



**ROBERT GORDON
UNIVERSITY ABERDEEN**



RGU RESEARCH MAGAZINE



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Our refreshed magazine exemplifies our commitment to showcasing the University's exciting and innovative research. Through this quarterly magazine we will present examples of how our research is helping to address a range of societal challenges, demonstrating how the University contributes to local and global development.

This aligns with our new research strategy which is underpinned by significant investment enabling us to grow our research capacity and capability, drive forward our commitments to interdisciplinarity, strengthen our inclusive research culture, and ensure that we support staff to maximise the impact and engagement of their work.

We are already making significant progress as we strive to break new ground in transforming communities with innovative and high-quality research. It was great to see that in the most recent Postgraduate Research Experience Survey (PRES) of UK institutions, RGU was placed first for research culture and research skills, a reflection of the hard work and commitment of all those who support our postgraduate research student community.

I hope you enjoy this magazine which features captivating insights from our staff and highlights key projects focused on improving quality of life and contributing to global sustainability. Thank you for joining us on this journey.

Professor Nick Fyfe
Vice Principal for Research and Community Engagement

WELCOME

I am pleased to welcome you to the new online RGU Research magazine. As we move towards warmer weather and brighter days, we are excited to share with you the latest developments in research and innovation at Robert Gordon University.



REVOLUTIONISING THE MARINE INDUSTRY: NSC'S CYBER-PHYSICAL SYSTEMS PROGRAM

The National Subsea Centre (NSC) is the Centre of Excellence for subsea research and its ambitions to speed up the energy transition show no sign of slowing as it launched a new programme this Spring.

SPOTLIGHT FEATURE

The NSC, located in Dyce, Aberdeen, is a state-of-the-art research centre that provides advanced subsea research to accelerate the transition to net zero. The Centre is delivered through a partnership between Robert Gordon University (RGU) and the Net Zero Technology Centre (NZTC) and forms part of the Aberdeen City Region Deal (ACRD).

The NSC is working on developing advanced technologies to protect and maintain equipment and infrastructure in the marine industry by combining operational and information technologies. To do this, they have four key research programmes: Transparent Ocean, Integrated Energy, Net

Zero Operations, and the newly introduced Cyber-Physical Systems.

The newly launched Cyber-Physical Systems programme is being led by Dr Andrei Petrovski who has extensive experience in both computing and engineering through research on data analytics; computational modelling and optimisation; computational intelligence and machine learning; fault diagnosis; cybersecurity; and computer networks.

This programme focuses on developing cutting-edge technologies to maintain and protect subsea equipment, assets, and infrastructure by seamlessly



Dr Petrovski

integrating physical components with modern computation, control, and automation algorithms. It aims to enable and accelerate digitally enabled transformation in the maritime environment.

Dr Petrovski commented on the importance of partnerships and the spirit of collaboration at the NSC, stating: "The introduction of a Cyber-Physical Systems programme has been in the works for some time now, and I am absolutely delighted to see it finally come to fruition. It is the result of a strong relationship between academia and industry which is fundamental if we are to achieve our key aims and help overcome worldwide challenges.

"We are already working on two pivotal research projects, 'Enhancing Remote Condition Monitoring of Offshore

Wind Turbines Using Machine Learning' and 'Inferential Measurement Systems for Enhanced Situation Awareness' and look forward to taking steps to enable and accelerate digitally enabled transformation in the maritime environment."

During a visit to the official opening of the research base in January, Michael Matheson, former Cabinet Secretary for Net Zero, Energy and Transport for the Scottish Government and current Cabinet Secretary for NHS Recovery, Health and Social Care, highlighted how vital partnerships are for Scotland's energy transition and how the NSC will "ensure that the North East of Scotland continues to lead the world in subsea technology".

He added: "The strength of this centre won't just be because of the great academic expertise that it has, or the great technical expertise that it has. It will be the partnerships that are forged and how we make sure we sustain those and develop those going forward."



The NSC is also currently working with the NZTC on several innovative projects, including 'SeaSense', which will develop technology that allows Remotely Operated Vehicles (ROV) to function in harsh, visually compromised environments. The two centres are also collaborating on the NZTC's 'Data for Net Zero' (D4NZ) project, which will deliver the world's first Smart Energy Basin by utilising an integrated suite of data science, visualisation, and modelling tools.

The Cyber-Physical Systems programme significantly adds to the NSC's research portfolio. Its research will explore leading technologies such as machine learning, AI, and automation to increase the efficiency and resilience of subsea equipment, assets, and infrastructure.

The programme will also explore ways to improve equipment and infrastructure situational awareness, allowing for faster and more accurate decision-making.

One of its programme's key research projects is 'Enhancing Remote Condition Monitoring of Offshore Wind Turbines Using Machine Learning'. The project aims to develop a machine learning-based system that can detect and predict the condition of offshore wind turbines in real time, enabling proactive maintenance to be carried out.

Another critical research project of the Cyber-Physical Systems programme is the 'Inferential Measurement Systems for Enhanced Situation Awareness'. It seeks to develop a system that can accurately measure subsea infrastructure and equipment's critical parameters, such as temperature, pressure, and flow, using advanced sensors and data analytics.

The marine industry faces new challenges and demands as it grows and evolves. Fortunately, the NSC is leading the way in developing innovative solutions to address these challenges.

The Centre demonstrates its commitment to excellence and pushes the industry forward through its four strategic research programs, including the newly introduced Cyber-Physical Systems. Their efforts promise the marine industry greater efficiency, sustainability, and safety.

As we look to the future, imagining the possibilities with the Centre's cutting-edge solutions is exciting. With its passion for innovation and commitment to excellence, the collaborative efforts between RGU and the NSC are a driving force in shaping the marine industry's future.

This centre is going to be key in helping to make sure that the North East of Scotland continues to lead the world in subsea technology.



The skincare industry is constantly evolving, with new ingredients and technologies being discovered which can be used to create effective products for health and scientific purposes.

RAISING A DRAM TO SOFTER SKIN

Recently, RGU researchers from the School of Pharmacy and Life Sciences (PALS) and helped Highland-based natural skincare business, ZAZA & CRUZ, make a breakthrough in the industry by incorporating the by-product of the whisky distillation process into its luxury skincare line. Rebecca Hastings, owner and founder of ZAZA & CRUZ, approached several whisky distilleries to no avail until GlenWyvis, a local Distillery in nearby Dingwall, gladly agreed to be part of the project and supply samples for testing.

It is thought to be the first time that whisky by-product has been used to investigate the antioxidant capacity of cells. This innovative use of whisky extract was inspired by a Japanese company's discovery of the beneficial effects of the sake yeast fermentation process on the skin in the 1970s.

ZAZA & CRUZ was launched from Inverness and successfully operated under the ethos of making customers feel confident in their skin with a unique and natural blend of ingredients that rejuvenate, moisturise, and shield against cellular damage and anti-ageing. Rebecca was delighted to have her unique project funded through an innovation voucher via the Scottish Funding Council, made possible through a forward-thinking link between Interface and RGU.

Kirsty Buchanan, Business Engagement Executive at Interface, is responsible for strategically partnering small businesses such as Rebecca's with innovative academia, something she calls a "unique matchmaking service".

She approached a team of specialists at PALS who took on the project and eventually led to headlines being made across the UK when it was unveiled earlier in the year.

The team of scientists at RGU, including Dr Carlos Fernandez, Professor Nadimul Faisal, Professor Paul Kong, and Laura Blaikie, discovered that incorporating the nutrients and polyphenols from whisky into skincare products can help boost peoples skin health and appearance.

Principal investigator and Senior Lecturer, Dr Carlos Fernandez, said: "The RGU team has developed a great partnership with ZAZA & CRUZ, and this is reflected by two successful research projects investigating the antioxidant effect of pot ale from whisky for health care products."

The collaborative project success means ZAZA & CRUZ is now able to not only implement changes to include the newly discovered ingredients in its growing range of skincare offerings but also has the platform to

develop further, having gained an expert understanding and scientific approach to research testing and development.

Kirsty added: "I am delighted with the results of Rebecca's partnership with RGU - we are all very excited about the potential future impacts for Rebecca, her business, RGU's research."

Rebecca Hastings expressed her gratitude towards the team at RGU for their research expertise and the support they provided her as a business owner.

She said: "From day one, we were both excited about the project and the outcomes we were to find. Having the experience of the team at RGU helped me, as a business owner in my field, feel confident in the results they could produce with their research facilities. The use of whisky extract in ZAZA & CRUZ's

"WORKING TOGETHER WITH RGU AND INTERFACE HAS HELPED MY BUSINESS TO LOOK FORWARD TO THE FUTURE. I CANNOT THANK THE TEAM ENOUGH FOR ALL THE SUPPORT THEY HAVE GIVEN ME AS A SCOTTISH-BASED BUSINESS IN THE HIGHLANDS."



skincare line is just one example of how natural ingredients and scientific research can work together to create effective and innovative skincare solutions. The successful partnership between ZAZA & CRUZ, RGU, and Interface is an excellent example of how collaborations between businesses and academia can lead to innovative solutions that benefit the industry.

The use of whisky extract in skincare has opened a new avenue for the beauty industry to explore, one which could lead to more exciting and sustainable practices going forward.

PLAY MY STORY



Rebecca Hastings, owner and founder of ZAZA & CRUZ

RGU's daffodil research breakthrough could unlock new heart disease treatment

INNOVATIVE RESEARCH

As we all know, daffodils are known as a sign of Spring, bringing joy and new beginnings with their bright, colourful petals. However, you may be surprised to learn that this common flower could also have life-saving properties.

Innovative research by the School of Pharmacy and Life Sciences (PALS) at Robert Gordon University suggests that UK-grown daffodils could help prevent cardiovascular disorders, tapping into new medical treatments for heart failure.

This ground-breaking project, led by RGU in partnership with pharmaceutical company Agroceutical Products and with support from the Industrial Biotechnology Innovation Centre (IBioIC), explores the effects of natural compounds found in the flower's stem, leaves and petals on cardiovascular disorders.

The study is being conducted by RGU academics led by Professor Cherry Wainwright, Director at the Centre for Cardio-metabolic Research and Co-Director of the Centre for Natural Products in Health at Robert Gordon University. With initial findings showing that specific compounds taken from daffodils could help prevent the thickening and stiffening of the heart's walls, this research could well be a game-changer in treating heart disease.

Daffodil bulbs, which produce a high-value alkaloid called galanthamine, are already used in the UK to treat Alzheimer's disease. The results from this project could unlock the benefits of using all parts of the plant and preventing them from going to waste. In this study, three different alkaloids are being tested to understand their impact on contributors to heart failure – such as hypertrophy and fibrosis. Further study will provide the research team with data

about the most effective compounds for preventing the conditions that lead to cardiovascular problems.

Data from the British Heart Foundation shows that more than half of the people in the UK will get a heart or circulatory condition in their lifetime. Around twice as many people live with heart and circulatory diseases in the UK than cancer and Alzheimer's. With such staggering statistics, it's clear that finding new treatments for heart disease is crucial.

This is where daffodils come in. The flower contains natural compounds that can potentially prevent the conditions that lead to cardiovascular problems. These compounds, known as alkaloids, have been found to interrupt a sequence of events that could lead to the stiffening of heart tissues and result in heart failure. While alkaloids can be toxic in their purest form, when isolated, purified, and prescribed correctly, they can effectively treat the disease.

Shubhada Kale, a PHD student at PALS who is working directly on the project, is devising a 'family tree' of the flower to begin to determine whether certain types, such as the more common Carlton bloom, carry the same alkaloids as others that are somewhat 'related'.



Prof. Cherry Wainwright

DAFFODIL'S BULBS, WHICH PRODUCE A HIGH-VALUE ALKALOID CALLED GALANTHAMINE, ARE ALREADY USED IN THE UK TO TREAT ALZHEIMER'S DISEASE.



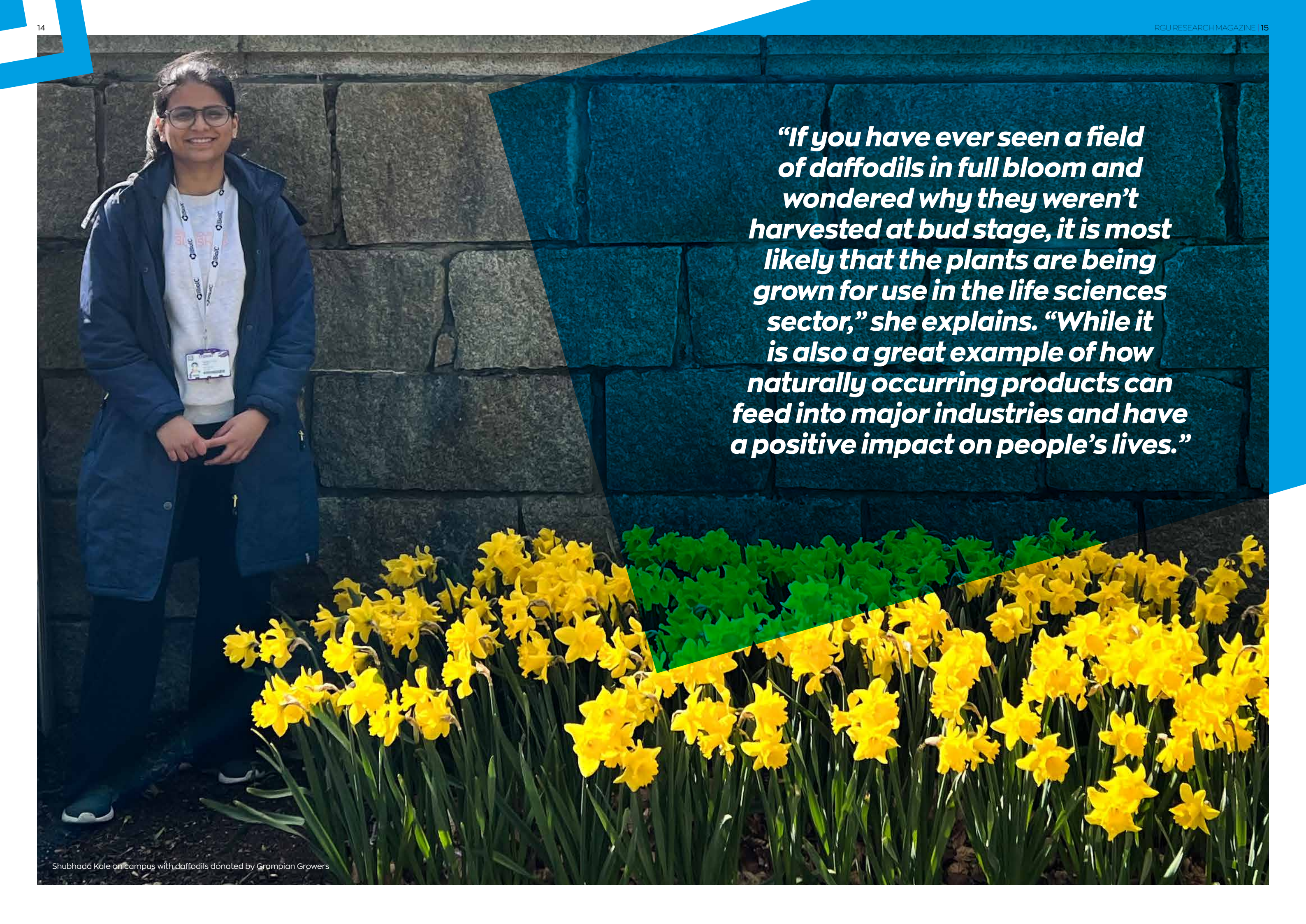
On campus at RGU is a small patch of daffodils donated by Grampian Growers in Montrose who grow the flower in vast numbers and have also partnered in the project. They gifted 50kg of both Fortune and King Alfred blooms which, once fully grown and reaching the end of their life cycle, will be examined by Shubhada and compared to Carlton to determine the similarities in compound.

Professor Cherry Wainwright is proud of RGU's leadership in this important research. She notes that the University's strong research culture encourages partnership and focuses on addressing global challenges and positively impacting communities.

"It's encouraging to see the positive effect on the heart cells being tested," she says. "We look forward to discovering the extent of the daffodil's potential as we take the concept to the next stage."

But the potential benefits of this research extend beyond just heart health. Liz Fletcher, Director of Business Engagement at IBioIC, notes that using natural compounds for medicinal purposes can offer huge economic potential for farmers in rural communities.

This study could lead to the developing of additional medicines that could be transformational for patients suffering from heart conditions.

A woman with glasses, wearing a blue jacket and a white shirt with a lanyard, stands in a field of yellow daffodils. Behind her is a stone wall. The image is split into two sections by a diagonal line: the top right section is dark blue with white text, and the bottom left section shows the woman and flowers in natural light.

“If you have ever seen a field of daffodils in full bloom and wondered why they weren’t harvested at bud stage, it is most likely that the plants are being grown for use in the life sciences sector,” she explains. “While it is also a great example of how naturally occurring products can feed into major industries and have a positive impact on people’s lives.”



Not just books: Public libraries and their role in communities

THOUGHT LEADERSHIP

“Against the backdrop of the confirmed closure of six Aberdeen city libraries in April, Professor Peter Reid of RGU’s School of Creative and Cultural Business has written his thoughts about their importance. Not only for their books, but for their people, resources, space, and communities around them.

The issue of public library closures is, once again, on the radar as local authorities seek to make savings. Inevitably, hard choices must be made but it is important to remember what our network of public libraries across Scotland actually does, and what branches mean for the communities that they service.

In 2020-21, I carried out a study into Scotland’s public libraries during lockdown, a time when only a digital offering was available. Digital is undeniably important and will continue to play a crucial role

in shaping the offer which public libraries make to the general public. Libraries will also continue to act as digital enablers within their community and helping transform Scotland into a fully digitally engaged nation. It is complacent and naïve, however, to believe that everyone has the devices, connectivity, and ability to access digital content themselves. It is equally naïve to ignore the digital divide. We heard accounts from across Scotland of people sitting outside the library for WiFi during lockdown, with many socially disadvantaged communities in Scotland having at least one in five households without internet. Libraries are crucial lifelines for such communities.

Digital matters, of course it does. However, it is nonsense to say that libraries are not also about physical spaces. One library service manager told us: “We position ourselves in the community, as safe spaces. It would be wrong thing to say we can just be virtual.

We need to develop the physical and digital together. Virtual has its place, but not at the expense of the physical space”.

Public libraries are, however, first and foremost, about safe and accessible spaces: free, trusted, neutral, communal,

Such views accord with the fundamental ethos and value of a network of public libraries.

Libraries support reading, yes. But they also support health and wellbeing, education, lifelong learning, creativity, economic development, the enhancement of training and skills and many other agendas. Delivery of these depends on those physical spaces. A library is not just a repository for books but a place where the community comes together. Scottish local government legislation says that councils must provide an ‘adequate’ public library service. This is inevitably (and rightly) a vague definition. The public library quality framework for Scotland, ‘How good is our public library service?’ helps to inform what ‘adequate’ might look like by suggesting that it is a ‘planned strategic network of branches offering core functions’. The danger with piecemeal reactive cuts to branches as part of annual budget-setting processes is that services end up without that ‘planned strategic network’ of libraries, delivering services to communities for whom it really matters.

public spaces where no expectations are placed on those who walk through the doors. Separate research conducted by the Scottish Book Trust during lockdown found that library users see it as an ‘essential service’.

People like that space, it fills so many functions for a community. Libraries are so much more than books. They’re about people, and about communities.”

Libraries support reading, yes. But they also support health and wellbeing, education, lifelong learning, creativity, economic development



Prof. Peter Reid

Craig Stewart's journey into higher education

FROM RURAL ROOTS TO ACADEMIC SUCCESS

Craig Stewart, a 32-year-old PhD student from a working-class background, is dedicated to his research on underwater wireless communication. He focuses on developing solutions for reliable data transmission underwater using acoustics and optics. Craig believes this technology has potential benefits for exploring the oceans and monitoring the impact of human behaviour on marine life. Despite facing external threats such as climate change and pollution, Craig focuses on his work's positive applications.

Craig's journey to pursuing a PhD at RGU was not easy. He overcame personal challenges, including severe anxiety, to travel alone to present his research at a conference in Italy. The experience was a great personal development opportunity, exposing him to different cultures and ideas. Craig acknowledges the barriers he had to overcome, including limited funds and a lack of access to quality education. However, he feels grateful for the opportunity and sees himself as privileged to be in his current position.

Craig's story is an inspiration for others facing similar struggles. He encourages those struggling to have the will and determination to pursue their goals.



Are you curious about the latest and most exciting research developments and discoveries across RGU?

RESEARCH REVEALED

Look no further than RGU's new digital feature, Research Revealed. This innovative video series showcases the cutting-edge research conducted by RGU's talented researchers, offering insights into everything from climate change and sustainable energy to healthcare and digital innovation. With engaging visuals and clear explanations, Research Revealed is the perfect way to be at the forefront of research and discovery.

If you're an academic at RGU and keen to be featured going forward, please email the comms team at newsdesk@rgu.ac.uk.



CLEAN WATER, GREEN FUTURE



The story of bio-based treatment

Launched during British Science Week, the first Research Revealed covered a global research project at RGU's School of Pharmacy and Life Sciences (PALS).

The research explores the possibility of using natural product to combat Earth's increasing shortage of safe, reliable drinking water, caused in part by cyanobacterial toxin contamination.

The method includes biochar, produced from waste plant material that is burnt to form something similar to charcoal, used as a solid surface where natural microbes live and degrade toxins in water.

This solution would be a far more cost-effective, efficient, and sustainable option for low and middle-income countries to adopt, effectively cutting out the middleman which can limit the accessibility of drinking water for millions around the world.

Work began on the research in 2021 and is still ongoing now, including partnerships with fellow researchers and institutions in Sri Lanka and Brazil, nations that both suffer from clean water issues.

Key to the project in Aberdeen is Linda Lawton, Professor in environmental microbiology at RGU. In the video she explains that at the research mission's fundamental core is to produce a sustainable solution for all.

"It's all wrapped together. The sustainability, the cost-efficiency. It's wrapped together with actually looking after the people. The UN Sustainability Goals - fresh water for all, clean drinking water for every person - we'll never achieve that through building bigger and better, huge water treatment plants.

"These can be important for city environments but so much of the population are in smaller rural communities where they're literally collecting water on a small scale, and if we can do that, we can transform the lives of many people."

The first episode of Research Revealed, 'Clean Water, Green Future: The Story of Bio-Based Treatment', can be viewed above as well on RGU's YouTube channel and across social media.

RGU's research is focused on making a positive impact on the world by applying collaborative interdisciplinary research expertise to improve quality of life, deliver innovative solutions for business and industry, and contribute towards global sustainability.

The University's research strategy is focused on growing the quality and impact of its research excellence around four key themes - inclusive and creative societies; the environment, energy and sustainability; health and wellbeing; and living in a digital world.



[CLICK HERE TO VISIT THE RGU RESEARCH REVEALED WEBSITE FOR MORE FASCINATING CONTENT.](#)



Len Montgomery, Professor Linda Lawton, Professor Christine Edwards, Jane Moore

FALLING OUT OF LOVE WITH THE UK

Emotions expressed through art



A team of researchers from RGU has carried out a unique study to explore the emotional wellbeing of EU citizens living in the UK and with care responsibilities both in the UK and in Europe. The team created a visual tour of participants' emotions and found Brexit has caused a profound and lasting impact on EU citizen's sense of identity, that has been heightened by the Covid imposed lockdowns.

RGU Sociology lecturer, Lucia Ruggerone, and Gray's School of Art researcher, Charlie Hackett, have published their work in a free and fully digital book available for download. RGView caught up with the research duo to find out more.

On the project, Lucia Ruggerone, from RGU's School of Applied Social Sciences, said: "Having secured funding from the British Academy in 2021, we set out to explore the emotional wellbeing of EU citizens living in the UK and with care responsibilities during the lockdowns imposed by pandemic.

"We wanted to understand the feelings brought on by the 'double whammy' of Brexit and Covid, and to find out if and how EU citizens were able to cope, emotionally and practically with their situation and changed citizen status.

“Our study focused on middle-aged EU citizens, as they represent a ‘sandwich generation’, likely to have attachments and bonds within the UK and in their European home country. Those interviewed came from a range of countries including Italy, France, Germany, Spain, the Czech Republic, Poland, Hungary, Bulgaria, Denmark, Switzerland, and Latvia.”

Unlike other social studies that have explored people’s attitudes post-Brexit, participants were sent a mixture of art materials and asked to produce artworks to show their emotions. The participants artworks were the starting point to open-ended discussions on Zoom, and included collages, drawings, photos and videos. One participant even selected a piece of classical music to represent their mood and feelings during lockdown.

The research identified recurrent themes, representing the feelings and moods that the participants experienced. These included a heightened sense of loss, guilt and vulnerability, among others.

The downbeat atmosphere, as reported by many, was not only due to the pandemic and its lockdowns, but also due to the feeling of rejection for many who had elected here as their ‘home’ of choice yet were faced with a post-Brexit reality.

Others mentioned the emotion of love and losing it for the UK, while others felt torn, helpless and even angry.

Feelings of nostalgia also resonated, with many highlighting the sense of displacement caused

by Brexit and the pain of the forced isolation from Europe imposed by the lockdown periods. In some of the artworks produced, the houses or specific rooms pictured, signify a sense of entrapment, whilst many hinted at the nostalgia they felt for their native countries.

The isolation and lack of social contact brought about by lockdown also caused some to feel extreme boredom and to lose their sense of purpose. Although daily chores helped, others highlighted their low mood and sense of helplessness.

Fellow researcher, Charlie Hackett from Gray’s School of Art, explained more: “Using artwork gave the participants agency to lead the researchers in understanding their experiences of applying for settled status and living through Covid. “One artwork can sum up the six years between the Brexit referendum, pandemic and leaving the EU. Their artworks showed symbols of impending doom, such as a Damocles sword, drawings with bridges that had collapsed into the sea, impenetrable channel crossings between the UK and Europe, staring googly eyes that represented xenophobic tendencies with people feeling they were being watched.”

Reflecting on the significance of the research, Charlie and Lucia added: “It was an emotive piece of work, undoubtedly inspired by an autobiographical note [Lucia is Italian]. It was great to investigate what other Europeans felt about these two major events and to explore with them their vision for the future.



Dr Lucia Ruggione and Charlie Hackett



[CLICK HERE TO VISIT THE RGU RESEARCH REVEALED WEBPAGE FOR MORE FASCINATING CONTENT.](#)

“It was also rewarding to hear some of them say that the participation in the project was somewhat therapeutic, giving them a voice which they felt they had lost”. In terms of social policy, the researchers found that the participants living in Scotland felt more positive about staying in the UK and felt that that the Scottish government cared about them more than the UK government, which seems more hostile to immigrants including those from Europe. The study’s focus on middle-aged individuals will also be useful to public health policy makers in understanding transnational care during crisis such as the Covid pandemic.

“It was also rewarding to hear some of them say that the participation in the project was somewhat therapeutic, giving them a voice which they felt they had lost”.



LEFT HUNGRY

Understanding maternal and infant food insecurity amongst young mothers in the UK



There are worrying trends in child poverty with 50,000 children estimated to be currently living in poverty in Scotland with predictions that this trend will continue to rise in future years (Scottish Child Poverty Statistics.) In addition, UN observers have highlighted the declining value of women's incomes in the last decade which, coupled with reductions in social care services in the UK, on which many women rely on to stay in the workplace.

All of these factors are leading to extreme levels poverty and hardship amongst women living in the UK.

Professor Flora Douglas and a small team carried out two qualitative studies between 2020-2022, to assess the impact of national policies aimed at ameliorating child poverty in low-income households in the north east of Scotland. These policies, centre around the Child Poverty Act (2017) in Scotland, which require all health visitors, midwives and family nurses in Scotland to screen and offer financial advice, otherwise known as 'Financial Inclusion Pathways' (FIPs) to at-risk pregnant women and parents/carers of families with children under five in Scotland to tackle child poverty.

The research, funded by NHS Grampian and the NHS Grampian Charity, aimed to assess the impact of these policies and to explore the experiences of parents from low-income households with babies and infants, particularly mothers. Their research highlights worrying

levels of poverty driven food insecurity, that is largely hidden and poorly understood.

Professor Flora Douglas explains more: "Working in partnership with health professionals and a food pantry network in the north east, we carried out two interview studies between 2020 and 2022. The first study involved 22 pregnant women and mothers with at least one child under five who generously shared their experiences. The second study involved interviews with 18 midwives, health visitors and family nurse partners who offered their expertise from the frontline.

Almost all participants were claiming Universal Credit and lived in the multiply deprived postcode areas within Aberdeen City.



[CLICK HERE TO VISIT THE RGU RESEARCH REVEALED WEBPAGE FOR MORE FASCINATING CONTENT.](#)

RESEARCH REVEALED



“Our research reveals the difficulties many parents on low incomes experience, and the shame and embarrassment many are experiencing in admitting hardship. There’s a stigma in asking health professionals for help with many low-income parents being too scared that their children could be referred to social services and taken into care if they ask for help. Others feared that asking for help, could exacerbate often existing abusive partnership relationships.

“Our research also showed a lack of confidence amongst health professionals, about how best to speak to parents about their financial well-being with many aware that mothers often wanted to ‘hide’ their poverty from them. They recognised that

this was a problem but reported a lack of time and knowledge to do so effectively. They also highlighted that young mothers were particularly vulnerable to the financial exploitation of local money lenders.

“Concerns about food insecurity and the nutritional quality of the food, have been commonly reported in previous food poverty studies however what’s alarming now is that the admissions of living with debt are featuring more prominently compared to previous studies. The situation of food insecurity has got far worse since the Covid pandemic and there needs to be a real urgency to tackle the problems.

“We found that parents are using careful budgeting to make ends

meet and going without food and other personal expenditures as a way of coping. Many are relying on charity or extended family for help with feeding and have insufficient income to cover the costs of living, council tax and other debt associated with overpayment of benefits. Unfortunately, it has become ‘normalised’ for mothers on low incomes to go without food and to sacrifice basics in life, to support their children.

“Families with very young children are the most insecure, particularly women whose incomes are not keeping up with the cost of infant formulae and other basic food supplies, even with the support of benefits. Food insecurity is hiding in plain sight and society is not paying enough attention to how

bad the situation really is and how policies are tackling the problem.

“Another worrying trend is that rising food insecurity is making it harder for some women to breastfeed, and for some families to afford to formula feed. It may also be affecting the diets of pregnant women and young children; especially as healthy foods are generally more expensive than unhealthy foods.

“What’s more alarming is that between March 2021 and November 2022, the most widely available and purchased infant formulas increased in cost by 15-23% and the cheapest and only ‘own-brand’ infant formula (Aldi’s Mami) increased by 33%. There are also no infant formulas affordable with the Health Start Allowance.

“As mothers continue to remain responsible for infant feeding (either as food producers themselves or through infant formula procurement from commercial sources) there is an urgent need to develop a better understanding of the nature and extent of maternal and infant food security in the UK to develop more effective public policy and health care practice. We need to explore further the extent of maternal food insecurity and

to find out how this is impacting the health of pregnant, postpartum women and infant food security.

“There needs to be ‘big ticket’ interventions to turn the tide including more investment and a shift in focus to prevention. This includes policy actions that increase household incomes like the newly introduced Scottish Child Payment, as well as other strengthening actions that can support parents and health professionals access community supports, that can help maximise household income. For example, the Community Link Worker programme, which places non-medical staff into GP practices to support patients with personal, social, emotional and financial issues.

“We have been focusing so much on behaviour change in terms of diet and health but often what’s holding people back is not a lack of motivation, it’s not a lack of knowledge, it’s not even a lack of skill. It’s only recently I have been hearing officials being honest about saying we have got to look at this more broadly. We can fix this situation by acknowledging it’s these profound structural factors playing a role and inhibiting people.”

“Our research reveals the difficulties many parents on low incomes experience, and the shame and embarrassment many are experiencing in admitting hardship.”



Prof. Flora Douglas

School of Engineering

RGU academic elected Fellow of the RSE

Professor James Njuguna, Associate Dean for Research in the School of Engineering, is among the newest Fellows elected to the Royal Society of Edinburgh (RSE).



School of Nursing, Midwifery and Paramedic Practice

School of Nursing, Midwifery and Paramedic Practice Research Fellow successfully defends PhD Thesis.

Congratulations Emma Hunter, Research Fellow in the School of Nursing, Midwifery and Paramedic Practice, who has successfully defended her PhD thesis, titled: Developing a Weight Loss Programme for Couples Seeking Fertility Treatment (WELCOME): A multi-methods needs assessment.



School of Computing

New A.I research in renewable energy



Researchers from the School of Computing have started a new project called the AR-Mini project, which will look at implementing renewable mini-grids for rural regions in Sri Lanka. This project costs £192,511 and is being funded by Innovate UK through its Energy Catalyst Round 9 funding competition.

Our four Interdisciplinary Research Theme Champions

Environment, Energy and Sustainability - Dr Jen Clarke
 Health and Wellbeing - Dr Paul Swinton
 Living in a Digital World - Dr Yang Jiang
 Inclusive and Creative Societies - Prof. Sarah Pedersen



School of Engineering

£10000

School of Engineering students' winners at The Society of Petroleum Engineers (SPE) 2023 Student Bursary Award

David Chedid and Mariah Ichakpa from the School of Engineering won the 2023 Society of Petroleum Engineers award of £1000 based on judgement of the quality of their academic work, their intent to embark upon a career in the energy industry, and their active involvement with SPE.

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School of Health Sciences

Clinical Professor of Allied Health Professionals gave evidence to the Scottish Parliament Covid-19 Recovery Committee



Professor Kay Cooper, along with joint Principal Investigator Prof Edward Duncan (Nursing, Midwifery & Allied Health Professionals Research Unit, University of Stirling) gave evidence to the Scottish Parliament Covid-19 Recovery Committee on 9th March, on the topic of study and research on long Covid. The evidence was related to their ongoing CSO funded study to evaluate models of service delivery for community rehabilitation for people with long Covid.

Pharmacy and Life Sciences

Postgraduate student has Covid-19 publication recognised by the World Health Organisation



A postgraduate student at RGU, Nortan Hashad, supervised by Dr Antonella Tonna, has had a publication recognised by the World Health Organisation (WHO) as high quality in their Covid-19 Research Database. The publication titled “The Impact of Covid-19 on antimicrobial stewardship programme implementation in hospitals an exploration informed by the Consolidated Framework for Implementation Research” is a study that investigates the effect of the Covid-19 pandemic on the implementation of antimicrobial stewardship programs in hospitals.



University of the Arctic

On March 16, the Scottish Arctic Network (ScAN) and UArctic signed an MOU, making ScAN a UArctic Regional Centre. Elsa Cox from RGU Orkney sits on ScAN's board, and RGU is one of the members.

The President of UArctic, Lars Kullerud, and Vice President Outi Snellman visited Aberdeen to encourage Scottish connections across the North and finalized the agreement. The next day, the Arctic Frontiers Abroad Conference occurred at the Aberdeen Science Centre. Keynote speakers included Angus Robertson MSP, Tomas Norvoll, State Secretary for Labour and Social Inclusion of the Government of Norway, and Urmas Paet MEP, European Parliament Arctic Friendship Group Chair

RESEARCH EVENTS

Curious Minds aims to showcase our research and provide a platform to share knowledge and expertise with the broader community. This event series will enable us to engage with the public, provide a forum for conversation, and foster a spirit of curiosity and learning that lies at the heart of our research.

Curious Minds will also demonstrate our research strengths and commitment to collaborating with industry and academia by bringing together experts from different fields. We hope to encourage interdisciplinary research and spark new ideas that can lead to innovative solutions to some of the world's most pressing issues.

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 for more information on future events





If you have any submissions or inquiries, you can contact the RGU Communications Team using the email provided below:

Email: RGUCommunications@rgu.ac.uk



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