



University of the
Highlands and Islands
Oilthigh na Gàidhealtachd
agus nan Eilean



Research
review
2016



Introduction

from **Clive Mulholland,**
Principal and Vice-Chancellor



I am pleased to present the University of the Highlands and Islands' 2016 Annual Research Review. This publication provides a snapshot of some of the cutting-edge research taking place around our partnership and introduces the talented staff and students leading the projects.

As the only university based in the Highlands and Islands of Scotland our mission is to have a transformational impact on the prospects of our region. Our research is inspired by and contributes to the natural environment, culture, industries and social infrastructure of the Highlands and Islands.

Focussing on these areas allows us to undertake research which is locally based, but which has national and international significance. Indeed, as well as being rooted in our community, we are also an outward looking organisation which values connections with researchers across the world. In a year which has seen much change in our external environment, we have reasserted our commitment to international collaboration.

I recently had the opportunity to attend our biennial research conference in Inverness. It was inspiring to hear from so many passionate colleagues and to see the breadth of research taking place around the university. Our achievements would not have been possible without the work of Professor Ian Bryden, our Vice-Principal (Research) who sadly passed away in November. We are indebted to Professor Bryden for all he did in leading in our research community and I dedicate this review to his memory.

Our research is inspired by and contributes to the natural environment, culture, industries and social infrastructure of the Highlands and Islands.

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Over two thirds of rope-grown mussels produced in the UK come from Shetland and production is reliant on the variable supply of wild natural spat (very young shellfish.)

Creating a Scottish shellfish hatchery:

the Stepping Stone project

There is capacity for production levels to be sustainably increased and the Scottish industry has a production target of 20,000 tonnes by 2030. To aid this growth, a steady and reliable supply of quality spat is required. The establishment of a commercial hatchery would help to provide this, while generating rural business and job opportunities.

The techniques for a cost-effective commercial bivalve hatchery are now in operation in several countries around the world. To accelerate the development of a Scottish hatchery, the NAFC Marine Centre UHI, along with the Scottish Shellfish Marketing Group and Scottish Aquaculture Innovation Centre visited Spring Bay Seafoods Ltd in Tasmania in 2015. The company operates a vertically integrated commercial shellfish farm using hatchery-reared spat. The Stepping Stone project aims to transfer this knowledge to establish a pilot shellfish hatchery at the NAFC Marine Centre UHI in Shetland using the centre's existing facilities and its links with the local mussel industry.

The project has a total value of just under £2 million. Funding has been provided by Highlands and Islands Enterprise and the European Maritime and Fisheries Fund. The Scottish Shellfish Marketing Group, Scottish Aquaculture Innovation Centre, Xelect Ltd and other academic partners have also made contributions.

The project is split into two phases. Phase 1 objectives are to set up equipment and develop the facilities at the NAFC Marine Centre UHI hatchery for algae cultivation, water treatments and larval rearing. Phase 2 will aim to spawn mussel broodstock, develop fertilisation techniques and examine methods

This research could lead to the development of the first commercial shellfish hatchery in Scotland.

for incubating larvae and post-larvae and the settlement and transfer of spat to on-growing farm sites. The second phase will also see the development of reliable and cost-effective algae production systems and the evaluation of nutritional quality.

Other partners, through the Marine Alliance for Science and Technology and Xelect Ltd, are working in parallel research and development projects, directly benefiting the development of the hatchery.

The Stepping Stone project aims to improve shellfish hatchery methods for spawning, incubation, settlement and on-growing, while providing a business model for a commercial shellfish hatchery for the Scottish shellfish industry. This research could lead to the development of the first commercial shellfish hatchery in Scotland.



Daniel Cowing
BSc (Hons), MSc



Daniel Cowing is an aquaculture scientist and technician at the NAFC Marine Centre UHI in Shetland. With experience in developing new aquaculture techniques, he has taken a secondment as project officer for the Stepping Stone project.

Daniel graduated with a BSc (Hons) in coastal marine biology from the University of Hull in 2010. He then took an internship at the Cape Eleuthera Institute in the Bahamas where he was involved with several research areas including shark population studies, aquaponics, aquaculture development, flats ecology and educational outreach activities. Daniel has since gained an MSc in tropical coastal management at Newcastle University and is currently completing a PhD at the University of Hull. His thesis is exploring the optimisation of commercial practices and development of aquaculture techniques for the Norway lobster.

Daniel's previous work includes developing crustacean aquaculture techniques. This includes broodstock procurement, transport husbandry and larviculture. Daniel has also investigated the performance of different diets and infrastructure related to larval rearing in several commercial and academic locations. Between 2012 and 2015, he managed the aquarium facilities at the University of Hull's Centre of Environmental and Marine Sciences.



Firths and Fjords: a coastal history conference

Organised by the University of the Highlands and Islands Centre for History, 'Firths and Fjords: a coastal history conference' took place from Thursday 31 March to Saturday 2 April 2016.

The event was the first ever international conference on coastal history and the largest academic gathering to take place in Dornoch, the east Sutherland town where the Centre for History is based. More than 100 delegates and expert speakers travelled from across the UK and from Finland, Canada and America to attend the three-day event.



As well as a range of international themes, the conference explored local subjects such as Norse place names in Gaelic-speaking areas, Brora's salt industry, the creation of air services in the Northern and Western Isles and witch belief in Scottish coastal communities. Delegates also had the opportunity to take part in social activities and excursions with a ceilidh, music performances and a guided tour of Pictish sites on the Fearn peninsula.

Professor Isaac Land, an expert in coastal history at Indiana State University, was one of the speakers at the event. He explained: "I travelled from the USA to attend the conference because it was the first conference ever organized around the emerging field of coastal history. More than one billion people worldwide live in low-lying coastal regions that are especially vulnerable to climate change

and many others live in heavily populated areas not far from the ocean. Coastal history can help us understand how we got to this point and may offer perspectives on where to go from here."

The local community also took part in the conference. Members of the public were invited to learn about coastal history by attending an exhibition at the main conference venue. Catering was supplied locally and the event was supported by a range of community organisations including Dornoch Community Council, Highland Council and Dornoch Academy Parent Council.

Firths and Fjords generated coverage in local and national media and the conference hashtag was used more than 900 times on Twitter during the week of the event. Recordings have been used to create a bank of teaching resources and the conference has also led to the development of a 'Firths and Fjords' blog, the publication of two peer-reviewed journal articles and a forthcoming volume exploring social, cultural and environmental perspectives on coastal communities.

Coastal history can help us understand how we got to this point and may offer perspectives on where to go from here.

Dr David Worthington
MA (Hons), PhD



Dr David Worthington is head of the Centre for History.

He is an historian of Scottish (and wider British and Irish) connections with central Europe (c.1500-c.1700) and has published two monographs, an edited volume, numerous peer-reviewed articles and book chapters in this field. He also researches and publishes on the history of the firthlands of mainland northern Scotland from an international, coastal history context. This interest led him to host the international 'Firths and Fjords' conference in Dornoch in 2016.

Dr Worthington completed his PhD with the University of Aberdeen in 2000. Before taking up his position at the University of the Highlands and Islands, he held posts at universities in Ireland and Poland. Joining the Centre for History as a lecturer in 2008, he led the development and launch of the BA (Hons) history and politics in 2010 and the online MLitt history of the Highlands and Islands in 2011. He has been programme leader for the MLitt history of the Highlands and Islands ever since and now leads three other postgraduate programmes too. Dr Worthington has been head of the Centre for History since 2011 and was awarded a readership in 2015.

Robotic gliders herald sea of change in survey work

Seagliders are autonomous vehicles used to gather information on a range of seawater properties, including temperature, salinity and oxygen levels.

Energy efficient and buoyancy driven, gliders can undertake independent journeys of up to seven months at depths between the surface and 1000 metres. The devices can send real-time data to a pilot using a satellite link. Once positional, scientific and technical data has been received, the pilot can control and redirect the glider on the rest of its mission.

Although limitations in depth range, sensor availability and power supply mean gliders will supplement rather than replace shipborne observations, their use is opening up huge opportunities, not only for understanding the current state of the ocean, but also for increasing our ability to predict future states. They allow oceanographers to make observations in hard to access regions and are often deployed in winter as they can withstand extreme conditions. Seagliders also allow for very dense sampling, collecting a profile every three kilometres, while survey vessels usually sample every 10 to 30 kilometres.

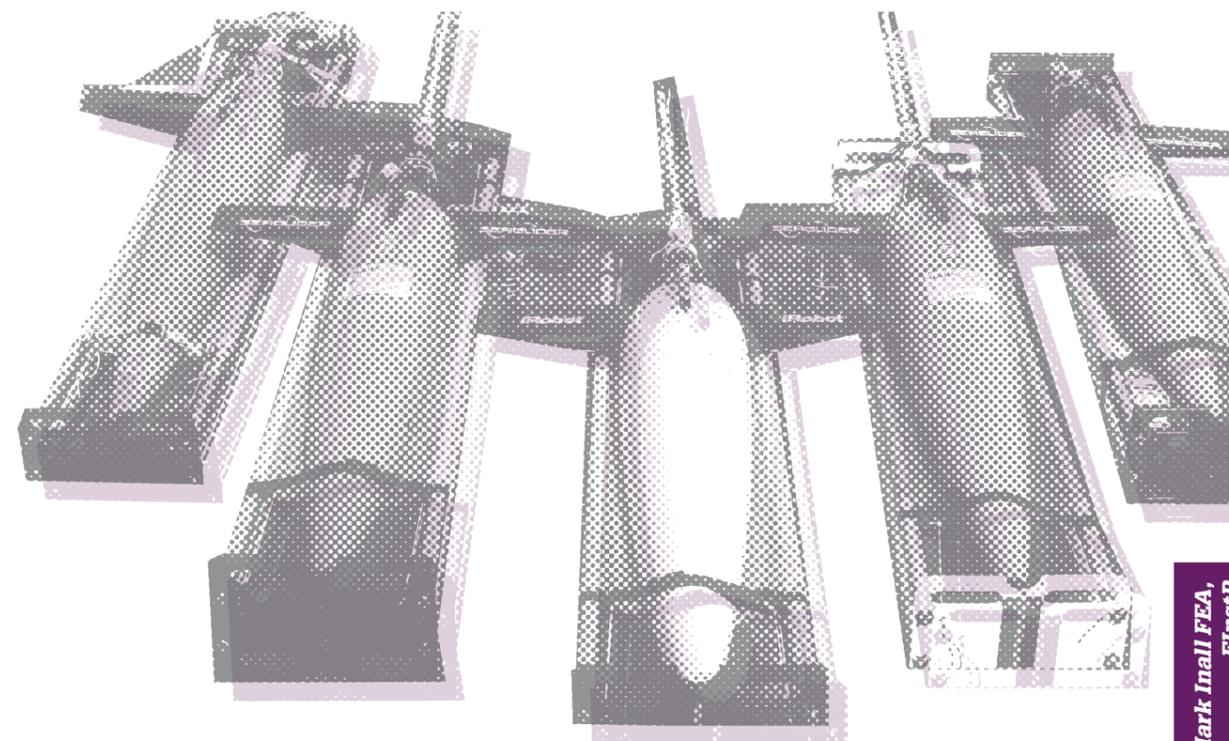
The Scottish Association for Marine Science UHI owns two Seagliders and has access to another seven from the Natural Environment Research Council's marine autonomous and robotic systems instrument pool. Ideally situated for Atlantic research, the Oban-based institute also runs the Scottish Marine Robotics Facility, a command and control centre for marine robotics operations.

To date, the Seagliders have spent the equivalent of over six years at sea. They have travelled more than 40,000 kilometres and are contributing to six major projects:

- The Extended Ellett Line project monitoring the evolution of waters flowing between Scotland, Iceland and the Arctic
- The Arctic Productivity in the Seasonal Ice Zone project, which seeks to understand how changes in sea ice and ocean properties will affect the large-scale ecosystem structure of the Arctic Ocean
- The Overturning in the Subpolar North Atlantic Program and North Atlantic Climate Variability project, which are monitoring oceanographic circulation
- The AlterEco project exploring the changing health and water quality of the northern North Sea
- The AltantOS initiative to deliver a framework for the development of an integrated Atlantic Ocean observing system
- The Fluxes Across Sloping Topography of the North East Atlantic project examining physical exchange processes between the deep ocean and shelf seas

These glider programmes also play a pivotal role in the training of early career scientists and technicians.

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Professor Mark Inall FEA, FInstP



Professor Inall is principal investigator in physical oceanography at the Scottish Association of Marine Science UHI in Oban.

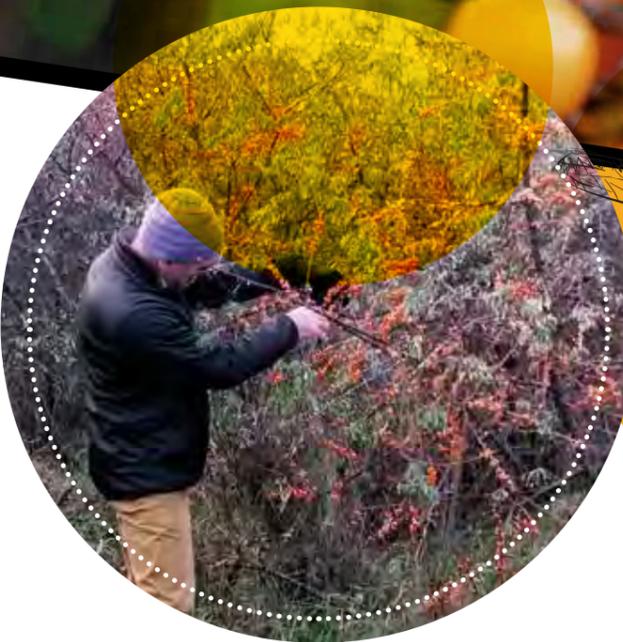
He studied physics at University of Edinburgh, polar oceanography at Cambridge University and physical oceanography at Southampton University, before spending three post-doctoral years at University of Wales, Bangor, studying the mixing generated by non-linear internal tides.

Professor Inall moved to the Scottish Association of Marine Science UHI in 1998 where he re-established the marine physics group. He was in the original team which set up the University of the Highlands and Islands' BSc (Hons) marine science and teaches on a third year module in ocean circulation and shelf sea dynamics on this programme.

Professor Inall has many years of experience in measuring turbulence in oceanic and coastal systems and has published more than 70 papers on measurements of turbulence made on the ocean margins and in shelf seas. In recent years, he has established an ocean turbulence measurement facility as part of the Scottish Marine Robotics Facility.

He became director of the Scottish Alliance for Geoscience, Environment and Society (SAGES) in December 2015 and is lead scientist for the North Atlantic Glider Base.





Sea buckthorn

The extreme maritime climate of Scotland's Northern Isles restricts the range of fruits which can be grown commercially outside.

Strong winds can damage bushes and a cool growing season with frequent rain and reduced sunshine are far from ideal for ripening fruit.

Since 2002, the Agronomy Institute at Orkney College UHI has been working to diversify the range of locally-grown fruits available to northern food and drink companies by testing several novel species. Some of the best performing species have been the North American plants aronia (*Aronia melanocarpa*), salal (*Gaultheria shallon*) and cranberry (*Vaccinium macrocarpon*). Cultivars of elderberry (*Sambucus nigra*) have also been found, which have performed well in more sheltered locations.

These results have been of particular interest to the Orkney Wine Company, which specialises in the production of fruit wines and which has been looking for unique, locally-produced ingredients for wines and liqueurs. As a result, the Agronomy Institute has been collaborating with the company since 2012 to identify species and varieties that combine good fruit production with attractive winemaking properties. The partners have also developed strong links with researchers at the James Hutton Institute who have analysed the chemical composition of the fruits and wines, allowing the company to better understand the characteristics which the different species bring to their products.



Using fruit from the Agronomy Institute's trials, the wine company has released two new wines: Orkney White which contains Orkney-sourced elderflower, rosehips and gooseberries and Orkney Rosé, which contains local aronia, salal and cranberry. A liqueur, Kvasir, was released in 2015, which includes elderberry and other local fruits. The Agronomy Institute has also helped the company to design and establish a fruit plantation so it can scale up production of its new wines and have its own source of fruit.

Apart from the obvious commercial benefits of this research to the wine company, the academic partners have also benefitted from working on new uses for novel fruits. Two recent joint publications have been the first to identify the potential of salal as a crop for fruit production and to provide a detailed description of the chemical composition of its fruit.

... the wine company has released two new wines: Orkney White which contains Orkney-sourced elderflower, rosehips and gooseberries and Orkney Rosé which contains local aronia, salal and cranberry.

Developing northern fruit wines from novel, locally-grown fruit

Dr Peter Martin
BSc (Hons), PhD



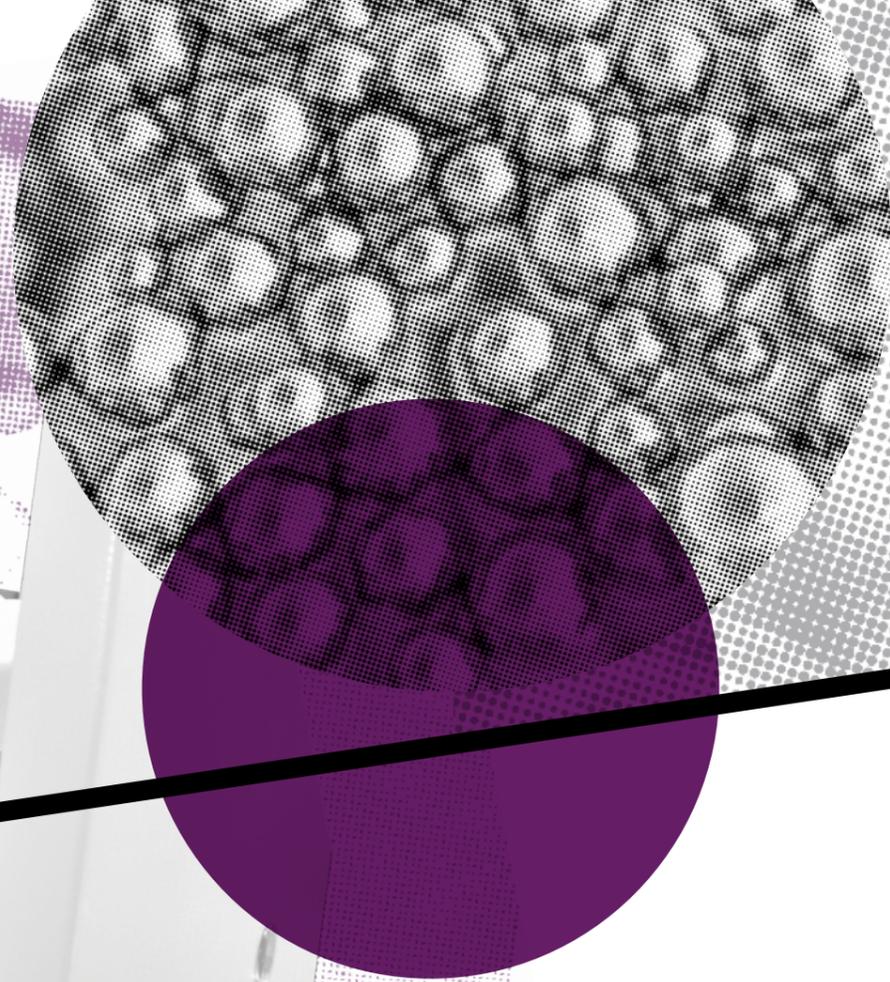
Dr Peter Martin joined the Agronomy Institute in 2002 and has been its director since 2006.

Throughout his career, Peter has worked on a wide range of plants in diverse environments. This includes tropical rainforest in Sarawak, cloves in Zanzibar, cashew in Tanzania and tea in Malawi. Since joining the Agronomy Institute, his research has included work on barley, oats, wheat, fruit, plants for natural products and tree species.

Peter is committed to commercialising the crops he works with and has helped to build long-term partnerships between the Agronomy Institute and distilleries, breweries and other end users. This has resulted in the development of several new products including beers, wines and gin.

One of Peter's favourite crops is bere, an ancient Scottish barley, which has a particular association with Orkney and which the Agronomy Institute is helping to conserve through commercialisation. A collaboration with Bruichladdich Distillery has resulted in the release of a series of bere whiskies, which won the Scotland Food and Drink Excellence Award for Innovation in 2015.

Peter is now working with scientists at the James Hutton Institute and the University of Copenhagen to determine the traits that make bere well-adapted to the Scottish islands.



Nanoparticles are an increasing feature of our lives: we unwittingly breathe in, swallow and expose our skin to these microscopic grains derived from exhaust fumes, e-cigarettes, sprays and creams.

Not all nanoparticles are as innocuous as we once thought; their size means that some have the capability to enter and damage our cells. Nanoparticles in pollutants have been linked to diseases including asthma, heart disease and diabetes, but the mechanisms involved are largely unknown.

Ironically, the ability of some nanoparticles to interact with cells has led to the idea of using them to improve drug delivery in cancer therapy. Before we can fully exploit the potential of nanoparticles in medicine, we must answer the question "what features might make a nanoparticle harmful?" A comprehensive answer to this will not only help us to reduce our exposure to harmful nanoparticles in the environment, but also to ensure the safety of nanoparticles selected for drug delivery.

Existing toxicity tests are not sufficiently sensitive to assess the risk associated with a given nanoparticle because the detrimental effects on health are associated with very subtle effects on cells. In particular, inflammation is emerging as a common feature of harmful nanoparticle exposure. This highly complex process is an essential defence against infection, but when it is inappropriately triggered, it can drive disease. Persistent inflammation involves an enormous range of molecular signals and the fingerprint of these molecules is likely to be distinct for different diseases. Identifying whether nanoparticles are able to trigger the release of inflammatory molecules could provide a way to identify which nanoparticles might induce chronic disease conditions. Furthermore, detailed analysis of the inflammatory fingerprint could determine which disease process is likely to occur after exposure.

Developments in a technique called mass spectrometry now make simultaneous measurement of a wide range of inflammatory molecules in a single sample possible. The university has established the capability to measure an important group of inflammatory molecules, known as eicosanoids. Through a series of projects funded by UK research councils and the British Heart Foundation, we have explored the potential of applying eicosanoid fingerprinting to help identify which nanoparticles might be detrimental to health. Our data suggests that this technique offers substantial advantages over existing tests, with the potential to identify nanoparticles which are safe for drug delivery as well as for understanding how nanoparticles in environmental pollutants cause disease.

Before we can fully exploit the potential of nanoparticles in medicine, we must answer the question "what features might make a nanoparticle harmful?"

The health risks of nanoparticles: size matters

**Professor Ian Megson BSc,
PhD, FBPfS, FRSB, FHEA**



Professor Ian Megson graduated with a PhD from the University of St Andrews.

He took up a British Heart Foundation junior research fellowship at the University of Edinburgh before progressing to a lectureship and senior lectureship in its School of Biomedical and Clinical Laboratory Sciences in 1998.

He was appointed to the chair of diabetes at the University of the Highlands and Islands in 2006. Since then, he has helped to develop a vibrant research team with interests spanning the full range of disciplines associated with diabetes and cardiovascular science. Professor Megson now leads the university's health research division and has a particular interest in the role of nanoparticles in disease.

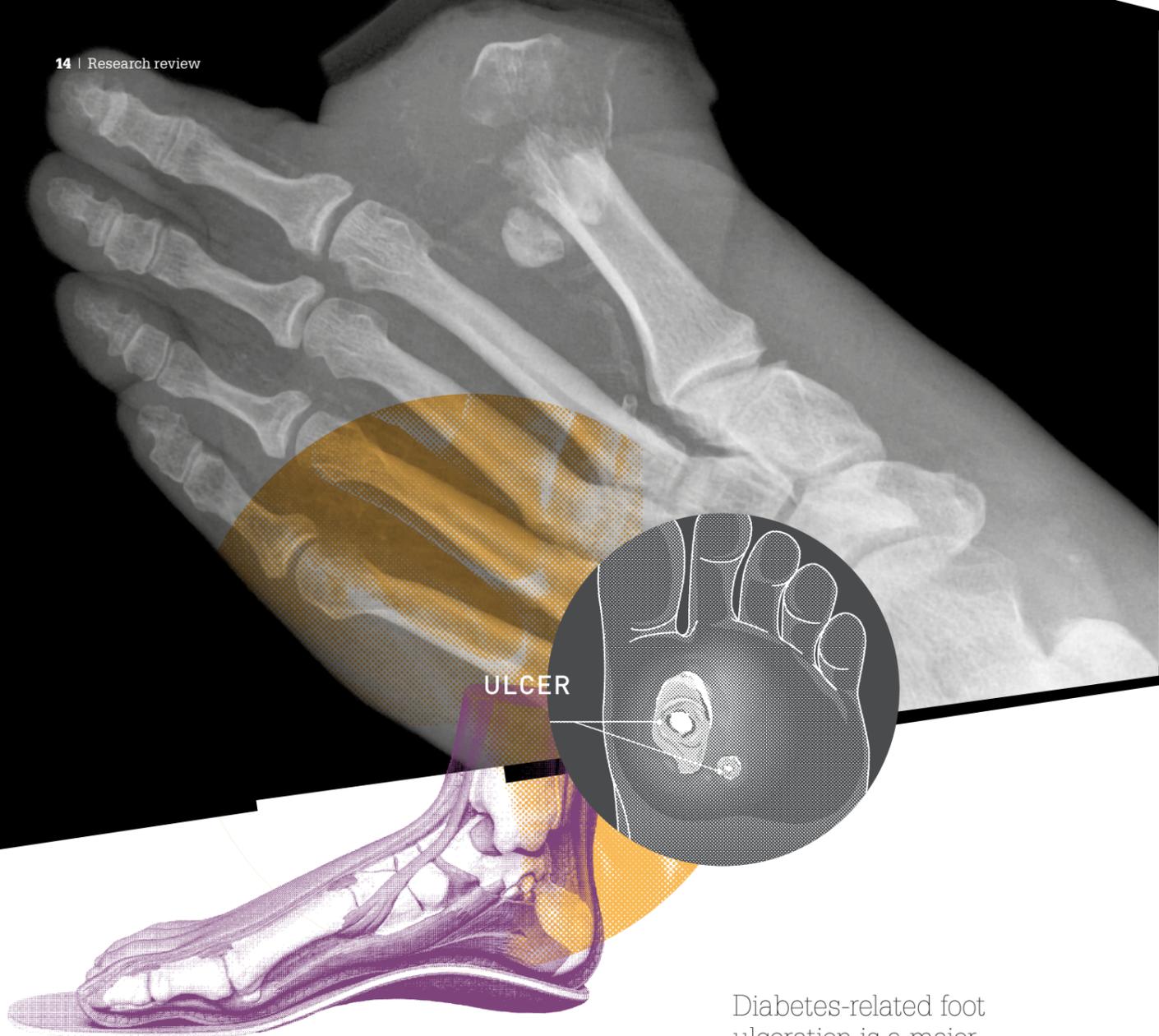
**Professor Phillip Whitfield
PhD, FRSB**



Professor Phillip Whitfield completed a PhD at the Institute for Child Health, University College London, before taking up a Hunter's Hope Foundation Postdoctoral Research Fellowship at the Women's and Children's Hospital in Australia.

He continued his research at Addenbrooke's Hospital in Cambridge before becoming a lecturer at the University of Liverpool.

Professor Whitfield was appointed as head of lipidomics research at the University of the Highlands and Islands in 2010. His research has focused on the use of mass spectrometry for the analysis of lipids in health and disease. He is currently directing his efforts towards the study of eicosanoids in inflammatory processes.



Diabetes-related foot ulceration is a major cause of preventable morbidity.

Reducing amputations in people with diabetes

The approach is aligned with the Scottish Government's 2020 Vision of people being cared for in their home settings and could be used as an exemplar for the management of other health conditions.

It is estimated that more than £60 million is spent on foot ulcers and amputations in Scotland every year. Up to 80% of these amputations could be preventable.

NHS Highland covers the largest and most sparsely populated part of the UK, comprising 41% of Scotland's landmass. Patients in rural settings often face unique challenges in accessing services due to their distance from health resources and transport limitations. This can be compounded by connectivity issues across the region. Widening access to multidisciplinary teams through innovative solutions that reduce travel could contribute to improved care and reductions in the amputation rates.

Working with clinical colleagues in NHS Highland and local industry partner Tactical Wireless, the university's rural health and wellbeing team has helped to establish a collaboration which is developing a new care pathway for people living with diabetes complicated by foot ulceration.

Together with community and specialist podiatrists and Tactical Wireless, the team

has been designing and evaluating trials of the RAPID (reducing amputations in diabetes) pathway. The research, which is being funded by Highlands and Islands Enterprise, includes a triage process, image capture and locally-based video consultation between the patient, community staff and central services.

The group has established that the Omni-Hub™, a portable unit that can optimise Wi-Fi, cellular and satellite networks, is capable of transmitting images and live video links to the multidisciplinary team across a range of rural settings in the NHS Highland area.

This programme of evaluation is important to enhance the new process so it can become an embedded pathway, which will inform policy change and create a paradigm shift in the management of health issues in the community. The approach is aligned with the Scottish Government's 2020 Vision of people being cared for in their home settings and could be used as an exemplar for the management of other health conditions. This would contribute to resilience in rural communities and help to transfer knowledge to health providers across Scotland and beyond.



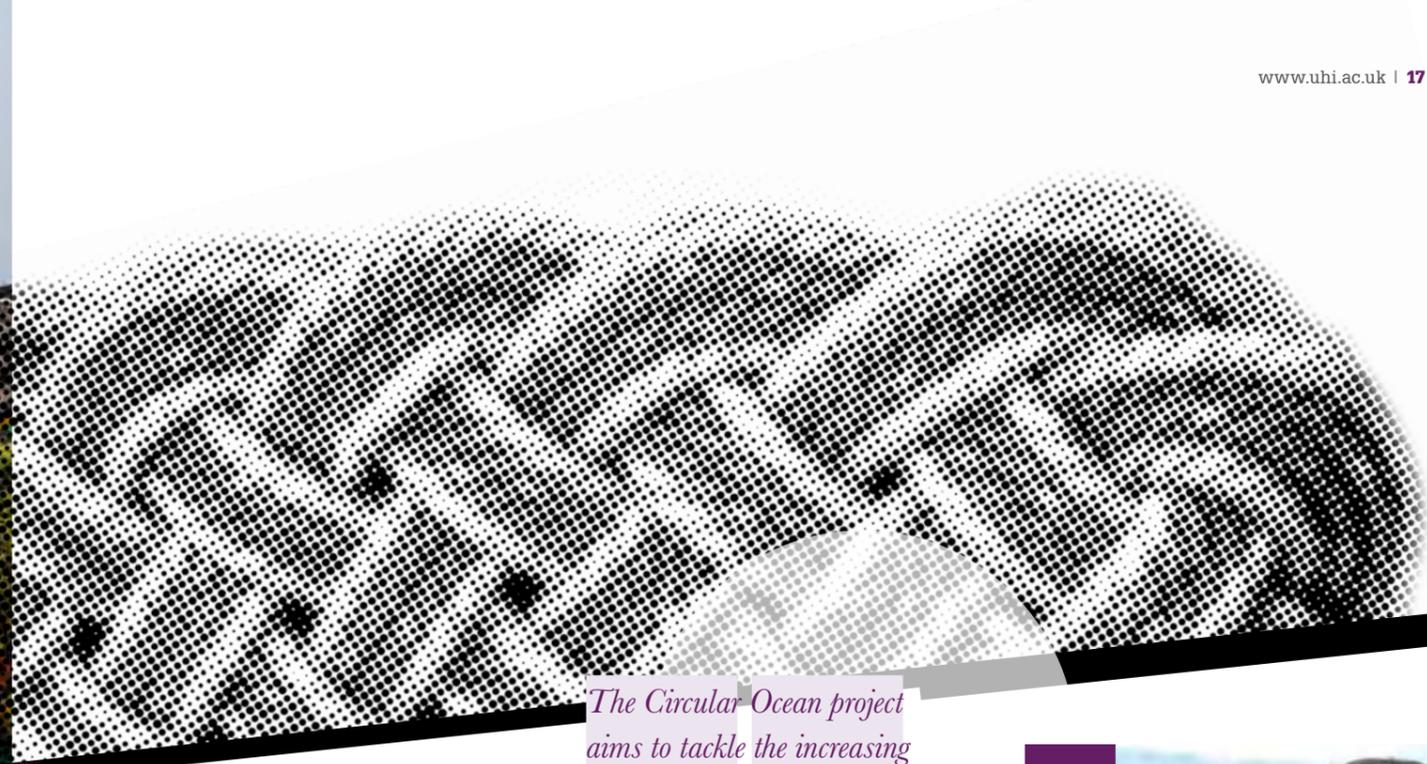
Professor Sandra MacRury
MBChB, MD, FRCP



Professor MacRury was appointed as the university's chair of clinical diabetes in 2006 and became head of rural health and wellbeing in 2014.

Based in the Centre for Health Science in Inverness, Professor MacRury leads a growing multidisciplinary research team made up of social scientists, human geographers, health psychologists, postgraduate students and academics in digital health. The group is involved in a variety of research projects across the themes of rurality, digital health and diabetes. Topics span the development and evaluation of rural healthcare service delivery; the remote monitoring and management of diabetes; online diabetes education; the role of technology in enabling lifestyle change in rural areas; community engagement in service provision and the use of outdoors and green space in health and wellbeing.

Professor MacRury is also a practicing consultant diabetologist and endocrinologist at Raigmore Hospital. Her links across clinical practice, industry and academia contribute to her innovative approach to research and have led to her involvement in a number of national and European collaborative projects.



The Circular Ocean project aims to tackle the increasing problem of marine pollution by encouraging the upcycling and repurposing of plastic litter.

Approximately eight million tonnes of plastic litter enters the seas and oceans each year.

Many seabirds, mammals and turtles die as a consequence of consuming or being entangled in discarded plastic, with the economic damage of marine plastic waste estimated at almost €12 billion. Due to its durability, marine plastic may take hundreds to thousands of years to fully breakdown. With plastic continuing to accumulate in the ocean, research suggests that our seas may contain 155 million tonnes of plastic by 2025. This has significant implications for the overall health of marine ecosystems and food chains.

The Circular Ocean project aims to tackle the increasing problem of marine pollution by encouraging the upcycling and repurposing of plastic litter. Led by the Environmental Research Institute at North Highland College UHI, the project is supporting communities and entrepreneurs across northern Europe and the Arctic to realise the economic opportunities of discarded marine plastic. The project is particularly focused on fishing nets and ropes, which currently account for up to 10% of marine litter.

In remote regions, renowned for their natural beauty and wild environments, monitoring, collecting and recycling marine litter can be difficult due to low population densities and

prohibitive transport costs. To overcome these obstacles, the Circular Ocean project is creating an online network to allow anyone to access and share practical and innovative ideas on how to reuse litter. Marine litter has already been used to make new products including trainers, rucksacks, socks, jackets, skateboards, carpet tiles and sunglasses. It is hoped that such eco-innovation, using resources otherwise wasted and lost to the economy, will encourage the development of local businesses and benefit rural economies.

The €1.5 million project, which runs from October 2015 to September 2018, is being funded by the EU's Northern Periphery and Arctic Programme. As well as researchers at the Environmental Research Institute in Thurso, project partners include representatives from the Centre for Sustainable Design in England, Macroom E in Ireland, the Arctic Technology Centre in Greenland and the Norwegian University of Science and Technology.

In October 2016, Circular Ocean won the inaugural Public Choice Award at the European Commission's RegioStars Awards. The awards aim to identify good practices in regional development and to highlight original and innovative projects that could inspire other regions.

Dr Neil James
MBioSci, PhD



Dr Neil James joined North Highland College UHI's Environmental Research Institute in Thurso in 2011 as a researcher and outreach coordinator.

He is responsible for coordinating the Institute's activity for EU Northern Periphery and Arctic Programme projects and lectures on an environmental conservation module.

Dr James gained a Master's degree in zoology from the University of Sheffield in 2004 and completed a PhD in marine ecology at the University of Liverpool and British Antarctic Survey in 2009. His broad research interests include applied approaches to tackling environmental contamination and the development of sustainable resource use and circular economies in remote and rural regions.

The majority of Dr James' research is connected with projects funded through EU's Northern Periphery and Arctic programme. He is currently contributing to the GREBE, REGINA, North20 and BioNorth projects. With a particular interest in the presence, magnitude and effects of plastic contamination in aquatic environments, Dr James was selected as the coordinator of the Circular Ocean project. He is responsible for the operational management, overall financial administration and accounting of the three-year initiative.

Turning the tide on marine litter: *the Circular Ocean project*

Selected key projects



**Professor
Neil Simco,**
*Assistant Principal
for Curriculum
Growth and Acting
Vice-Principal
(Research)*

The projects in this review represent a small sample of the research output across the university. They reflect some of the key sectors in the region, as well as the distinctive social, cultural, historical and economic context of the Highlands and Islands. As the only university based in the Highlands and Islands, our university is uniquely placed to deliver high-quality research which is directly relevant to the regional economy.

This table details a selection of additional projects, many of which are collaborations with other institutions.

Title	Project lead	Funders	Duration
Runic writing in the Viking diaspora: expression of a Norse identity?	Andrea Blendl, PhD student Centre for Nordic Studies, Orkney College UHI and Shetland College UHI	Scottish Graduate School for Arts and Humanities, Scottish Funding Council and University of the Highlands and Islands	3 years
Beyond the creative city – creative industries in Scotland's remote and rural areas	Robin MacPherson, Shetland College UHI robin.macpherson@uhi.ac.uk	Royal Society of Edinburgh	1 year
Hospitality in adventure tourism: soft skills and natural knowledge	Jelena Farkic, PhD student West Highland College UHI	Moffat Charitable Trust, University of the Highlands and Islands Development Trust and West Highland College UHI	3 years
FloWTurb: response of tidal energy converters to combined tidal flow, waves and turbulence	Arne Vögler, Lews Castle College UHI (overall project lead University of Edinburgh) arne.vogler@uhi.ac.uk	UK Engineering and Physical Sciences Research Council	3 years
Depictions of the young Gael in Gaelic children's literature	Maria Russell, PhD student Sabhal Mòr Ostaig UHI	Part funded by the University of the Highlands and Islands	3 years
Bay of Ireland palaeolandscape assessment – addressing critical changes in Orcadian landscapes; Mesolithic to Bronze Age	Scott Timpany, Orkney College UHI scott.timpany@uhi.ac.uk	Carnegie Trust	2 years
Can marine plastic litter be used in water remediation?	Emily Kearl, PhD student Environmental Research Institute, North Highland College UHI	European Regional Development Fund Interreg VB Northern Periphery and Arctic programme	3 years
Cromarty Dreaming: a tale of two Thomases. An exploration of how to improve personal and community wellbeing inspired by the imaginative approaches of the philosopher, Thomas More, and the writer, Thomas Urquhart of Cromarty	Issie MacPhail, rural health and wellbeing group issie.macphail@uhi.ac.uk	Arts and Humanities Research Council	10 months
A critical exposition of John Davenant's hypothetical universalism in the early modern era	Hyo-Ju Kang, PhD student Highland Theological College UHI	Part funded by Highland Theological College UHI	3 years
Soillse: maintenance and revitalisation of Gaelic language and culture	Conchúr Ó Giollagáin, Sabhal Mòr Ostaig UHI sm00cog@uhi.ac.uk	Scottish Funding Council, Bòrd na Gàidhlig, Highlands and Islands Enterprise, the University of the Highlands and Islands and the Universities of Aberdeen, Edinburgh and Glasgow	8 years
Seaweed as food and fodder in the North Atlantic Islands: past, present and future opportunities	Magdalena Blanz, PhD student Orkney College UHI	European Social Fund and Scottish Funding Council as part of the Scotland 2014 to 2020 European Structural and Investment Fund programme	3 years