



TENOVUS SCOTLAND
SUPPORTING MEDICAL RESEARCH

NUSOVUS

NO.82 JANUARY 2017

2016 HIGHLIGHT

Our Patron, Her Royal Highness The Princess Royal, graced us with her presence at a dinner held on 12th April in the Cancer Research UK Beatson Institute in Glasgow. The purpose of this event was to celebrate the successful establishment of the Princess Royal Tenovus Scotland Medical Research Scholarship Scheme. In July 2014 this programme of awards was inaugurated when she presented the first Scholarship to Anna Muriano. Anna, who is pursuing her studies of the debilitating condition of Huntingdon's Disease, is now on course towards completion of her PhD at the University of Dundee.

At the Beatson event our Patron presented the second award to Angela Ianniciello, University of Glasgow, who is now studying Chronic Myeloid Leukaemia under the supervision of Dr Vignir Helgasson. A strong international flavour is already a feature of the programme! The Princess also met a number of young investigators from the Beatson Institute who demonstrated their research activities into many areas of cancer.

The evening was most convivial and we



Her Royal Highness The Princess Royal with Angela and her supervisor, Dr Vignir Helgasson

were delighted to express our gratitude to Her Royal Highness who spoke warmly of the evening and again emphasised her personal enthusiasm for the Scholarship scheme.

Since this event a third scholar, Vasiliki

Mallikouri, has been selected to research non-invasive mapping of lipid and metabolite profiles in breast cancer, involving MRI methods, at the University of Aberdeen and it is anticipated that, by the autumn, a fourth scholarship will have been awarded.

50TH ANNIVERSARY

The year 2017 is of special significance for Tenovus Scotland, marking the 50th anniversary of our foundation. In 1967 Sir Charles Illingworth, Regius Professor of Surgery at the University of Glasgow, sought the support of nine prominent fellow citizens of Glasgow with whom he established our Charity. The object was to encourage and provide funding for research across the whole spectrum of medical disorders.

The success of the organisation has been well documented in our Annual Reviews and issues of Nusovus over the past half-century. The most notable impact has been to afford the opportunity to aspiring investigators, both scientists and clinicians, to take their first forays into research. The

comparatively modest 'start-up' grants, which have been our most frequent awards, have set scores of recipients on the path to successful careers in academic medicine, as laboratory investigators and clinical scientists. That pattern of support has been amplified by larger awards and also prizes in recognition of researchers judged of particular merit. In the past three years, with the enthusiastic endorsement of our Patron, Her Royal Highness The Princess Royal, a new form of prestigious awards has been provided under The Princess Royal Tenovus Scotland Medical Research Scholarship Programme. By the end of this year there will be four scholars pursuing PhDs under this scheme. A new initiative in 2017 will be the launch of the annual Sir

Roddy MacSween Prize and Medal to pathology intercalated degree students at the University of Glasgow.

In this, our 50th anniversary, we plan to host several events. The principal one will be led by the Royal Scottish National Orchestra, which has most generously given us its support. A weekend of concerts will begin in Dundee (Thursday 5 October) and Edinburgh (Friday 6 October) culminating in a Golden Jubilee Gala Concert in Glasgow on Saturday 7 October, appropriately where it all began. This will be a wonderful opportunity for the recipients of our support, friends of the organisation, and numerous people on the Regional Committees to join in celebrating the first half-century of Tenovus Scotland.

LADY ILLINGWORTH AWARD



Dr Tatham and Sir Kenneth Calman, our Honorary President

The Lady Illingworth Award is awarded periodically to a person or persons who have made an outstanding contribution to the understanding of the disabilities which affect elderly people within the British Isles. This most prestigious award has only had three previous recipients in the history of Tenovus Scotland.

Dr Andrew Tatham was the winner of the 2016 Award. His research was focused on improving the understanding of chronic eye disease and how it affects elderly patients' quality of life.

Andrew is an NHS Scotland Career Research Fellow and Honorary Clinical Senior Lecturer at the University of Edinburgh. He is a specialist in glaucoma, a common cause of blindness and visual disability. Andrew's research has focused on improving understanding of how glaucoma affects quality of life

and ability to perform important tasks such as driving. For many people, especially those living in rural areas, the ability to drive is essential for maintaining independence. However, elderly drivers are more likely to have visual problems, which increase the risk of collisions, with potentially serious implications for all road users. Andrew's group has recently demonstrated that the tests currently used to determine whether a person with visual impairment is safe to drive are only weakly associated with the actual risk of collision. It was found that incorporating information from ocular imaging, using a device known as optical coherence tomography (OCT), could provide an objective measure of damage and improve the ability to differentiate safe and unsafe drivers. OCT is a non-invasive test that uses infrared light to measure the thickness of layers of the retina and optic nerve.

The research has the potential to avoid unnecessarily penalising safe drivers, helping to maintain their independence and quality of life, whilst correctly identifying high-risk drivers. In partnership with the University of California San Diego, Andrew has also recently concluded a study showing that changes in retinal thickness measured using OCT are also associated with worsening quality of life. As changes often occur before decline in vision, OCT has the potential to allow earlier treatment to prevent visual disability, and shorten the length of clinical trials of new treatments.

SIR ROBIN MACLELLAN AWARD 2016



Dr Roelofs receiving her award from Prof Jamie Grieve, Grampian Chairman

This annual award is presented to the researcher whose final report on their research work has been judged the most outstanding for the year.

Dr Anke J Roelofs, University of Aberdeen, was the 2016 winner. She was delighted to receive this award in recognition of her work on rheumatoid arthritis

Dr Roelofs said "Rheumatoid arthritis is the most common chronic inflammatory disease in the UK, affecting around 1% of adults. It mainly affects the joints and can progress rapidly, causing joint damage and devastating deformities. A key feature of arthritis is overgrowth of the membrane that surrounds the inside of the joint, or joint cavity, which is instrumental in the breakdown of cartilage and bone. Our research aims to understand why this thickening of the membrane happens, and to find out new ways to stop this. A research grant from Tenovus Scotland has helped us to discover a protein that appears to be involved in this process. We are currently continuing these studies with funding from the Medical Research Council (£485k), the Wellcome Trust through the Scottish Translational Medicine and Therapeutics Initiative (£249k) and the EU (£273k), to determine whether removing or inactivating this protein can prevent the membrane from thickening in rheumatoid arthritis, or after trauma to the joint which can lead to osteoarthritis. Ultimately, we hope to show with our research whether targeting this protein could be a novel therapeutic strategy for the millions of people suffering with arthritis".

SAVE THE DATE! 50 years of Tenovus Scotland



Come celebrate with us at our **Golden Jubilee Gala Concert** in Glasgow Royal Concert Hall with The Royal Scottish National Orchestra and Music Director Peter Oundjian for the first night of their 2017-18 Season on Saturday 7 October 2017. Full details to follow. Register your interest at stra.sec@btinternet.com

Mrs Freda Cutler, Trustee

Freda, who was one of our most committed and loyal supporters since 1977, sadly died in August 2016 aged 90 years.

She held the offices of Vice-Chairman, Chairman and Treasurer of the Strathclyde Ladies Committee.

Freda joined the National Committee in 1989 and actively participated as a trustee. Her last Tenovus Scotland event in April last year was a dinner in Glasgow to celebrate The Princess Royal Tenovus Scotland Medical Research Scholarships, which was attended by Her Royal Highness The Princess Royal. It was extremely fitting that she was congratulated on her 90th birthday in the presence of The Princess Royal.

Professor Andrew Calder, Tenovus Scotland National Chairman, paid tribute to Freda. "Tenovus Scotland was hugely fortunate to have the enthusiastic support of Freda over the past five decades. She provided exactly what the Charity depends on: a profound loyalty and

energetic support of its aims and endeavours. Medical research has never been more important as it is now. Freda recognised this and put her heart and soul into its furtherance."

Ms Mary Marquis, a fellow trustee for many years, said "There's a Scottish saying that I feel perfectly expressed Freda - 'Guid gear comes in sma' bulk', or 'small of stature with a warm heart'. Freda spent her energies supporting and encouraging people and never more than Tenovus Scotland in its fundraising functions and all its endeavours. A sparky lady herself with a dry wit, her interest in life around her, particularly the arts, was so infectious and stimulating. In spite of various health problems in her long life, she rarely talked about them and at meetings was always positive, always stylish and amazingly youthful - someone to whom you could always turn for friendship and understanding. Freda was such an inspiration to the rest of us in Tenovus, a bright star and a truly loyal friend."



Mrs Freda Cutler

The nonagenarian, who was married to the late Dr Bernard Cutler, is survived by her daughter Vivien, son David and grandson Dougal.

Sir Malcolm Macnaughton, Honorary Vice President



Sir Malcolm Macnaughton

Malcolm (known as Callum), our Honorary Vice President and one of Scotland's most distinguished medical academics, sadly passed away on 1st July 2016 aged 91. He was Chairman of our National Committee from 1994 to 2004.

Sir Roddy MacSween, Callum's successor as Chairman, unfortunately passed away a few months earlier

leaving us with the loss of two of our Honorary Vice Presidents within a short timeframe. They were both highly distinguished medical academics who had given wonderful support and leadership to our Charity. Callum was named after an uncle who had been killed at the Somme on 1st July 1916, and it was a poignant coincidence that he died on the centenary of that date.

Callum attended Glasgow Academy and the Glasgow University Medical School, graduating in 1948 after which he did National Service in the RAMC in Hong Kong.

He married Margaret-Ann Galt in 1955 who supported him in his steady desire to change social attitudes.

Choosing to specialise in obstetrics and gynaecology, Callum's training took him to various West of Scotland hospitals before taking up a clinical academic post with Professor Dugald Baird in Aberdeen. There he developed his research reputation in reproductive endocrinology while coming to share Baird's conviction that their specialty could and must embrace fertility control. Throughout his career he was as passionate in his desire to help childless couples have a family and as he was to

prevent the scourge of unwanted pregnancies.

After a sojourn as a consultant in Dundee he returned to Glasgow in 1970 as Muirhead Professor of Obstetrics and Gynaecology. The city he returned to was beset with social deprivation much of which was due to over-large families in inadequate housing. Many of his colleagues did not recognise these issues as any of their concern, but he gradually changed attitudes. In time, this was seen by many to have had as great an impact on living conditions as decades of well-intentioned town planning.

A highly regarded clinician and teacher, he also established a world class research department. Elected President of the Royal College of Obstetricians and Gynaecologists in 1984, he brought his influence to bear on numerous governments and other bodies, always seeking to improve the health of women and their families.

Tenovus Scotland was exceptionally fortunate to have Callum Macnaughton's support and guidance over so many years.

He is survived by his wife and children.

Face to Face

With Professor

Tim Hales,
Head Of
Neuroscience
Division, School
of Medicine,
Ninewells
Hospital &
Medical School,
Dundee and
Chairman of the
Tenovus Scotland Tayside Local
Scientific Advisory Committee.



Professor Tim Hales

What is your background?

I graduated with a BSc degree in Physiology from King's College London in 1986 and a PhD from the University of Dundee in 1990. I then completed my postdoctoral training in the Department of Anesthesiology, University of California in Los Angeles and in 1997 was appointed Assistant Professor at the George Washington University (GWU) in Washington DC, gaining tenure in 2002. I became Professor in the GWU Departments of Pharmacology and Anesthesiology & Critical Care Medicine and Director of Research in Anesthesiology in 2006. I returned to Dundee in 2009 as Professor of Anaesthesia and non-clinical head of the Division of Neuroscience. I took on the additional role as Chair of the Tayside Scientific Advisory Panel in 2015 when the previous Chair, Professor Sara Marshall, was appointed Head of Clinical Research at the Wellcome Trust. Sara is a tough act to follow, but I learned a great deal by serving for several years, under her leadership, on the Tayside Scientific Advisory Panel.

Why did you decide to pursue a career in medical research?

I grew up with medical research. My father, Nick Hales, was Professor of Clinical Biochemistry in Cambridge. His mother and sister both suffered from diabetes mellitus and his paternal grandfather died from the disease. My father devoted his career in medical research to the study of diabetes. He had boundless enthusiasm for biomedical science, published more than 300 papers and was honoured by being elected Fellow of the Royal Society in 1992. It is hard to know how much my career choice was driven by genetics and how much was the result of growing up exposed to my father's passion for research - probably a combination of both factors. Many other people were also instrumental during my training, which took a circuitous route owing to my not having been a willing student during secondary school.

What is the role of the Local Scientific Advisory Committee?

The Tayside Scientific Advisory Committee makes recommendations about the research that should be supported by Tenovus in Tayside. Typically we organise two calls for research funding per year; one in spring and

the other in autumn. There are two levels of research funding; smaller awards that support pilot projects and major awards that fund larger projects. We consider applications from researchers in the three universities of our region: Abertay, Dundee and St Andrews. Currently, five scientists, with expertise in different aspects of medical research, are members of the Tayside Scientific Advisory Committee. We have just completed the review of applications for autumn 2016. During this funding round we reviewed 33 research proposals, nine of which were recommended for funding. The shortlisted proposals will next receive further scrutiny from the National Scientific Advisory Committee and those considered worthy of support will be funded.

How successful has Tenovus Scotland Tayside been in supporting researchers over the years?

Thanks to the extraordinary generosity of the people of Tayside, since 1990 more than £8 million pounds has been awarded to support local medical research, funding 345 pilot projects and 74 major projects. The research includes projects investigating cancer, heart and blood vessel disease, diabetes, brain and nerve disease, maternal and child health, infection and immunity. Tenovus funding has had a remarkable impact on medical research in Tayside, establishing scientific careers and leveraging substantial amounts of additional external funding for high impact research in the region. There have been many discoveries that

have improved the healthcare of people in Tayside and well beyond. The Tayside Scientific Advisory Committee plays an important part in this process by ensuring that the best research proposals are recommended for funding.

Why is it important for Tenovus Scotland to continue awarding pilot and major awards?

Research funding from the Research Councils and major UK charities is highly competitive and tends to be somewhat conservative, supporting work by investigators with an established track record. The challenge is to recognise emerging research talent and support early stage projects that have the potential for high impact. This is what Tenovus Scotland does best. Pilot grants are often instrumental in progressing ideas to a stage at which they become competitive for more substantial support from the larger funding agencies. Tenovus major awards enable completion of projects that lead to new research breakthroughs.

As Chair of the Tayside Scientific Advisory Committee my role is to help identify the most promising research projects to support with Tenovus funding. It is rewarding to see how often a relatively modest investment at an early stage in a promising young scientist's career accelerates their progression by enabling scientific discoveries that benefit the health, wellbeing and economy of the local community.

LOCH MORLICH FUN RUN

On Sunday 28th August 2016, two of the Moulton-Barratt PhD scholars from Aberdeen led a small band of colleagues on a sponsored run round Loch Morlich, in the Cairngorms National Park near Aviemore. After completing the four-mile circular run along the banks and beaches and through the surrounding Glenmore Forest, some of the more courageous runners enjoyed a dip in the loch.

Matteo Santoro (researching the inhibition of high mobility group box 1 (HMGB1) as a neuroprotective treatment in the MPTP mouse model of Parkinson's disease, at Aberdeen University) and Franz Pohl (researching the application of rapeseed pomace extracts in the prevention and treatment of neurodegenerative diseases, at Robert Gordon University) were joined by Professor James Grieve, Chair of Tenovus Scotland Grampian, and his wife, Nicola (who strolled gently round the course with their dog!) on a beautiful day in the stunning highland countryside. The runners were decoratively attired in purpose made Tenovus T-shirts. Their efforts raised an amazing £1500.

Matteo would like to make the Loch



On your marks . . . Tenovus athletes ready to go!

Morlich run (or walk) an annual fundraising event in the Tenovus calendar, and we believe that it could become a national activity with students, committee members and supporters gathering from all parts of the country to enjoy the magnificent surroundings and health-giving benefits of such an enterprise. Anyone interested please contact Matteo at r06ms13@abdn.ac.uk.

The Grampian scholars are committed to helping raise funds for Tenovus as well as being beneficiaries. Well done to Matteo and Franz!