, Miss Farhat Din, and Dr Susan Farrington at the formal opening by HRH The Princess Royal of the IGMM Systems Biology Building on the Western General Hospital site on 7th July 2016. She was there in her role as Chancellor of the University of Edinburgh. The Edinburgh Committee has funded research over the years at that site.

Committee and Thanks

As mentioned above, I shall be stepping down as Chairman at the AGM in June 2017.

I am pleased to report that Professor Derek Bell has agreed that his name should go forward as my successor. Professor Bell is the current (and second term) President of the Royal College of Physicians of Edinburgh (RCPE). He was appointed the first Professor of Acute Medicine in the UK within the Faculty of Medicine at Imperial College London. The Department of Acute Medicine is now established and based at the Chelsea and Westminster Campus.

It has not proved possible to make an appointment to succeed David Land, CA, as Treasurer. I have decided to allow my name to go forward at the June AGM for that role.

During the year Mr Sandy Corstorphine and Mr David Campbell resigned from the Committee, each after years of service. In David Campbell's case the time involved is of the order of twenty years. Both are warmly thanked for their not inconsiderable efforts over the period.

Dr Alan Patrick left the Committee on demitting the office of Vice President of the RCPE, and Dr Tom MacKay has replaced him.

My thanks go again to Mrs Kay Rich for her tireless work as Honorary Secretary.

Mr James D Watson
Chairman

Edinburgh Committee

AS AT 31 MARCH 2017

Chair Mr J D Watson

Hon Treasurer Vacant

Committee

Professor D Bell, Professor A A Calder, Dr D Davidson, Miss F V N Din, Dr S Farrington, Mrs H A Finlayson, Dr T Mackay

Edinburgh LSAC

Professor D Bell, Professor A A Calder, Dr D Davidson, Ms F V N Din, Dr S Farrington, Dr T Mackay, Mr J D Watson

Donors

Our sincere thanks to all our donors

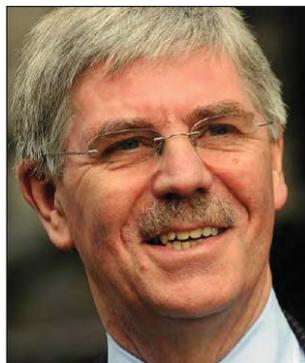
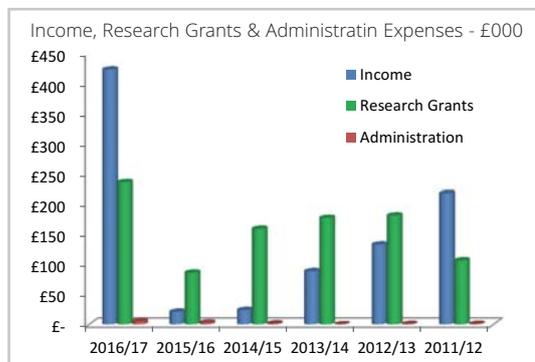
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Mr & Mrs R Gregor
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Ms A Neale
Mr & Mrs C M A Pearson
Mr & Mrs D Simpson
Mrs R Stewart
Miss J S C Stuart
Mrs F Young

Edinburgh Regional Secretary

MRS K RICH Regional Secretary
Tel: 0131 332 8502
Email: edin.sec@talk21.com

Grampian

"We remain exceptionally grateful to our very generous benefactors who have bequeathed and donated the funds to support our critical work in contributing to current research in pursuit of future advances in health, particularly as the monies are used in our local regions and for projects which clearly relate to health issues of relevance to the local population"



Tenovus Scotland Grampian is delighted to continue to fund early career researchers and innovative pilot studies of the highest calibre in the Universities of the North of Scotland, in both laboratory and clinically based projects.

We remain exceptionally grateful to our very generous benefactors who have bequeathed and donated the funds to support our critical work in contributing to current research in pursuit of future advances in health, particularly as the monies are used in our local regions and for projects which clearly relate to health issues of relevance to the local population.

Applications Received and Project Reports

The single annual cycle of research funding commenced in September 2016 with a total of 13 applications submitted to the Local Scientific Advisory Committee (LSAC); from these, 10 were selected for onward transmission to the National Scientific Advisory Committee (NSAC).

Review of the NSAC ranking led to funding being offered to seven projects, with a total expenditure of £72,327. However, the Morningfield Association (Aberdeen), which supports care of the elderly and chronically sick, was invited to select one of two of the projects particularly relevant to their interests, and most generously offered to fund both (about £17,000), the remaining projects being funded locally.

While the John Shivas Trust permitted Tenovus Scotland Grampian to appoint a Princess Royal Tenovus Scotland Medical Research Scholarship, which commenced in October 2016, it was decided that such was the quality of the applicants and their proposed research that a further PhD scholarship would be awarded from Moulton-Barratt funds. As our first Moulton-Barratt scholar had just graduated on completion of her research, this new appointment maintains our complement

of Moulton-Barratt scholars at three. Satisfactory interim and final reports have been received, and our PhD scholars continue, in turn, to deliver fascinating updates at the quarterly meetings of the Grampian Committee.

We are proud that one of the Grampian scholars won the Sir Robin MacLellan Travel Award for 2016, and another was granted two million euros for further studies.

In order to relieve pressure on NSAC and accommodate start times in line with University sessions, applications for the next round of funding are being sought by 31 May with a view to introducing an annual submission date of 31 March in 2018.

Income Generation and Events

We held another very successful Lawyers' Evening, when Prof Roddy Paisley, University of Aberdeen Professor of Scots Law, delivered an entertaining, educational talk on changes in Succession Law.

One of our PhD students organised a sponsored run/walk round Loch Morlich, yielding almost £1500.

In addition to Morningfield Trust's contribution, we have been greatly supported by generous bequests from the estates of Mr B Dufus (£35,000), Mrs Elizabeth Isabella Gordon (£50,000) and Miss Jean Merchant (£175,000) in the last year.

Committee and Thanks

We are pleased that Mrs Sharon Mackie has joined the Grampian Committee. The Chair wishes to record his enormous gratitude to the Hon Secretary, the Hon Treasurer and other members of the Committee for their tireless efforts on behalf of Tenovus Scotland, locally and nationally, and also to Ms Marilene Walker for her administrative support.

Professor Jamie Grieve
Chairman

Grampian Committee

AS AT 31 MARCH 2017

Chair Professor J Grieve
Vice Chairman Professor C Wainwright
Hon Treasurer Mr D Fraser
Hon Secretary Mr J Young

Committee

Mr G Benvie, Professor B Connolly,
Dr S Duncan, Mrs S Mackie, Mr F McLellan,
Mr A Marshall, Professor J Maxwell

Grampian LSAC

Dr S Duncan, Professor J Maxwell,
Professor J Grieve

Donors

Our sincere thanks to all our donors

Lily Charlton Trust
Morningfield Association
The John Shivas Memorial Trust
Mr E Flett
Professor J Grieve
Mr M Santoro & supporters
Mr D Yule

Legacies

We are grateful for the following legacies

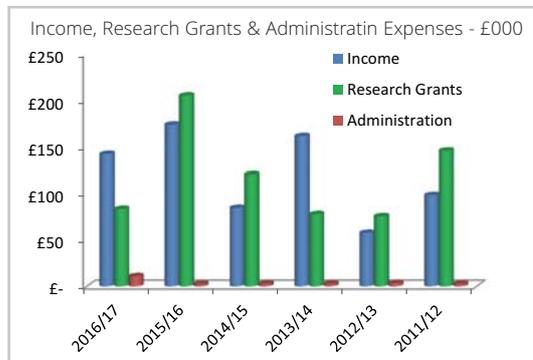
B Duffas
Mrs E I Gordon
Miss J Merchant

Grampian Regional Secretary

MR J F S YOUNG Regional Secretary
Tel: 01467 681380
Email: oldbraco@aol.com

Strathclyde

"Final reports were received from 11 projects funded in previous years. It was pleasing to note that almost all projects achieved their aims, and led to publications in the scientific literature. Many had also obtained further funding by the time of the final report"



The Strathclyde Committee of Tenovus Scotland had another productive year, meeting on four occasions to debate new grant awards, receive mid-project and final project reports and discuss matters around fund-raising and other activities.

Applications Received and Project Reports

A total of 19 applications for pilot project funding were received and reviewed/scored by our Local Scientific Advisory Committee (LSAC). Their views were then brought to the Strathclyde Committee for further discussion and recommendation of projects to fund, subject to the constraints of available funds. Applications were of a particularly high standard and a total of seven projects were recommended to the National Scientific Advisory Committee (NSAC) for funding. All were approved by NSAC, meaning that funds totalling £83,566 were allocated.

Final reports were received from 11 projects funded in previous years. It was pleasing to note that almost all projects achieved their aims, and led to publications in the scientific literature. Many had also obtained further funding by the time of the final report, and one project had led to the formation of a small 'spin-off' company to develop the new technology – we shall watch its progress with interest.

The Committee was pleased to note that the underpinning ethos of Tenovus Scotland was very much reflected in both the new projects funded and the final reports received.

Income Generation and Events

As in previous years, most income in 2016 came from charitable trusts and legacies. A

number of charitable trusts are regular donors to our funds, and their contributions are very much appreciated, especially as income generation from charitable trust funds is relatively low at the present time. Sadly we have probably tapped into most of the charitable trusts in the West of Scotland whose aims allow for support of Tenovus, so scope to increase income from this source is minimal.

Fund-raising events have proved onerous to organise and have provided only modest returns, though the annual Golf Day is much enjoyed by the participants and provides useful income. The Committee recognised the need for professional advice on newer and more modern approaches to fund-raising and has agreed (with colleagues in Grampian) to make this a priority in 2017.

Committee and Thanks

I am personally grateful to all members of the Strathclyde Committee for their commitment, enthusiasm and willingness to modernise our activities. It is invidious to single out individuals but, as ever, the contribution of Strathclyde Secretary Sue Ogden is unstinting and invaluable. I would also highlight the immense contribution of retiring Committee member Thia Begg. Thia has led on income generation from charitable trusts in Strathclyde for many years (to excellent effect as noted above) and has also led on the annual follow-up report on grants made five years earlier, showing the impact of Tenovus Scotland pump-priming funding on unlocking further, more substantial funding from other sources. We thank her and wish her well.

Professor Kenneth Paterson
Chairman

Strathclyde Committee

AS AT 31 MARCH 2017

Chair Professor K R Paterson

Hon Treasurer Mr D MacLucas

Committee

Mrs G Buchanan, Mrs C Donald, Mr J Drury, Professor A Foulis, Professor D Galloway, Mrs J Macanna, Mr I MacDonald, Mrs L Mawson, Mrs S Tolmie

Strathclyde Fundraising Committee

Chair Mrs J Macanna

Hon Treasurer Mrs G Buchanan

Committee

Mrs C Donald, Mrs L Mawson, Mrs S Tolmie

Strathclyde LSAC

Dr H Carswell, Dr S Lang, Professor I McInnes, Professor S Pyne

Donors

Our sincere thanks to all our donors

The AMW Charitable Trust
The WA Cargill Fund
Martin Connell Charitable Trust
MV Hillhouse Trust
The Jeffrey Charitable Trust
The Martin Charitable Trust
MEB Charitable trust
The Ronald Miller Foundation
Helen A Reid Charitable Trust
The Templeton Goodwill Trust
The Iris and Alexander Walker-Naddell Trust
Alma and Leslie Wolfson Charitable Trust
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Dr A G Mathieson
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Mr M McLean
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Dr I D Melville
Mr A K and Mrs P M Morton
Mrs E Sinclair
Mr J Sinclair
Mrs R Walls
Mrs B Winocour
Mrs J M Young

Legacies

We are grateful for the following legacies

Mrs M Preston
Ms C Wilson

Strathclyde Regional Secretary

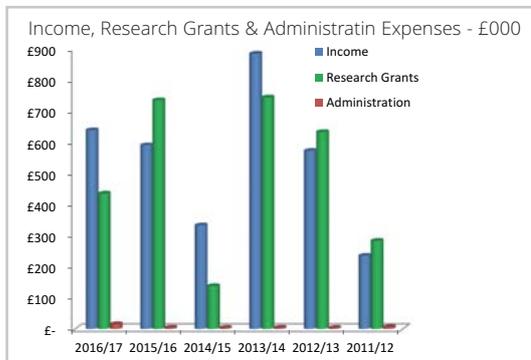
MRS S OGDEN Regional Secretary

Tel: 0141 221 6268

Email: str.sec@btinternet.com

Tayside

“During the year 34 small grant applications and 18 larger applications were received and all were fully peer reviewed prior to approval by the Local and National Scientific Advisory Committees”



Tenovus Scotland Tayside has had a very successful year in 2016/7.

Applications Received and Project Reports

The Committee has been very fortunate to have had a total sum of £638,422 available for supporting research projects, raised from donations including a number of local Trusts (£379,864), legacies (£215,916) and fundraising events (£7,434). During the year 34 small grant applications and 18 larger applications were received and all were fully peer reviewed prior to approval by the Local and National Scientific Advisory Committees. The available funds allowed 13 small awards and three large projects to be supported to a value of £434,820.

Income Generation and Events

The Events Committee, led by Mrs Gloria Burns, arranged a number of functions throughout the year, including a bridge meeting, and a golf outing. As always, a highlight was the annual dinner, held in the Invercarse Hotel at the beginning of December, which attracted more than 130 supporters, and raised £3,711 for funds. The event was attended by our Honorary President, Lady Fraser. The Committee is very aware of the value of local publicity in maintaining fundraising support and has prepared a brochure outlining the value of the scientific projects supported by Tenovus Scotland in recent years; this was distributed to attendees at the dinner and will be used in other funding drives in the future.

Committee and Thanks

As always, the work of Tenovus depends on the enthusiastic support of our Committee

members, including our Scientific Advisory Committee. Professor Tim Hales leads the Scientific Advisory Committee, which very efficiently adjudicates on the large number of applications received for funding.

The Committee has been particularly indebted to the work of its Honorary Treasurer (Mr James Wilson) and Secretary (Mrs Margaret Lawson). Both have decided to step down at the end of March 2017, and their hard work for Tenovus Scotland will be sorely missed. I am delighted that Mr Bryant Paterson and Ms Victoria Borthwick have agreed to take over these roles. I am also very pleased to report that Professor Jill Belch, Mrs Lydia Fotheringham, Mrs Gloria Burns, and Mr Murray Etherington have agreed to join the Committee.

Professor John Connell Chairman

Tayside Committee

AS AT 31 MARCH 2017

Hon President Lady Fiona Fraser

Hon Vice Presidents

Mrs P Dunn

Mr N J Robertson

Chair Professor J M Connell

Vice Chairman Mr A F McDonald

Treasurer Mr J M C Wilson

Committee

Professor J Belch, Mrs G Burns,
Mr M Etherington, Mrs L Fotheringham,
Professor T Hales, Professor PW Howie,
Mr D J Smith, Mr D J Young

Tayside LSAC

Professor T Hales, Professor C Lang,
Dr C Marwick, Dr A Saurin

Donors

Our sincere thanks to all our donors

Lord Armistead Dundee Trust
The Evelyn Farris Mudie Trust
Larg Family Trust
The Leng Charitable trust
The Northwood Trust
AM Pilkingtons Charitable Trust
Monifieth Probus Club
Dr JM Anderson
Mrs Bastable
Mr & Mrs J Bennet
In memory of Lady Diana Douglas
Dr & Mrs ID Duncan
Mr C du V Florey MD
Professor & Mrs PW Howie
Mr & Mrs F McManus
Mr R McVean
Ms ME Roy
Mrs L Scott
Dowager Countess of Strathmore
Mrs Y J Taylor

Legacies

We are grateful for the following legacies

Miss A M Aitken
Mr W S Durham
Miss T Gourley
Mrs M Stevenson
Mrs E O Stothart
Mr C D Whittingam

Tayside Regional Secretary

MS V BORTHWICK Regional Secretary

Tel: 01382 383964

Email: tenovus@dundee.ac.uk

The National Scientific Advisory Committee

When I write my yearly report, I usually start with describing the changes in personnel in the National Scientific Advisory Committee (NSAC). However, I am delighted to say that there have been no changes this year. Nevertheless, I would like to acknowledge and thank the current members of the NSAC for their continuing hard work. They are Dr Marie Freel (Strathclyde), Dr Fiona Denison (Lothian), Prof Zofia Miedzybrodzka (Grampian), and Prof Douglas Steele (Tayside).

Our work is to act as a second scrutiniser of projects already approved by each Local Scientific Advisory Committee. We ensure that the standard of the research proposed by each local committee is of a sufficiently high standard for it to go ahead. It is not common for the NSAC to disagree with the local committee but it does occur sometimes. This “double scrutiny” means that Tenovus can claim uniquely that funds raised locally are all spent locally while, at the same time, ensuring that the money is only being spent on high quality research projects with strong potential to improve treatments.

Here is a flavour of some of the projects we funded this year. They reflect new trends and priorities in research and, as can be seen from the projects listed below, a new hot topic is the micro-organisms that cause infection and, maybe, even cause some non-infective diseases (see below).

In Tayside, a new young researcher at the University of St Andrews, Dr Sam Pitt, will be studying an important new phenomenon in infection. As is well known, bacteria commonly become resistant to our current antibiotics, and one way they do this is to develop ways to eject to the outside the antibiotic molecules that had got into the inside of the bacterial cell. Dr Pitt will study how a newly discovered efflux pump (RND) on the bacterial wall works. If the

“Our work is to act as a second scrutiniser of projects already approved by each local scientific committee”

researchers can establish how this efflux pump works, then development of a drug that blocks it, and so prevents the bacteria developing antibiotic resistance, may be possible.

A whole novel aspect to this topic of infection is the new idea that the bacteria which are normally present in our own intestines could have a role in causing a whole range of non-infective diseases. It is important to realise that our guts are normally full of bacteria, which live in harmony with our bodies, and probably even do good rather than harm. However, it now appears that changes within the range of healthy bacteria in our gut might be linked to certain (apparently unrelated) diseases such as dementia. To explore this idea, Dr A Johnstone from Grampian will compare stool samples from dementia patients with stool samples from normal elderly subjects. The plan is to see if there are subtle changes in the bacteria in the gut of patients with dementia. If so, they could have downstream effects, which might precipitate dementia. If this turns out to be the case, then carefully using targeted antibacterial drugs might prevent early dementia from progressing.

On a different theme, Dr Jennifer Greaves and Professor Laura Machesky from Strathclyde will be doing important molecular detective work potentially to help treat malignant melanomas, which are the most dangerous form of skin cancer. They will focus on a new molecular switch (NRas) and how this “switch” is regulated by certain proteins (ABMD17). The hope is that drugs which target these proteins will ultimately be able to switch off an important molecular switch which is stuck in the “on” position and, therefore, drives this cancer.

The above are just a few of the many applications we funded this year. This



year’s projects will enable many new promising ideas to be explored for the first time. The strong expectation is also that positive results will be seen in many of these new ideas, leading ultimately to advances in medical treatments.

Professor Allan D Struthers
Chairman
Professor of Cardiovascular Medicine
University of Dundee

The National Scientific Advisory Committee

AS AT 31 MARCH 2017

Chairman Professor A D Struthers
Committee Dr F Denison, Dr M Freel,
Professor Z Miedzybrodzka, Professor D Steele

Financial Review

This has been an excellent year for Tenovus Scotland with income of £1,236k, thanks to significant legacies, particularly in Grampian and Tayside.

As we only approve projects from cash generated, we appear to be cash rich pending the approval and settlement of new research projects.

In previous years our cash balances have generated useful additional income, but regrettably this source has fallen because of the almost zero rate of interest available from banks on deposits.

Mr Francis McCrossin National Treasurer

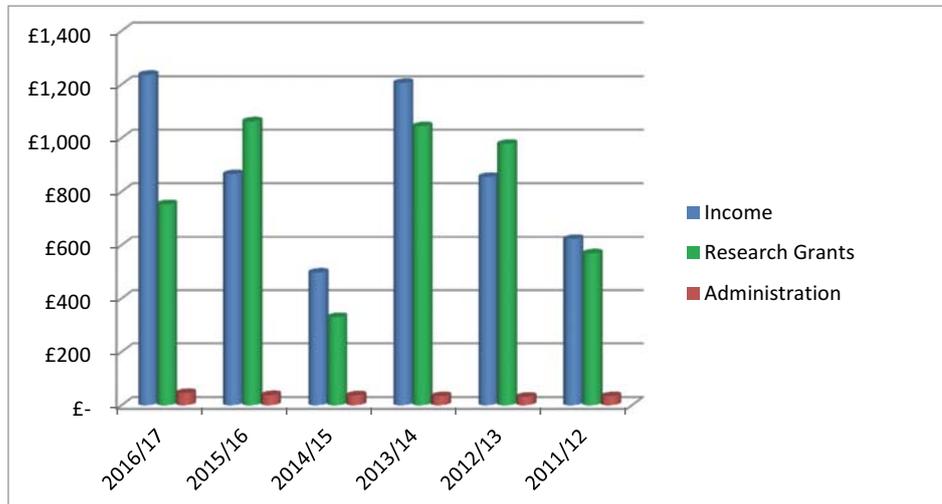
Set out below are the accounts for this and the preceding five years

Income & Expenditure Accounts - £000

YEAR TO 31 MARCH 2017

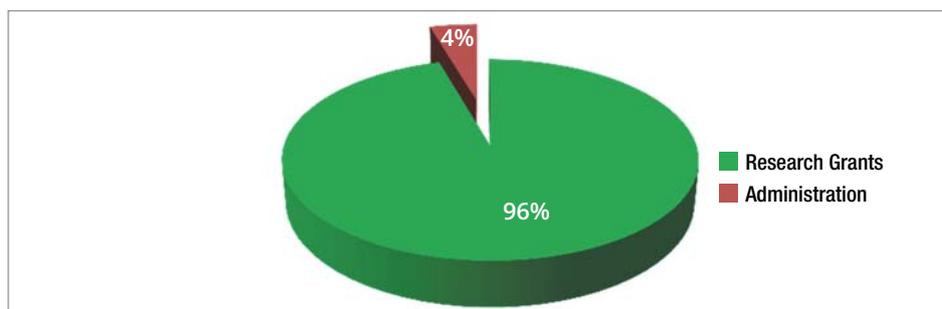
	2016/17	2015/16	2014/15	2013/14	2012/13	2011/12
DONATIONS	589	754	321	618	598	227
LEGACIES	560	5	73	476	140	310
FUND RAISING	10	16	15	20	26	20
INTEREST & DIVIDENDS	77	90	88	92	91	66
TOTAL INCOME	1,236	865	497	1,206	855	623
RESEARCH GRANTS	753	1,062	330	1,044	978	569
ADMINISTRATION	46	38	37	34	32	34
TOTAL EXPENDITURE	799	1,100	367	1,078	1,010	603
SURPLUS/DEFICIT	437	-235	130	128	-155	20
ADMIN AS % OF GRANTS	6.1%	3.6%	11.2%	3.3%	3.3%	6.0%

Income, Research Grants & Administration Expenses - £000



Research Grants and Administration Costs

6 YEARS TO 31 MARCH 2017



"This has been an excellent year for Tenovus Scotland"



The financial information opposite is extracted from the full audited Annual Report and Accounts for the 6 years ended 31 March 2017.

Copy of the most recent audited Annual Report and Accounts is available on request from the General Secretary.

Finance Committee

AS AT 31 MARCH 2017

Chair Mr F E J McCrossin

Committee

Professor A A Calder, Professor J Connell, Professor J Grieve, Mr M McIver OBE, Professor K Paterson, Mr G M Philips, Mr J D Watson

All are Trustees of Tenovus Scotland



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Mr Colin J Black
Professor John Connell
Professor James Grieve
Miss Mary Marquis MBE
Mr Francis E J McCrossin (Hon Treasurer)
Mr Malcolm McIver OBE
Professor Kenneth Paterson
Mr Graham M Philips (Hon Secretary)
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Mr James D Watson

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Mr Iain McFadzean

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