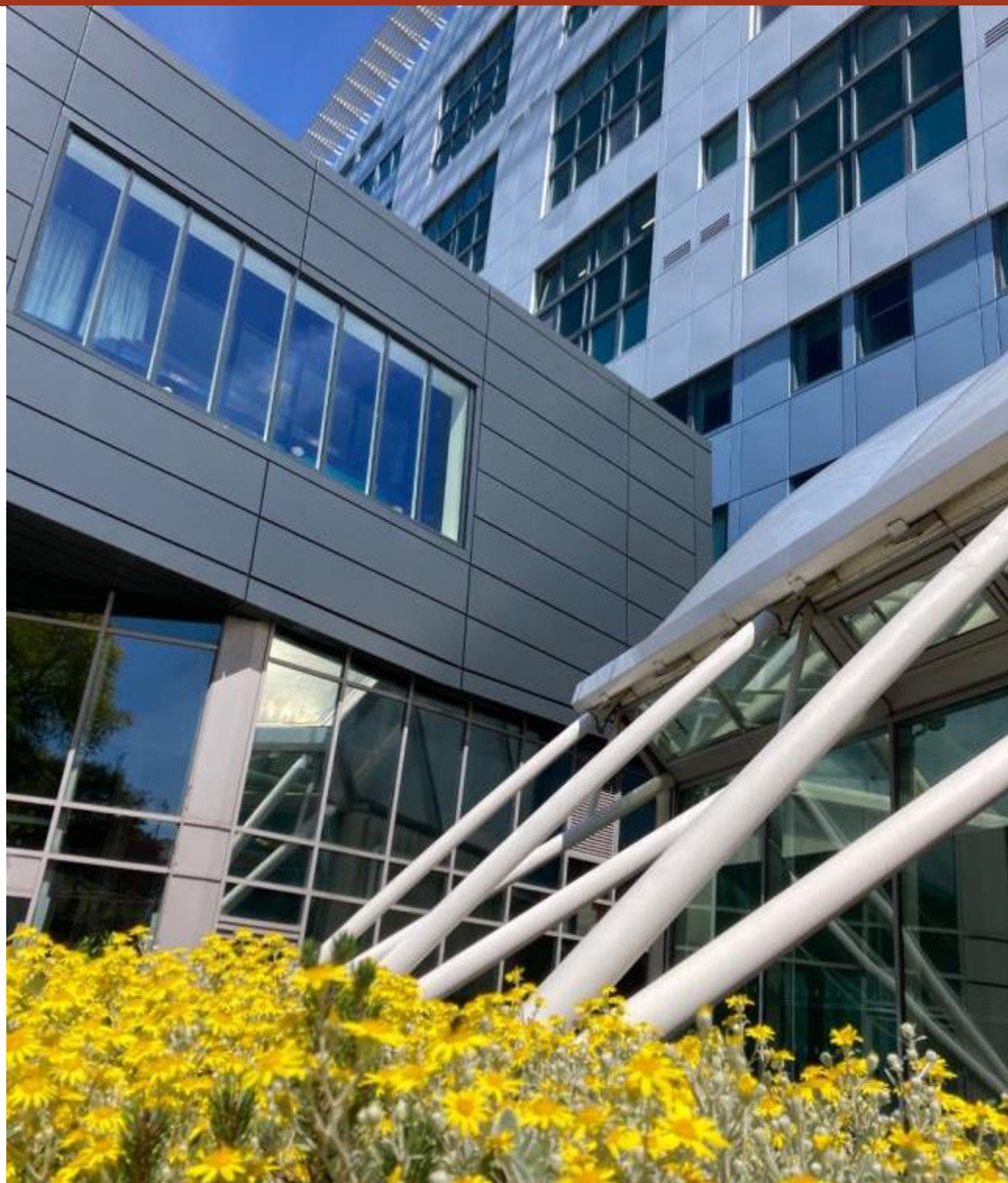


Bradford ChemBio

What's been going on in our school for the past six months...
January – June 2022



@UoBChem

@UoBBio



Have an item for the newsletter? Email k.riches@bradford.ac.uk or a.tedder@bradford.ac.uk with 'Newsletter' in the heading

Welcome!

Welcome from your Newsletter Editors...

Welcome to the first newsletter of 2022! In this edition we're covering all the news from the first half of the year, and what a busy year it has been. Thank you all for your patience (there was no newsletter in April this year) but I'm glad to say we are back bigger and brighter than ever.

We would like to thank **Dr Andrew Tedder** for all his hard work and efforts that he contributed to the newsletter. He was co-editor from the inception of the newsletter and a key part of it's design; Andrew stepped down from the newsletter team when his tenure as Director of Marketing and Admissions came to an end. That means we have a new face on the editorial team, so we offer a warm welcome to **Dr Mark Sutherland** who is happy to contribute to spreading all the positive news we have as he takes up the Director of Marketing and Admissions mantle.



We kick off this edition with the news of **Prof Diana Anderson's** award in the New Years Honours list. Diana is an inspiration to the University and the scientific community and we offer her our warmest congratulations.

Our new technicians are introduced on page two – both former graduates of our School who enjoyed their with us time so much that they are using the skills and knowledge that they learned with us to contribute to the smooth running of the laboratories. This is a vital (and often under-appreciated) role and we look forward to getting to know them better over the coming years.

As the country continues to open up following the pandemic, national and international travel is back on the agenda and it has been great to read about all our researchers' adventures around the world. We are sure this will continue to expand there will be lots of gorgeous images from far-flung locations in the coming editions! It has also meant that school visits are back on the agenda and we can all play a role in enhancing our future recruitment by engaging with schools wherever possible.

Thank you also to our tireless teaching team who continue to go above and beyond to deliver an excellent student experience in an increasingly challenging time. Your hard work is very much appreciated. Special thanks also to the apprenticeship teams, lead by **Dr Tom Swift** and **Kara Thornton**, who navigated the University's first experience with Ofsted. You can read about those experiences on page 13.

Please do keep in touch with all your good news stories – we are particularly keen on increasing the input from students! All the best,

Dr Kirsten Riches-Suman and **Dr Mark Sutherland**

National Recognition of Excellence

Professor Diana Anderson travelled to Windsor Castle on May 3rd to receive her **MBE** for services to Genetic and Reproductive Toxicology awarded by Queen Elizabeth 2nd in the New Year's Honours List . The Ceremony was conducted by the Prince of Wales.

Diana has been a life-long trailblazer for women in STEM and she is renowned on both the national and international stage.

Following on from her recognition, Diana was invited to give a lecture for the University to celebrate her career. Diana's talk was entitled 'The best model for man is man: some findings from research using blood and sperm cells from humans'. It was a celebration of her many achievements and was attended by family and friends as well as colleagues, peers and students.



New Technicians

Hello everyone, I'm **Israr Hussain**, the new technician in the chemistry teaching labs. After doing my MChem at the University of Bradford and working as a COVID 19 vaccinator for a short while, the opportunity to give back to the place which had given me so much had arose and here I am. The best way I spend my spare time is to go down to the cinemas and enjoy the latest releases with a couple of mates.



Hi, I'm **Milena Abid** and I recently joined the G floor laboratory team as a biology teaching technician. I graduated as a mature student at the University of Bradford in 2019 with a BSc. degree in Biomedical Science, following which I embarked on a master's degree in Parasitology at the University of Salford. My career journey to where I am today has been particularly interesting and taken several diverse and fascinating pathways. My fascination with medical science was evident when I recall at the age of 6 years old being perplexed and intrigued at how my grandmother had undergone lifesaving pioneering brain surgery, which in 1978 was certainly remarkable!

Interestingly after studying A levels in literature and sociology I unexpectedly embarked on studying beauty therapy at the Yorkshire college of beauty where I was captivated by the studies of anatomy, physiology, and dermatology. At the age of 19 I married and became self-employed with my husband in our Italian restaurants, Valentino's in Bingley and York whilst also being self-employed in my own beauty salon and all amid having children! However, my enthusiasm for education was still prevailing and as such I became a tutor and an examiner in beauty therapy at Leeds City college where I particularly enjoyed working with young people.



In my 40's the midlife crisis hit, and instead of getting a tattoo or a motorbike I decided to combine my love of studying with my curiosity of medical science and embark on a new career into biomedical science. Being a Bradford lass, although I'm half Italian, my first choice was the University of Bradford and luckily, I was accepted. I embraced every moment of studying at the university, I gained great friendships and absorbed a wealth of scientific knowledge from exceptional scientific academics. It was the lecture in parasitology at Bradford that inspired me towards studying further and hence the reason why I devoted myself to the arduous four times a week journey to the University of Salford and yet it was so worth it when I graduated with a distinction in MSc Parasitology.

This year I was given the wonderful opportunity to work on a temporary contract with students in their final year of projects in biomedical science. Luckily, I was offered a permanent post as a biology teaching technician of which I'm absolutely loving; combining my love of science, education, being part of an amazing team and working with young people what more could I ask for??? Back to the beginning of my story, my grandmother passed away this year aged 95 years old, she had been given the chance of a long and fulfilling life through pioneering research and the innovations in medical science.

New Visiting Professor

I am **Mark Boyett** and I have just been appointed an Honorary Professor. After a BSc in Biological Sciences at the University of East Anglia, a PhD in Physiology at University College London and a postdoc at the University of Berne, I was appointed a Lecturer in Physiology at the University of Leeds. I left Leeds 26 years later as a Professor of Physiology to take up the post of Professor of Cardiac Electrophysiology at the University of Manchester. I finally retired from Manchester 14 years later in 2019 and I now live in Skipton. Although retired, I have an h factor of 78, I have carried on working with colleagues, and last year I published seven papers. I have known Dr. Munir Hussain in the School of Chemistry and Bioscience for many years and with his support I was delighted when I was appointed an Honorary Professor at the University of Bradford. All my career I have worked on the heart and my main focus has been on the pacemaker of the heart, the sinus node. My work was supported by 113 research grants including five consecutive five-year British Heart Foundation programme grants. Over the years, my work shifted from physiology to the molecular sciences and most recently omics technologies. I have spent about 20 years studying diseases of the sinus node and pacemaker malfunction in heart failure, diabetes, the elderly and even athletes. One of the most fascinating studies has been of the circadian rhythm in the pacemaker – this is important because pacemaker malfunction tends to occur at night. Did you know that veteran athletes can have dangerously low heart rates at night and are more likely to need an electronic pacemaker than less active people? Don't let me put you off exercise though – athletes live longer than less active people! At the University of Bradford, I hope to work with **Munir Hussain** and others and if my experience can help anyone - staff or students - I will be pleased.



New Roles

Dr Sanjit Najak was appointed to the role of **PGR Coordinator** in School of Chemistry and Biosciences-welcome on board! **Dr Krzysztof Poterłowicz** will continue to support PGR students in his role of Director of Research-Computational and data Driven Science. Krzysztof, thank you for all your contributions and support in the past few years!

Thanks to **Dr Mark Sutherland** who will be our new **Director of Admissions**. There will be a handover period of a few weeks so please do all you can to support Mark and Andrew Tedder during this period. Many thanks to Andrew who has led our Admissions, Recruitment and Marketing team for over 5 years, during the most challenging of times, particularly throughout the pandemic. Watch this space for new and exciting developments in this area

Thanks and congratulations also to **Dr Juanvi Canet-Perez** who has agreed to be the new **Biomed Admissions lead** academic and to **Dr Maria Katsikogianni** who has been appointed as our **School International placement and CPD co-ordinator**. Look out for their input in future bulletins and please work with them and support them in their new roles.

Dr Katie Hanna has volunteered to be our new **EDI Mental Health and Neurodiversity champion**. Welcome to the EDI team to Katie.

SFHEA

Congratulations to **Dr Sobia Kauser**, **Dr Clare Peyton** and **Dr Kirsten Riches-Suman** who received their **Senior Fellowship** of the HEA.

PGR Supervision

Congratulations to **Dr Kirsten Riches-Suman** who has been awarded recognition from the **UK Council for Graduate Education** (UKCGE) for her approach and practice regarding postgraduate supervision. The panel particularly highlighted her work to understand the mental health and well-being needs of students as well as her efforts in building student confidence to enhance independence.

Prof Anne Graham has also obtained national Research Supervisor Recognition from the UK Council for Graduate Education. This scheme recognises good practice in PhD supervision for those who have experience of PhD supervision through to completion.

Promotion

Regrade congratulations to **Dr Giulia Grimaldi** who has successfully progressed from Grade 8 to Grade 9 Assistant Professor at the recent Faculty regrade Panel. I'm sure all colleagues will take the opportunity to congratulate Giulia personally when they see her.

Bradford Inaugurals

Promotion to Professor is one of the highest achievements in an academics career; it is a recognition from the University that the academic concerned is operating at the highest level in their field. As such, the promotion is one worthy of celebration by both the academic and the University. The inaugural lecture is a centuries-old tradition; a transition point in the career of an academic, recognising leadership in their chosen field. An inaugural lecture is, therefore, a key milestone in any academic's career, signifying their promotion to 'Professor'.

Professor Anne Graham

Cardiovascular disease is still one of the biggest killers in the developed world, causing 27% of deaths in 2021. A person dies every 3 minutes in the UK, mainly due to heart disease and stroke which can occur with no prior symptoms. The underlying cause is progressive low grade, chronic inflammation. For the last 30 years, Anne has studied the single cell layer that lines blood vessels, the endothelium. These cells are master regulators of inflammation, releasing soluble agents into the blood and to the muscle below which prevent inflammation and promote relaxation of the blood vessels. Endothelial cells play a critical role in keeping our blood vessels healthy. In the last 10 years, her group has shown that gestational diabetes causes endothelial dysfunction. They show signs of oxidative stress and produce inflammatory markers which are likely to contribute to poor vascular health of the offspring. They have also shown that interleukin 36, an important contributor to psoriasis, causes endothelial inflammatory responses. Links between psoriasis and cardiovascular disease need further research. Working with collaborators, Anne has shown that platelet microparticles can promote development of new blood vessels by transferring microRNA into the endothelium and altering intracellular signalling. This process of angiogenesis is important in both cardiovascular disease progression and in cancer metastasis.



Professor Julie Thornton

Your skin is your largest organ, comprising 15% of your body weight and an area of approximately 2m². Its diverse functions include protection, communication, hormone synthesis, regulation of body temperature and sensory perception. It has an amazing ability to regenerate and is home to 1.5 trillion "friendly" bacteria. Skin conditions are the most frequent reason for consultation in general practice, ranging across the life span from babies to the elderly. Without good skin health, quality of life is compromised, and chronic skin conditions present a high economic burden. For example, infected wounds limit independence, particularly in the elderly, and their management alone utilises 5.5% of total NHS expenditure. Melanoma skin cancer has risen significantly becoming the 5th most common cancer in the UK, while damage to the skin e.g., burns, open wounds and diabetic foot ulcers, risk infection by pathogenic bacteria leading to life-threatening conditions such as sepsis. This fascinating, complex organ, including its most famous appendage – the hair follicle - has been the focus of Julie's research for over 30 years. Her research started with her PhD studying the hair follicle, a mini organ with stem cell populations that allow it to recapitulate embryogenesis and tissue remodelling in an adult tissue. Julie's long-standing collaboration with the Plastic Surgery and Burns Research Unit, has led to a greater understanding of the benefit of stem cells on wound healing in damaged skin. Julie has also collaborated extensively with industrial partners including Estée Lauder on skin ageing. With ageing, our skin is subjected to chronic inflammation (inflammaging), which impacts significantly on its important functions. Julie is currently leading a new, multi-disciplinary Skin in Healthy Ageing network, as part of a larger exploration of ageing science in the UK. Because skin can reflect underlying health issues, understanding these changes will also give insights to ageing in the rest of our body.



UKRI, BBSRC and MRC Joint Initiative

The University of Bradford will lead research into the skin microbiome and how it affects skin conditions and ageing, as part of a new UK-wide virtual institute. The research could lead to a better understanding of conditions like eczema and acne, and scientists believe it can also shed light on the ageing process itself. Recent studies have identified the skin microbiome to be a more accurate predictor of chronological age than the gut microbiome. Although the gut microbiome has been extensively researched, and is known to impact ageing, there is little knowledge on how changes in the skin-microbiome ecosystem impact ageing.

The new **UK Ageing Network** – launched March 7 - is funded by UK Research & Innovation, the Biotechnology and Biological Sciences Research Council, and the Medical Research Council, and includes 11 networks, each focused on a different aspect of ageing. **Professor Julie Thornton**, Director of the Centre for Skin Sciences at the University of Bradford, will lead the Skin Microbiome in Healthy Ageing (SMiHA) network, a multi-disciplinary UK research community comprising universities, industry, and healthcare practitioners, whose goal is to identify how changes in the composition of the skin microbiome reflect acceleration or deceleration of the ageing process and age specific disorders. Other founding members come from the University of Manchester, University of Liverpool, University of East Anglia and Queen Mary University of London.

Prof Thornton said: "We want to understand how changes in the skin microbiome affect skin health and identify links with ageing and its role in conditions like eczema or in wounds that won't heal. Is it something to do with an age-related microbiome? Ultimately, our aim is to understand how to reset or regulate the skin microbiome as a route for healthy ageing. We are bringing together specialists in microbiology, the skin and ageing. There's a lot of interest in this field from an industry point of view, so one of our goals is to become the premier resource for scientific-based information and research into the skin microbiome."

Skin conditions are the most frequent reason for consultation in general practice. Poor skin health and chronic skin conditions, such as infected wounds, limits independence in the elderly population and represents a high economic burden. Without good skin health, day-to-day living is compromised. Skin disorders occur from tiny infants to the very elderly and 50% of the UK population suffer a microbiome associated skin complaint (such as infant eczema or teenage acne) each year, with management of infected wounds alone utilising 5.5% of total NHS expenditure. The network formed under the umbrella of this project will help to drive skin microbiome research towards intervening in age-related conditions and has ambitions to expand and incorporate more members with the overall goal of understanding the ageing microbiome and in turn translate this to better outcomes and quality of life for the general population. It is supported by a network manager Rachael Williams and in commercial aspects by Dr Gill Westgate, both from the University of Bradford.

More about the SMiHA network

The founding members of the SMiHA network are Prof Julie Thornton (Network Lead), Professor of Cutaneous Biology is Director of the Centre for Skin Sciences, University of Bradford, and Scientific Director, Plastic Surgery and Burns Research Unit; Dr Malcolm Horsburgh (Deputy Network Director), Senior Lecturer in the Institute of Infection, Veterinary and Ecological Sciences, University of Liverpool; Prof Andrew McBain, Professor of Microbiology, School of Health Sciences, University of Manchester; Dr Jelena Gavrilovic, Associate Professor in Cell Biology, School of Biological Sciences, University of East Anglia (UEA) and Dr Matthew Caley (ECR), Lecturer in Cell Biology, Queen Mary University of London.



UKRI UK Research and Innovation

Skin Microbiome in Healthy Ageing (SMiHA)

- Prof Julie Thornton > (University of Bradford)
- Dr Mal Horsburgh > (University of Liverpool)
- Prof Andrew McBain > (University of Manchester)
- Dr Jelena Gavrilovic > (UEA)
- Dr Matthew Caley > (QMUL)
- Dr Gill Westgate > (University of Bradford)
- Rachael Williams > Network Manager (UoB)

BBSRC Biotechnology and Biological Sciences Research Council

MRC Medical Research Council

Travel Grant

Paul Norton had his abstract accepted for the BSID which took place between the 4th-6th April in Newcastle. He submitted an e-poster and was successful in gaining a £250 travel grant from the **BSID** (his first one funding success).

Research Fellowship

Dr Hankui Wu (main applicant) and **Dr Anna Wu** (co-applicant) have won CSC (**Chinese Scholarship Council**) Research Fellowship, Hankui will do 1-year PDRA research in Anna's group soon.

Aurora Grant

Dr Gisela Helfer has received an **Aurora mobility grant** to host a research visit of PhD student Francesca Manocchio from the University of Rovira i Virgili. Francesca will join Helferlab in September for 5 months to work on circadian rhythms in tanocytes.

Industrial Funding

Dr David Ansell (PI), and **Prof Julie Thornton** (Co-I) have won an industry award of £118,000 from Soterius Ltd for "Pre-clinical and clinical sample evaluation of a new topical treatment for alopecia areata".

BBSRC DTP

Dr Kirsten Riches-Suman has established a collaboration with Prof Michelle Peckham at the University of Leeds. A BBSRC DTP student will be studying smooth muscle myosin assembly dynamics for the next four years.

Industrial PhD

Dr Helen Sheldrake (PI), **Dr Mark Sutherland** (AS) and Dr Steve Snyder (AS) have been awarded a fully funded PhD studentship for approximately £100,000 over a 3 1/2 to 4 year project through the company **Incanthera**. The project will focus on coupling small integrins targeted molecules to PROTAC/LYTAC promoting lysosomal degradation to reduce metastatic potential of cancers.

Summer Studentships

The school is hosting a record number of summer studentships this year.

Dr Giulia Grimaldi has received funding through the university **Summer Work Experience Program**. **Manisha Sami** and **Azaan Khan** will be modelling the blood brain barrier for drug testing.

Dr Pete Nicholls and **Dr Gisela Helfer** have secured funding from the **British Society for Neuroendocrinology** for a Vacation Scholarship for **Awaba Mussadiq**.

Dr Yvonne Nyathi has secured two scholarships. **Isa Nadim** is funded by **Biochemical Society**, and **Karen Jose** will be funded by **Physics for Life**.

Dr Kirsten Riches-Suman has received funding from the **Biochemical Society** for **Shehryar Qureshi**, who is examining markers of early vascular ageing in gestational diabetes.

Beam Time

Dr Briony Yorke has secured 3 Shifts at **EMBL@PetraIII** (Hamburg, Germany) to develop a new Robotically controlled system for introducing ligands to protein crystals. She has also got 3 Weeks at Eli beamlines (Dolní Břežany, Czechia) to develop laser driven plasma X-ray sources for protein crystallography.

Project Cayman

Dr Richard Telford and **Dr Tom Swift** presented the second training session of **Project Cayman**. Delegates from four SME businesses in the Leeds City Region enjoyed a full day of bespoke training on analytical science and are now working with them to develop small commercial projects to show how university engagement can enhance their businesses. Feedback gathered by commercial manager Jason Jones after the session has shown it was very well received and the case studies shown of how analytical science has already resolved complex business challenges was a great way to inspire new ideas and approaches to laboratory science problems

Peer Review

Dr Gisela Helfer has been invited to join the Review Panel for Summer Studentship applications for **The Physiological Society**. She has also been invited as a 2022 Reader for the **L'Oréal-UNESCO UK and Ireland For Women in Science** Fellowship applications. This is the fourth year in a row that Dr Helfer has been appointed as a Reader for this prestigious fellowship round.

Papers in Press...

Chua KO, **Fatima I**, Lau YY, Hong KW, Yin WF, **Mardaryev A**, Chan KG, Chang CY. **Bacterial microbiome of faecal samples of naked mole-rat collected from the toilet chamber.** *BMC Research Notes* 2022;15(1):107

Clark ER, Helliwell RJ, Bailey MA, Hemmings KE, Bridge KI, Griffin KJ, Scott DJA, Jennings LM, **Riches-Suman K**, Porter KE. **Preservation of smooth muscle cell integrity and function: A target for limiting abdominal aortic aneurysm expansion?** *Cells* 2022;11:1043

Huang S, Ma J, Yi Y, Li M, Cai P, Wu N. **Synthesis of Orthogonal Push-Pull Chromophores via Click Reaction of Arylnamines.** *Org. Biomol. Chem.* 2022;20:4081

Hughes JF, Skaletsky H, **Nicholls PK**, Drake A, Pyntikova T, Cho TJ, Bellott DW, Page DC. **A gene deriving from the ancestral sex chromosomes was lost from the X and retained on the Y chromosome in eutherian mammals.** *BMC Biol* 2022;20:133

Jiao F, Hossain SI, Sang J, Saha SC, Gu YT, **Hughes ZE**, Gandhi NS. **Molecular basis of transport of surface functionalised gold nanoparticles to pulmonary surfactant.** *RSC Advances* 2022 in press

Riches-Suman K and **Hussain A**. **Identifying and targeting the molecular signature of smooth muscle cells undergoing early vascular ageing.** *Biochimica et Biophysica Acta: Molecular Basis of Disease* 2022 in press

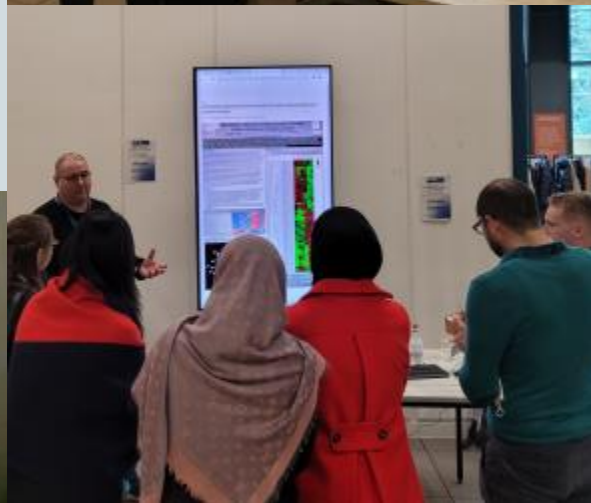
Swift T, Pinnock A, Shivshetty N, Pownall D, MacNeil S, Douglas I, Garg P, **Rimmer S**. **Generation and use of functionalised hydrogels that can rapidly sample infected surfaces.** *MethodsX* 2022;10:1684

Yun H, Dumbell R, **Hanna K**, **Bowen J**, McLean SL, Kantamneni S, Pors K, Wu QF, **Helfer G**. **The chemerin-CMKLR1 axis is functionally important for central regulation of energy homeostasis.** *Front Physiol*, 2022 in press.

The Royal Society of Chemistry has released its new two volume Book on Covid 19 "**The Corona Virus Pandemic and The Future**". **Prof Diana Anderson** is an Editor and contributing Author to this important publication

BSID

Dr Stephen Sikkink, **Richard Baker** and PhD Student **Paul Norton** from CSS attended the annual **BSID 2022** conference in Newcastle in Early April. Having been a virtual conference for the last two years due to COVID it was good to catch up in person with the UK skin research community, see a few former colleagues and also some new faces. For Paul it was particularly exciting as this was his first external conference and he presented a virtual poster on his PhD research entitled 'Surface engineering of novel patterned polymers to remove pathogenic biofilms from human skin'. Stephen also presented a virtual poster of his current research entitled 'Proteomics analysis of high glucose cultured human fibroblast subpopulations'. Both presentations were very well received. The final evening involved a trip down to the famous Newcastle quayside for the conference dinner atop an art gallery with panoramic views of the Newcastle riverside, Baltic Mill and the Tyne Bridge.



Cosmetic Chemists

Prof Julie Thornton gave an invited talk on skincare during the menopause to the **Regional Development Group of the Society of Cosmetic Chemists** in which was held in Cheshire.

WOCN Society

Dr Tom Swift presented at the **WOCN**(Wound, Ostomy and Continence Nurses Society) - WOCNext 2022 on June 8th 2022. His presentation was entitled 'Has the Introduction of Breathable Silicone Rewritten the Future of Ostomy Care?' and was an on demand pre recorded lecture on silicone wound dressing materials.

British Crystallographic Association

Dr Briony Yorke attended the **British Crystallographic Association** spring meeting in Leeds in April 2022. Whilst there she judged the ACA AIPP Judith Flippen Anderson Memorial Journal of Structural Dynamics Poster Prize which was awarded to Catherine Tooke at the University of Bristol for her work on time-resolved crystallographic studies of β -lactamase. Next year, Briony will be chairing the biological structures group meeting at the British Crystallographic Association spring meeting. In October, there will be a CCP4 protein structure workshop in York aimed at post graduate / post-doctoral researchers. If anyone is interested in chairing a session please get in touch with Briony.

Gestational Diabetes

Prof Anne Graham travelled to Dhaka from 12-19 May to deliver a presentation to her collaborating clinical partner for the International Development Funded PhD student project **Health Opportunities in Patient Empowerment in Gestational Diabetes Mellitus** (HOPE-GDM). Unfortunately Sumaia Sabouni the final year PhD student on the project was unable to join her. The visit to Sh Surawahardy Medical College and Hospital went very well and was picked up by a local tv news network who were interested in the benefits of patient education for improving maternal and foetal outcomes. The next phase of the project will recruit a Bangladeshi researcher to obtain ethical approval to start prospective collection of data which can be analysed by machine learning to promote benefits of patient empowerment.



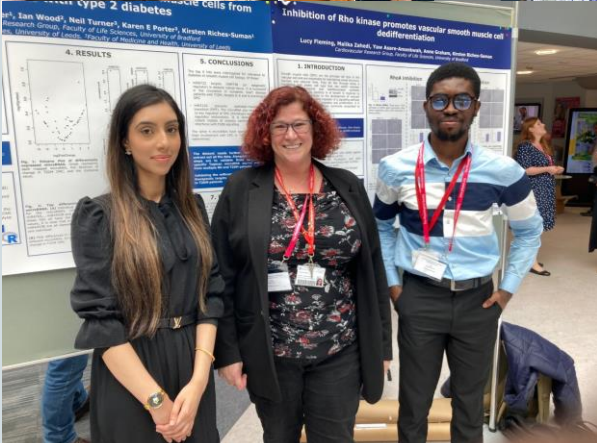
NCRG

Dr Kirsten Riches-Suman, Dr Munir Hussain, Dr Jacobo Elies and Dr Matt Hardy organised the **Northern Cardiovascular Research Group** which was held at the University of Bradford in April. This was the first time the conference has been face-to-face in 3 years and was great to see finally happen as we were initially scheduled to hold the conference in 2020 at the start of the COVID pandemic.

Kirsten was the oral judge for the conference and her group presented two posters.

- L Fleming, M Zahedi, Y Asare-Amankwah, A Graham, K Riches-Suman. "Inhibition of Rho kinase promotes vascular smooth muscle cell dedifferentiation."
- A Hussain, A Tedder, I Wood, N Turner, KE Porter, K Riches-Suman. "Defining the miRnome of vascular smooth muscle cells from patients with type 2 diabetes."

It was also an excellent introduction to Bradford for Prof Mark Boyett who has joined us as an honorary professor.



Germ Cell Biology

Dr Pete Nicholls has had a busy time presenting at three international conferences. In January, he gave an online presentation at the **Society for Reproduction and Fertility** annual conference. Following this he was invited to present at the **Malignant Germ cell International Consortium** (MaGIC) annual meeting in Indianapolis, USA between 22-25th May. The global consortium is comprised of clinicians and scientists that seek to advance germ cell tumour treatment through research. He also presented at the **Frontiers in Reproduction** annual symposium in Woods Hole, USA between 9-12th June.

Bioinformatics & Biomedical Engineering

I am **Richard Matzko** and I am nearing the end of my second year in a Synthetic Biology PhD, operating primarily out of the department of Computer Science and co-supervised by **Dr Sanjit Nayak**. I believe strongly in the application of interdisciplinary approaches, in fact my work comprises a phenomenological multiscale approach to multicellular simulations. As many others would, I felt extremely honored and privileged to have won "Best Full Paper" at Bradford University's Annual Innovative Engineering Research Conference (AIERC 2022). Our associated work was published in relation to the 9th International Work-Conference regarding **Bioinformatics and Biomedical Engineering** (IWBIO 2022) held in beautiful Gran Canaria, in the 5 star Meloneras area. Beaches, sand, sun, swimming pools and science: it was a surreal experience. Conferences, especially those targeted to your subject area, are incredible opportunities to network and listen to leading professionals in areas associated with your field. I am happy to share my experience and hope that others feel inspired by them. Our paper can be found at https://link.springer.com/chapter/10.1007/978-3-031-07802-6_17, and if it is of interest, or if you wish to make a technical contribution, you may contact me at rmatzko@bradford.ac.uk.



Tromso

Dr Gisela Helfer was invited to The Arctic University of Norway in Tromso beginning of May. She examined the PhD thesis of Dr Mattis Jayme van Dalum who presented his thesis 'Evolution of seasonal adaptations in voles'. Gisela spent a few great days in Tromso and met up with her collaborators to discuss future research project. The Arctic University of Norway is the most northern University and the department is specialised on seasonal physiology.



Vitae

On Wednesday 22nd June, Dr Kirsten Riches-Suman and Russell Delderfield presented their findings on what influences academics' preferred supervisory styles for **Vitae**, the global body for postgraduate researcher education. The aim of this presentation (and research thread as a whole) is to influence policy on improving accessibility and equality in research culture.



RSC

Nathan Fenwick to give a talk entitled 'The curious incident of the proximity effect in the mass spectra of 2-substituted benzaniilides at the **Royal Society of Chemistry** Molecular Spectroscopy Group Postgraduate Event.

School of Chemistry and Biosciences Research Away Day

In June, Prof Anne Graham hosted our latest Research Away Day. The well-attended event saw talks given regarding the Analytical Centre facilities, Ethical Tissue and human tissue use, the BSU and the HPC. This was followed by an intensive afternoon of networking, brainstorming and planning for high impact research proposals to develop over the coming months.



Hair biology

Gill Westgate from CSS gave two invited talks on hair biology and hair fibre science on 6th and 9th June. The first was at the **TRI Princeton Applied Hair Conference** in a Hair Biology online session which she also helped coordinate, with a talk title "Molecular responses to visible light suggests roles in maintaining hair growth" that included the work completed by **Serena Buscone** as part of the EU funded doctoral training project with Philips. The second talk was at the **Hair Biology Symposium** at Monasterium Laboratories in Munster, titled "Biology and diversity of the hair shaft and cosmetic/nutraceutical strategies for improving hair shaft quality". **Dr Andrei Mardaryev**, **Prof Kevin McElwee** and **Prof Des Tobin** (previous Director CSS) also attended.



BSCR & BCS

Dr Kirsten Riches-Suman and **Asare Amankwah** attended the **British Society for Cardiovascular Biology and British Cardiac Society** joint annual conference in Manchester in June 2022.



Industry presentations

Prof Julie Thornton visited the R&D facilities at **Aveda** and their parent company **Estee Lauder** in Minneapolis, MN and Melville, NY to present the research they have been funding in CSS. She also gave a talk to the **International Trichology Congress** on "The Hormonal Changes in the Skin during Menopause"

RAMS

Drs Sanjit Nayak, **Debbie Crawford**, **Phil Drake**, **Nadeem Javid**, **Colin Seaton**, **Bev Stewart**, **Tom Swift**, **Richard Telford** are organising **RAMS-2022** from 5-6th Sept at the University of Bradford. RAMS provides a national platform for early/mid career academics/researchers in materials science and related areas to share experiences and create a collaborative network. The conference is partly sponsored and promoted by RSC Materials Chemistry Division.

Biomed Technical Team Projects Feedback

The undergraduate BSc(Hons) Biomedical Science final year research project took place in January and February. This is the capstone part of the Biomed degree and is well-valued by students and staff alike. However, it is also an incredible amount of work and the teaching technicians are on the front line for any mishaps, miscommunications or disasters, and we are also very thankful to them for their calm, friendly and supportive ways!

All students are asked for feedback at the end of the projects and these were collated by **Dr Juanvi Canet-Perez**. In short, the feedback has been fantastic. This shows the great work that the team does year after year supporting the Biomed students in their final year lab-based research project and is an excellent team effort. Below you can find more detailed information regarding this feedback divided in 3 sections.

Total response rate

Students based on G floor: 86

Total responses: 55

Response rate: $55/86 \times 100 = 64\%$

Individual comments

- I had a wonderful time in the labs and also received a lot of help from the amazing team of technical staff.
- Everything has been run smoothly.
- Ver nice staff.
- Staff have been extremely helpful & accommodated all our needs.
- Staff were approachable and helped a lot with any issues.
- Technical staff very very helpful and friendly. You have made this experience worth it.
- Every member of the tech team were so pleasant and friendly. You were all amazing.
- The lab technicians were very helpful. They were lovely to work with and friendly.
- Very helpful and lovely to work with
- Staff were great, very patient & friendly.
- Technical staff members were wonderful people to work with.
- All technicians deserve a pay rise.
- You were all kind, patient and helped in everything that you could.
- Technical staff were very very helpful and explained everything clearly. Give them a pay rise asap.
- Technical staff have been outstanding throughout the entirety of my research project. Always helping & working quickly to resolve issues & fulfil requests.
- All the staff were amazing. Big thank you to everyone.
- I cannot think of another way you could improve, you are doing well.
- Perfect procedures already.
- Enjoyed the lab experience.
- A lovely time in G floor labs, everyone was fantastic and extremely accommodating.

Constructive feedback

- Computer based booking system for equipment. Avoid double booking of equipment.
- Longer time in the labs. More hands-on training sessions. Run training sessions before projects.
- Run a pipetting challenge.
- All staff could help with maths.
- Sometimes hard to find equipment. Posters around the labs to point out how to find it.
- More equipment: SDS-PAGE kits, CO2 incubators, qPCR equipment, homogenizer...
- Inform about all type of equipment available (multipipettes)
- Empty autoclave bins and sharps bins more often.
- Close the windows.
- More IT based work.

Teaching

Ofsted Visit

Apprenticeship programmes are regulated by Ofsted and in March 2022 the University was visited onsite for a 4 day inspection. **Kara Thornton** is the lead for the Healthcare Science apprenticeship, and **Dr Tom Swift** is the lead for the Chemistry apprenticeships.

Both the Healthcare Science Apprenticeship and the Chemistry Apprenticeship were included in this university wide inspection, with the level 6 healthcare science programme being selected as one of four highlight programmes from the visit.

Overall, the Ofsted team found the university provision as requiring improvement, however, issues highlighted were predominately University level management/ organisation issues and varying practices across faculty.

The individual programmes and teaching methodology were generally well received, with the healthcare scientist programme specifically praised in the Ofsted report: **"most apprentices develop sound knowledge, skills and behaviours and routinely apply these in their workplaces."** Ofsted further recognised the variety of teaching methods, the qualification and appropriateness of the teaching team.

We understand Ofsted plan to return before the end of the year to discover whether the organisational changes that were still being embedded in during their visit have been successfully completed.

Although this reflects the overall requirement for improvement across the university it also shows they believed that the quality of teaching was fundamentally sound and they wanted to see the fundamental organisational changes implemented settle in. The programme leaders would like to thank all the staff, and students, who spoke to Ofsted inspectors during the visit and received very positive feedback overall. Indeed, the report highlighted that:

'Lecturers are highly qualified academics with relevant industry experience. They are passionate about the subjects that they teach. Curriculum managers ensure that subject experts deliver each module, and often invite guest lecturers to lead lessons.'



Research in Schools

Dr Yvonne Nyathi was a panel member at the Research in Schools [RIS] Regional conference held on the 14th of June at the Bradford National Science and Media Museum. RIS funds research in schools with the aim of promoting uptake of STEM subjects at university level. As a panel member, Yvonne spoke to a group of 120 students about a career in science and answered all questions raised by the students, hoping to raise awareness of our programmes in the local area.

Teaching Standards

Dr Sobia Kauser has been appointed to the Advisory Group for the review of the **Biomedical Sciences Subject Benchmark Statement**.



QAA

UK Quality Assured

University Training

Dr Kirsten Riches-Suman delivered a University-wide training course on building effective learning environments for postgraduate researchers

Building effective learning environments for postgraduate researchers

Kirsten Riches-Suman
PhD BSc(Hons) SFHEA

@doctorkriches

Admissions and Outreach

Admissions

The last few weeks have been quite busy with outreach activities.

To coincide with Biomedical Science Day on 9 June the Outreach team managed to arrange several visits to schools and colleges. **Alex Surtees, Philip Drake** and I attended Brooksbank School in Halifax, St Aidens in Harrogate and Huddersfield New College. St Aidens had Betty's for catering but unfortunately, we didn't have time to sample all the cakes and sandwiches. There are still trips planned for Abbey Grange Academy and Horsforth School.

We have had our first AED and Open day back on Campus on Thursday 26 May and Saturday 18 June respectively. Thank you to **Antony Scimone, Juanvi Caneñ-Perez, Mike Fessing, Karthic Swaminathan, Yvonne Nyathi** and **Anne Graham** for helping out on the days. Unfortunately attendance at both events was a bit low but hopefully we managed to convert them to Biomedical sciences at Bradford. Our application numbers remain low, there is another Open Day on Saturday 20th August and we need at least one more, preferably 2 academics to help on the day. This coincides with clearing.

Thanks to those who have put their names down to help with clearing, there are still some staff who haven't put their names down to help with either Open days or clearing, PLEASE do so.

Thank you to those academics and Farah who have put their names down for webpage training. In the next few weeks I will organise a workshop to expand on the activities for Open days and ideas for the webpage. The idea is to create separate links for a research page, link to the undergraduate course, our research and the clover leaves. I will also be looking to get a new up to date school photo of all academics.

Dr Mark Sutherland, Director of Marketing and Admissions

Recruitment Videos

Dr Sanjit Nayak (Chemistry) and **Dr Kirsten Riches-Suman** (Biomedical Science) have created YouTube recruitment videos for the University of Bradford for their 'Reasons to Study...' campaign. Please share the videos with your networks to try and maximise our student numbers.



Admissions and Outreach

International Day of Women and Girls in Science

Prof Anne Graham convened a panel of female academics to celebrate the careers of women in science. Thanks to **Drs Beverly Stewart, Kirsten Riches-Suman, Yvonne Nyathi** and **Maria Katsikogianni** who joined us from the lab. The session was recorded for others to see. If you would like to view the recording, you can find it here:

Topic: International Women and Girls in Science 2022: Panel Discussion

Meeting Recording:

https://bradford-ac-uk.zoom.us/rec/share/K7KyPCIMtH5siRCdm9O4rO47XoNVDs08h6A8z0C480RAz96ogEwYqrrW3D8Wav_t.nUOo_OxR-hd3KZj_

Access Passcode: bX8!fDTR

Many thanks to all our panel for an inspiring set of discussions and some insights into what motivates some of our research scientists in Chemistry and Biosciences. Anne hopes this is the first of a series of future events to celebrate successes and motivating factors for our staff.

International Women's Day

On 26 March, for International Women's day, **BCB Research Matters** was hosted by **Dr Gisela Helfer**. The programme featured Dr Dianne Wepa, Associate Professor in Mental Health at the School of Nursing and Healthcare Leadership. Dianne talked about her research spanning from the impact of digital technology on suicide prevention, father's use of kangaroo care with new-born babies and how Maori people engage with healthcare services. Gisela was also joined by our very own **Dr Briony Yorke**, Assistant Professor in Structural Biology at the School of Chemistry and Biosciences. Briony discussed her research on developing new methods to investigate the structure of proteins and enzymes using time-resolved crystallography. Gisela also chatted with her guests about breaking the gender bias and the importance of International Women's Day 2022, particularly for gender equality in research



UNIfy Festival



The exciting cardiovascular and neurological research being performed within our School was showcased at the UNIfy Festival at the weekend. **Prof Anne Graham, Dr Gisela Helfer** and **Dr Kirsten Riches-Suman**, along with PhD students **Yaw Asare-Amankwah, Junior Bowen, Alisah Hussain, Mitali Singhal, Haesung Yun** and technician **Amy Scholes** had a great time making pipe cleaner neurones and DNA strands out of sweets with the public. Everyone could have a health check where their blood pressure and blood flow was monitored in real time and it was really interesting to let people see inside their hearts and brains with anatomical models. **Dr Philip Drake** was flying the flag for chemistry in the Student's Union talking all things extra-terrestrial!

Admissions and Outreach

BMS Day

The **Biology technical team** did a display board in the G floor lobby for **Biomedical Science Day** on 9th June. University of Bradford had 2 entries into the Biomedical Science Day photo competition. Team photo of the bio technical team and a Clinical Biochemistry related meme.



Radio appearances

Dr Tom Swiff was interviewed by **Bradford Community Radio** for a live broadcast to discuss the success of our Chemistry Apprenticeship programme and students.

Prof Julie Thornton gave an interview to **BBC radio Leeds** on sun cream and staying safe in the sun.

Pint of Science

Prof Anne Graham and **Drs Katie Hanna, Gisela Helfer** and **Kirsten Riches-Suman**, as well as PhD students **Junior Bowen** and **Haesung Yun**, all ran public engagement sessions at the inaugural Pint of Science event for Bradford. We are looking forward to running this event again in the coming years and getting even more students involved!



School Visits

Dr Philip Drake attended **Huddersfield New College** in June to attract the brightest and best of their students to our chemistry offerings. The same month, **Dr Kirsten Riches-Suman** attended Peel Park Primary School to talk to year 6 students about being a scientist as part of their Careers Week with the **Inspiring the Future** programme.



Admissions and Outreach

Team Bradford Festival

Our Faculty was represented at the **Team Bradford Festival** by the Stone Age Team which was led by Dr Jacobo Elies and **Laia Rafols**, and included students and members of staff from School of Pharmacy and Medical Sciences, and School of Chemistry and Biosciences. It was a fantastic day filled with lots of fun activities among which laser game, football, memory games, cycling, archery, and more. We achieved 4th place among 17 teams. The Tech Team were a close 5th. Well done everybody, great team effort and enthusiasm!



Apprentice of the Year

Talia Pryce, one of the first Chemistry Apprentices, has won one **Apprentice of the Year** at the North East England's Chemical-Processing Sector and Supply Chain (NEPIC) Industry Awards. Congratulations to Talia and the Chemistry Apprenticeship teaching team.



PhD Success

Iqra Fatima (supervisors **Dr Andrei Mardaryev** and **Dr Mike Fessing**) successfully defended her PhD entitled "Characterisation of Cutaneous Wound Healing Process in Naked Mole Rats" Congratulations to Iqra who has taken up a postdoctoral position in Boston with her former supervisor to continue her research on the naked mole rat.

Progression Success

There have been a large number of PhD students who have passed their progression vivas in the last six months:

- **Nathan Fenwick** (supervisors: **Prof Richard Bowen** and **Dr Richard Telford**)
- **Mehwish Fida** (supervisors: **Prof Diana Anderson** and **Dr Mojgan Najafzadeh**)
- **Daniel Hall** (supervisors: **Dr Clare Peyton** and **Dr Jenny Waby**)
- **Mohammed Hussain Mahdi** (supervisors: **Prof Diana Anderson** and **Dr Mojgan Najafzadeh**)
- **Mitali Singhal** (supervisors: **Dr Jacobo Elies**, **Dr Sanjit Nayak** and **Dr Kirsten Riches-Suman**)
- **Dimitra Tsaroucha** (supervisors: **Dr Maria Katsikogianni** and **Prof Stephen Rimmer**)
- **Haesung Yun** (supervisors: **Dr Gisela Helfer** and **Prof Klaus Pors**)

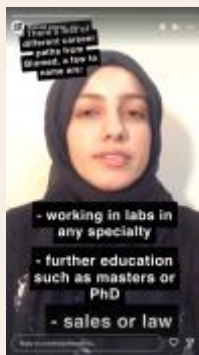
Congratulations to all and the best of luck with the rest of your PhDs!

ICT Away Day

On Monday 4 April the ICT hosted a Research away day that was attended by a few academics from the School of Chemistry and Biosciences. As part of the programme PhD students presented posters or 3 min flash talks. Congratulations to **Sirli Anniko** (Supervisor **Dr Pete Nicholls**) and **Asiye Busra Boz Er** (Supervisors: **Dr Helen Sheldrake** and **Dr Mark Sutherland**) who received a prize for best poster and talk respectively.

Instagram Takeover

Awaba Mussadiq, 2nd year Biomedical Science student and ambassador, did an **Instagram takeover** of the University of Bradford account to promote our course and the opportunities it affords to graduates.



Holi Blog

PhD student **Mitali Singhal** wrote a blog for the University newsletter about the Hindu festival of Holi. This celebrates love and the triumph of good over evil, and is very colourful!



Student Zone

Student Societies

We have two societies for our students – **ChemSoc**, and the **Biomedical Science Society**. Did you know you can even join both if you fancy it? Please keep an eye out as to how to join and all the different events that they put on – it's a great part of being an undergraduate. While you're at it, why not follow the School on twitter - @UoBBio and @UoBChem to find out all our latest developments.



VOLUNTEERS NEEDED!!!



Are you interested in helping out with the newsletter? Do you want to quiz your professors on how they reached their positions? If so, then we would like to hear from you! We are looking for volunteers from either Chemistry or Biomedical Science (or indeed both) who would be interested in conducting the 'Meet Your Professor' interviews that are normally found at the end of this newsletter. All it takes is a ~1 hour timeslot with yourself and the professor, and then a write up of what you discussed. It's easy, and our two roving reporters from last year (**Absari Choudhury** and **Ridha Ali**) really enjoyed the experience. If you would like to volunteer, please contact **Dr Kirsten Riches-Suman** (k.riches@bradford.ac.uk) or **Dr Andrew Tedder** (a.tedder@bradford.ac.uk) – we're looking forward to hearing from you!

Student Ambassadors

The University are currently recruiting for student ambassadors, who play a key role in supporting recruitment activities. Student ambassadors act as advocates for the university and their degree programmes, working on events such as Open days and UCAS fairs, as well as acting as role models, helping to raise aspirations and awareness of higher education. Outbound calling ambassadors help to encourage attendance at events such as open days, as well as supporting enquirers and applicants with any questions they may have about university life.

If you are interested, you can fill out an application form [here](#)!

We are also asking all staff to please help us in promoting this opportunity to ensure we have the best advocates for our courses and the university. You can do this by encouraging students to enquire by emailing ambassador@bradford.ac.uk before the application **deadline of 23:59 on Thursday 17th October**

Join our LinkedIn Groups

LinkedIn is a great tool for building your professional network, showcasing your skills and can even lead to employers contacting you, rather than the other way around. Here at Bradford we have our own LinkedIn groups so please, sign up for your free LinkedIn profile at www.linkedin.com and join the community!



Bradford University School of Biomedical Sciences
Bradford University School of Chemistry