

# Bradford ChemBio

What's been going on in our school for the past three months...  
September – November 2020



@UoBChem

@UoBBio



Have an item for the newsletter? Email [k.riches@bradford.ac.uk](mailto:k.riches@bradford.ac.uk) or [a.tedder@bradford.ac.uk](mailto:a.tedder@bradford.ac.uk) with 'Newsletter' in the heading

# Welcome!

## Welcome from your Newsletter Editors...

A warm welcome from your newsletter editors! We are very nearly at the end of term now and we would like to congratulate all students and staff in getting through what could have been the most challenging term in Higher Education history! Well done to everyone for continuing to work to the best of their abilities during the 'Online Era'; we also sincerely hope that you have taken some time to look after yourself as well.

In this edition of the newsletter we shine a light on some of the new PhD students who have joined our School over the last three months – we wish them all the best in their studies with us. We also have some excellent news with Prof Julie Thornton being awarded a Chair in Cutaneous Biology.

Despite spending hours and hours designing and delivering teaching material, our staff have still managed to get out there and present the important research that we are conducting. Online conferencing is a different experience and it will be interesting to see how much online material the sector retains once we come out of lockdown.

This year has amplified feelings of isolation, stress and over-work across the country, and we have written a focus on mental well-being particularly around students. If any students or staff are struggling, please do contact the University wellbeing service – they are excellent, very supportive, and will help you with your troubles. You do not have to suffer alone.

Finally, we report on our fantastic students and their achievements – from symposium successes, to Lego DNA, to understanding what the life of a chemistry student is like right now, we cover it all!

As always, we hope you enjoy reading this newsletter and celebrating our continued successes as a School. We hope you have a relaxing and well-deserved break whilst the University is closed – unplug the laptop, switch off the emails and have some you time!

**Dr Kirsten Riches-Suman** and **Dr Andrew Tedder**



## Athena SWAN

This has been an incredible busy term for all of our staff and students and I am sure you are very much looking forward to a well-deserved break. Please make sure that you take time off! Your mental health and well-being is more important than any upcoming work-related deadline, may this be research or teaching.

This will be my last EDOC announcement in our newsletter. Richard Telford and I will step down as chairs from the EDOC committee. To allow for a smooth transition, we will remain on EDOC as members for the time being and we will support the new chairs as much as we can. The positions will be advertised after Christmas and the applications process and deadline will be announced via the weekly HoS bulletin. If you are interested in the position and want an informal chat about it, please do get in touch with myself or Richard.

I would like to take this opportunity to thank all members of EDOC for their continuous support and hard work. I had the privilege to lead a great team to the first Athena SWAN bronze award within the University and I am still very proud of this achievement. Since we were awarded Bronze, we never stopped and we continuously worked towards silver. I think it is fair to say that we made some real positive changes within the School. While I appreciate that there is still a lot of work ahead, I believe that our School is on the right track. However, after leading EDOC for four years, I believe it is time for a new and fresh approach and I wish the new chairs the best of success in this endeavour.

The EDOC wishes all our staff and students a merry (and relaxing) Christmas and a happy (and less stressful) New Year!

Dr Gisela Helfer, Chair of Equality, Diversity and Opportunities Committee



## New PhD students

My name is **Ayman Asem**; I come from south part of Egypt, Aswan. I obtained my BSc and MSc in Pharmaceutical Sciences in 2013 and 2019, respectively, from Faculty of Pharmacy, Assiut University. I hold an assistant lecturer of Natural Products Chemistry in the same institution, I thus have focused my career path on 'Chemistry of Natural Products'. In February 2020 I was awarded a PhD scholarship from Newton-Mosharafa fund (jointly funded by Ministry of Higher Education (Egypt) and the British Council) to conduct my PhD studies abroad. I have joined Dr. R. Hamed's group in October 2020 to conduct my PhD studies in the exciting area of Chemical Biology with a special emphasis on bioproduction of intriguing chemical entities, taking a multidisciplinary approach around chemistry, biology, informatics and medicine.



**Nathan Fenwick** has started a full-time PhD with **Prof. Richard Bowen, Dr. Richard Telford** and **Dr. Will Martin**, having graduated with a first class MChem from the University of Bradford this year. He is a chemist and will be studying synthesis, analysis and chromatography of aromatic compounds using novel synthesis methods.



Hello, I am **Dan Hall**, I am a first-year PhD student at the University of Bradford. I also completed my undergraduate studies at the University of Bradford. My supervisory team are **Drs Clare Peyton** and **Jennifer Waby**. My PhD is based around the Sp protein family and their inhibition by NDGA and other derivatives. I will investigate this using molecular dynamics simulations.



My name is **Haesung Yun** from Seoul, South Korea. I completed two BSc in Physics and Biochemistry and an MEng in Chemical and Biological Engineering at Korea University, South Korea, where I received diverse insights to widen my knowledge from various fields. In September 2019, I moved to the UK to get an MSc in Medical Bioscience at the University of Bradford as my second master's degree because I realised that I am more interested in the biomedical field than engineering. Now, I am a new PhD student in Biomedical Sciences under the supervision of **Dr Gisela Helfer** and **Dr Klaus Pors**. My project is building on my MSc thesis and I will be evaluating the adipokine chemerin as a new drug target to develop therapies for treating obesity. It is a great opportunity for me to gain knowledge in neuroendocrinology and learn new techniques and I am very enthusiastic to work in this research field.

## CSS Chair

**Julie Thornton** has been awarded a Chair and is now **Professor in Cutaneous Biology**. As the Director of the Centre for Skin Sciences (CSS) Julie provides leadership in research and teaching in one of the largest academic bases in the UK that offers a blend of fundamental and applied skin and hair follicle science. She leads a team of scientists and clinicians supported by grants from key public funders (e.g. Innovate UK, Research England Connecting Capability Fund and the European Union), charities (e.g. Alopecia UK), as well as from global industrial partners (e.g. Dyson, Aveda/Estee Lauder). Julie has attracted nearly £1M for research and KT project over last year, with a strong track record of continuous funding and contracts over many years. Julie is also the Academic Director of the Plastic Surgery and Burns Research Unit (PSBRU), also known as the Burns Unit, providing innovative research opportunities for young trainee plastic surgeons. She consults for 2 companies currently, and publishes widely including papers, books chapters and invited editorials and reviews. Julie's community engagement is extensive, ranging from fund raising for the PSBRU to filming BBC interviews on skin ageing from her living room during lockdown. Julie also undertakes a wide range of teaching and administrative/management duties for the School of Chemistry and Biosciences. Furthermore, Julie has supervised 18 PhD students to completion and in 2019 was nominated for the prestigious Times Higher Education Awards: Postgraduate Supervisor of the Year.

CSS has a strong, well-networked academic and commercial focus, 2020 marks the 10-year anniversary of CSS. There were plans to highlight this with a symposium with keynote speakers and invitations to staff in the rest of the University to highlight the ongoing research in CSS; this will now take place on 2021.

We offer our congratulations to Professor Thornton and wish her well in developing the CSS.



## Promotions

We offer our congratulations to **Dr Clare Peyton**, who has been promoted to Grade 10, and **Dr Refaat Hamed**, who has been promoted to Grade 9.

## Farewells

**Jennie Smith** left the University in November. She writes:

"After some 42 years working I am finally putting down my note pad and pen and switching off the computer. Thank you all for the card, messages and gift voucher It was a lovely surprise. The UoB has been a big part of my life for the last 12 ½ years starting off in Computing, Informatics and Media (now Engineering and Informatics) then in ICT and finally in ChemBio. I starting my working life as a trainee Operating Department Assistant at St Lukes Hospital back in 1978 and once qualified I was in that role for around 15 years working in various hospitals ending up in LGI Ophthalmic operating theatres. I then decided on a career move and did dental nursing for a few years before finally moving into office work with a recruitment company and then moving back to the LGI working as PA to the Head of Anaesthetics before moving to UoB. So I have had a varied and interesting working life and met some lovely people along the way some whom have become good friends. Now it is time for the next chapter in my life - being a lady at lunch 😊 (when things get back to a bit of normality). I will miss you all thank you for being a great working family and I hope we can meet up and have coffee sometime soon. I wish you all well for the future especially during these difficult times."

We were sad to see Jennie go, and thank her for all her hard work and fantastic organisational skills!

## New Admin Positions

**Dr Yvonne Nyathi** and **Dr Giulia Grimaldi** are the new **Staff Development** co-leads for the school. Yvonne and Giulia will work together to plan a staff development programme for the school across a wide range of subjects. They will contact you in due course for ideas.

**Dr Mark Sutherland** will assume the role of **Admissions Tutor** for the Biomedical Science programme and **Dr Alex Surtees** as the **Admissions Tutor** for the Chemistry Programmes. Mark and Alex will be working closely with **Dr Andrew Tedder** as our School Director of Admissions and Marketing to help increase the number of applications to our programmes and help convert those that apply.

### Biomedical Science Tutors:

Stage 1 – **Dr Conor Meehan**

Stage 2 – **Dr Anna Snelling**

Stage 3 – **Dr Munir Hussain**

Course lead – **Dr Jon Fletcher**

### Chemistry Tutors:

Stage 1 – **Dr Philip Drake**

Stage 2 – **Dr Colin Seaton**

Stage 3 – **Dr Bev Stewart**

Stage 4 – **Dr Sanjit Nayak**

Placement Tutor – **Dr Richard Telford**

International Tutor – **Dr Sanjit Nayak**

Course lead – **Dr Clare Peyton**

### Healthcare Science Tutors:

Course lead – **Gillian Jagger**

## British Society for Neuroendocrinology

Dr **Gisela Helfer** has been elected as the new chair of the grants committee of the British Society of Neuroendocrinology. She will start her 4-year term in January. The British Society of Neuroendocrinology is an international society that provides funding, including project support grants, research visit grants and summer student grants, to neuroendocrinologists around the world. Gisela is very humbled to have been elected for this important role. If your research falls in the wider category of neuroendocrinology, Gisela would be delighted to discuss any potential grant applications with you. Please do get in touch.

## Medical Research Council

The Centre for Skin Sciences submitted 5 applications to the MRC Confidence in Concept (Skin Sciences and Pharmacology) call and were delighted that Dr **Krzysztof Poterłowicz** was successful in his bid.

## Oxford Collaboration

Dr **Chris Sutton** is collaborating with Professor Rutger Ploeg and his team from the Transplant Translational Research Group at the Nuffield Department of Surgical Sciences, University of Oxford on a series of funded organ transplant proteomics and metabolomics projects, which will generate up to £100,000 of income for the Proteomics Facility over the next 18 to 24 months.

## Grow MedTech

Dr **Mojgan Najafzadeh** has won a GrowMedTech Proof of Feasibility award for £20K.

## External Examining

Dr **Conor Meehan** was external examiner for the PhD of Gareth Coleman at the University of Bristol.

## New Equipment

Congratulations to Dr **Richard Telford** for securing the donation of a very nice piece of LC-MSMS instrumentation from Waters for use in the Analytical Centre. It's just over 3 years old, and until it's decommission in preparation for transportation to Bradford, has been an integral part of their demonstration laboratory. Hopefully this gives some context to how well this instrument will have been cared for and how modern it is. The apparatus will sit very nicely in the Analytical Centre as a replacement for the oldest (18 years) triple quadrupole LCMS to service the needs of the Faculty. Richard's best estimate is that a new instrument of equivalent specification would be ca. £200,000.

Richard has developed an excellent working relationship with the team at Waters and they are really positive about how we use LCMS at Bradford and how we apply it to such a breadth of applications, which is a really nice reflection of the strengths of the Analytical Centre. We hope this will also be a catalyst for more interdisciplinary projects based upon ongoing discussions with collaborators across the University in Pharmacology, Forensic Science, Health Studies and Psychology and Heritage and Social Science. Well done Richard!

[https://www.waters.com/waters/en\\_US/Xevo-TQ-S-micro-Triple-Quadrupole-Mass-Spectrometry/nav.htm?locale=en\\_US&cid=134798856](https://www.waters.com/waters/en_US/Xevo-TQ-S-micro-Triple-Quadrupole-Mass-Spectrometry/nav.htm?locale=en_US&cid=134798856)

## 13 Academics Series

In October, the University, led by PVC John Bridgeman, launched a new series of research articles from 13 academics. Dr **Gisela Helfer** featured part one of the 13 Academics series. In this article Gisela discusses chronobiology, naked mole rats and why it's time to stop putting the clocks back. The story was picked up nationally and ran all over the country, in no fewer than 27 outlets and led to 2 radio interviews (Pulse 1 and Sputnik Radio) and an invitation to talk about biological clocks at the Harrogate Hospital as part of their CPD series for doctors and other healthcare professionals.

## Editorial Board Membership

Dr **Conor Meehan** has become an editorial board member for BMC Infectious Diseases.

## Papers in Press...

Akhtar S, Najafzadeh M, Isreb M, Newton L, Gopalan RC, Anderson D. **Anti-cancer potential of myricetin bulk and nano forms in vitro in lymphocytes from myeloma patients.** *Archives of Toxicology* 2020

Battaglia S, Spitaleri A, Cabibbe AM, Meehan CJ, Utpatel C, Ismail N, Tahseen S, Skrahina A, Alikhanova N, Mostofa Kamal SM, Barbova A, Niemann S, Groenheit R, Dean AS, Zignol M, Rigouts L, Cirillo DM. **Characterization of genomic variants associated with resistance to bedaquiline and delamanid in naïve Mycobacterium tuberculosis clinical strains.** *J Clin Microbiol.* 2020 Sep 9;JCM.01304-20.

Brahmbhatt HA, Surtees A, Tierney C, Ige OA, Piletska EV, Swift T, Turner NW. **Effect of polymerisation by microwave on the physical properties of molecularly imprinted polymers (MIPs) specific for caffeine.** *Polymer Chemistry* 2020

Buscone S, Mardaryev AN, Westgate GE, Uzunbajakava NE, Botchkareva NV. **Cryptochrome 1 is modulated by blue light in human keratinocytes and exerts positive impact on human hair growth.** *Experimental Dermatology* 2020

Dell'Acqua G, Richards A, Thornton MJ. The potential role of nutraceuticals as an adjuvant in breast cancer patients to prevent hair loss induced by endocrine therapy. *Nutrients* 2020, 12, 3537

Lempens P, Decroo T, Aung KJM, Hossain MA, Rigouts L, Meehan CJ, Van Deun A, de Jong BC. **Initial resistance to companion drugs should not be considered an exclusion criterion for the multidrug-resistant tuberculosis shorter treatment regimen.** *IJTLD* 2020

Merck R, Swift T, Rees R, Van Guyse J, Schoolaert E, De Clerck K, Ottevaere H, Thienpont H, Victor Jerca V, Hoogenboom R. **Förster resonance energy transfer in fluorophore labeled poly(2-ethyl-2-oxazoline)s.** *J. Mater. Chem. C*, 2020

Rellstab C, Zoller S, Sailer C, Tedder A, Gugerli F, Shimizu KK, Holderegger R, Widmer A, Fischer MC. **Genomic signatures of convergent adaptation to Alpine environments in three Brassicaceae species.** *Molecular Ecology* 2020

Rivière E, Heupink TH, Ismail N, Dippenaar A, Clarke C, Abebe G, Heusden P, Warren R, Meehan CJ, Van Rie A. **Capacity building for whole genome sequencing of Mycobacterium tuberculosis and bioinformatics in high TB burden countries.** *Brief Bioinform.* 2020

Sikkink SK, Mine S, Freis O, Danoux L, Tobin DJ. **Stress-sensing in the human greying hair follicle: Ataxia Telangiectasia Mutated (ATM) depletion in hair bulb melanocytes in canities-prone scalp.** *Scientific Reports* 2020

Soldevila-Barreda JJ, Fawibe KB, Azmanova M, Rafols L, Piñó-Barry A, Eke UB, Barry NPE. **Synthesis, characterisation and in vitro anticancer activity of catalytically active indole-based half-sandwich complexes.** *Molecules.* 2020 Oct 3;25(19):E4540.

Williams R, Pawlus A, Westgate G, Sikkink SK, Thornton MJ. Age-related changes in female scalp dermal sheath and dermal fibroblasts: how the hair follicle environment impacts hair aging. *J Investigative Dermatology* 2020

## A Message from CSS

2020 will be memorable for many things but our CSS skin and hair related publications tally is one we are all justly proud of this year ([www.bradford.ac.uk/css/css-research-publications](http://www.bradford.ac.uk/css/css-research-publications)). Not only have two key papers for the REF impact case study been accepted/published, but variously the CSS group contributed to 12 original research papers, 7 reviews and 5 book chapters. Of note, both basic and applied (industry funded) projects contributed to these publications. The breadth of research covered also reflects the wide interests of our group, with papers on nutraceuticals as adjuvant therapy in breast cancer to stress-sensing in the human greying hair follicle; cell adhesion mechanisms; two papers exploring wound healing in type 2 diabetes; a brief excursion into silicone dressings for stoma care of skin; a final paper from the Philips EU project showing blue light impacts hair growth; machine learning and new bioinformatics approaches to data and image analysis made three appearances and we collectively authored 5 chapters and co-edited a new book - *Methods in Molecular Dermatology*; Alopecia Areata research is making a comeback and our first paper reviewing adipose cells for tissue regeneration was one of two from the PSBRU fellows. Research plans for 2021 look equally diverse and we look forward to many more fruitful collaborations.

Our thanks to everyone for their great efforts over the year and wishing everyone 'happy holidays'.

## The Conversation

Dr Gisela Helfer had a very timely (ho ho!) article published in *The Conversation* regarding daylight saving time:

Helfer G. **Daylight saving time: five tips to help you better adjust to the clock change.** *The Conversation*, Oct 23, 2020

This was incredibly well received and had over 10000 reads within a week of publishing.

## Chemical and Engineering News

Dr Deborah Crawford's work has been discussed in *Chemical and Engineering News*. Her recent paper (DE Crawford, A Porcheddu, AS McCalmont, F Delogu, SL James, E Colacino. Solvent-free, continuous synthesis of hydrazone-based active pharmaceutical ingredients by twin-screw extrusion. *ACS Sustainable Chem. Eng.* 2020, 8, 32, 12230–12238) and the impact this may have on reducing the environmental footprint of pharmaceutical manufacturing is featured in '**Interlocking screws crank out pharmaceuticals**' by XiaoZhi Lim.

## SSRL and LCLS Users Conference

Dr Briony Yorke gave a talk at The joint **Stanford Synchrotron Radiation Lightsource (SSRL)** and the **Linac Coherent Light Source (LCLS)** Users' Conference that was held virtually on the 5th of October. She gave a zoom presentation in the 'ghost imaging' session which is an emerging field based around developments at synchrotrons and free electron lasers. Briony was presenting her work on HATR<sub>X</sub> (Hadamard Time-resolved crystallography) which is one of the techniques that has contributed to the emergence of this field.

## REDS2020

Dr Kirsten Riches-Suman and Dr Russell Delderfield presented their research at the virtual **Researcher Education and Development Scholarship (REDS2020)** conference. Following on from their recent publication regarding the challenges facing postgraduate students, they discussed the role that the supervisor can play in either mitigating or propagating poor mental well-being practices. The conference was attended



by delegates as far and wide as America, Australia and Africa as well as the UK and was an excellent opportunity to gauge the global challenges that we face in improving academic well-being.

## Foundation for Medical Research India

Dr Conor Meehan gave an invited seminar to the **Foundation for Medical Research (India)** entitled "Improving Mycobacterium tuberculosis surveillance through capacity building in bioinformatics and sequencing". The Foundation for Medical Research practices a combination of basic biomedical and translational research for diseases that affect vulnerable sections of Indian Society ([www.fmrindia.org](http://www.fmrindia.org)).

## Conference Chairs

Dr Tom Swift was conference chair for the **Recent Appointees in Polymer Science** conference on 2<sup>nd</sup> September.

Dr Conor Meehan was a session chair for the **Union World Conference on Lung Health**, online (session: New and Existing TB Drug Resistance).

## Cold Spring Harbor Conference

Dr Yvonne Nyathi presented a poster at the 2020 **Cold Spring Harbor meeting: Protein Homeostasis in Health & Disease** (Virtual) (11<sup>th</sup> to the 14<sup>th</sup> November). This was a very intense 4-day conference with 6 hours of talks and 2 hours of poster presentations per day. Yvonne learnt a lot and is happy to share insights with anyone interested in protein homeostasis and disease.

Yvonne also completed a 6-week course on how to organise and run your own Helpathon (<https://www.tpihelpathon.nl/>). This course, run by the Dutch TPI Helpathon, aims to inspire and help researchers to rethink their research and develop animal free disease relevant research models. However, this innovative approach can be translated to problem solving beyond animal free innovation.

## Vascular Conferences

Dr Kirsten Riches-Suman made the most of the opportunities that online conferencing now offers, by attending the **European Council for Cardiovascular Research (ECCR)** conference (9-10<sup>th</sup> October) and **Artery 2020** (23-24<sup>th</sup> October). Both of these conferences gave exciting updates to the most recent vascular disease research and in particular the effect that early or premature vascular ageing has on the development of atherosclerotic disease.

Under normal circumstances, Kirsten would not have been able to attend these conferences because of the costs associated with registration and travel, and the complications of childcare. Thus, online conferencing does represent a step forward in terms of accessibility and inclusivity for attendees. However, conferences that run over the weekend (such as these) are still a barrier to people who work all week so that they can spend the weekend with their loved ones. We have taken a step forward with equality using remote conferencing, but there is still a way to go before we have accessibility for all!

## Upcoming Conferences



British Crystallographic Association



### Biological Structures Group Winter Meeting 2020 Friday 18th December

#### “Celebrating Rosalind Franklin's 100-year Birthday: New Structures, New Challenges”

Our Winter meeting celebrates Rosalind Franklin's 100th Birthday with a line-up of world-leading international speakers presenting some of the newest and exciting achievements in structural biology, including a substantial number of presentations related to SARS-CoV-2. We are also delighted that Professor Matthew Cobb from the University of Manchester will open our meeting with a historical account of the life and times of Rosalind Franklin.

In addition to organising meetings, a key role of the BCA Biological Structures Group is to promote the development of structural biology, particularly through supporting workshops, training and other events aimed at students and early career researchers. We receive many requests for support and profits from this meeting will be used to support as many of those events as we are able.

Please note that we have tried to keep registration costs low. However, if you are a student and/or young researcher and are in need of support to attend this meeting then please contact our secretary Dr. Mark Roe (M.Roe@sussex.ac.uk) to discuss your circumstances.

#### Registration Packages:

- Standard Rate (incl. membership for the British Crystallographic Association 2021) - £60
- Standard Rate (without membership) - £40
- Student Rate (incl. membership for the British Crystallographic Association 2021) - £35
- Student Rate (without membership) - £20

All proceeds of the meeting are used to support workshops, crystallographic meetings and bursaries. To register please use this link: <https://www.eventsforce.net/hg3/188/register>

Time	Program
10:30-10:35	Session 1: Chair Kate Brown (University of Cambridge)
10:35-11:05	Kate Brown – Welcome
11:05-11:35	Matthew Cobb (University of Manchester, UK) – The life and times of Rosalind Franklin
11:35-12:05	Briony Yorke (University of Bradford, UK) – Early Career Prize Lecture – Developing new tools for time-resolved crystallography
12:05-13:00	Elena Seitadake (University of Oxford, UK) – Receptor-ligand complexes in the brain: Combining structural and biological methods to understand the biology
12:05-13:00	Lunch break
13:00-13:30	Session 2: Chair Mike Hough (University of Essex)
13:30-14:00	Andrea Thorn (HARBOUR, Hamburg University, Germany) – The Coronavirus Structural Taskforce: A 2020 effort.
14:00-14:30	Patrick Cramer (Max Planck Institute, Göttingen, Germany) - Coronavirus RNA polymerase: structure and inhibition by remdesivir.
14:30-15:00	Jason McLellan (University of Texas, Austin, USA) - Development of Antibodies and Vaccine Antigens for SARS-CoV-2.
15:00-15:30	Coffee/tea break
15:30-16:00	Session 3: Chair Ivo Tews (University of Southampton)
16:00-16:30	Donald Benton (Crick Institute, London, UK) - Structural basis of SARS-CoV-2 receptor binding.
16:30-16:35	Tânia Custódio (DESY/EMBL, Hamburg, Germany) - Selection and structural analysis of synthetic nanobodies neutralizing SARS-CoV-2.
16:35-17:00	Sjors Scheres (LMB, Cambridge, UK) - Cryo-EM single-particle analysis
16:35-17:00	Kate Brown - close
16:35-17:00	Post-meeting get together

## Adapting to Online Teaching

This semester has been an unprecedented time in academia, with the majority of teaching being conducted online. Students have had to adapt to learning in this way, and academics have had to step out of their comfort zone, think outside the box and come up with innovative ways to deliver lectures, tutorials, workshops and laboratory practicals in an engaging way. This has been a massive challenge for us all, and everyone from the students, to the lecturers, to the teaching technicians, all deserve the recognition for their efforts in ensuring the students have the most positive learning experience that they can.

### Lectures

Large group lectures for Biomedical Sciences (up to 150 students) have in the most part been surprisingly positive. In particular, the first year students are incredibly engaged during the teaching sessions, with insightful questions regularly coming up in the chat box. However, we have had to adapt our methods during the semester. Over the summer, we were recommended to have regular breaks throughout each hour, for example by inserting a quiz or break-out room or other activity. Student feedback on this was not positive as it meant clicking in and out of different software packages multiple times throughout the session. As some students are using their mobiles to attend lectures, this is clearly not an accessible and inclusive way to teach. Instead, we have found that condensing the presented lecture material into 25-30 minutes and allowing the remainder of the time for free-form questions is much better received.

### Tutorials

Lecturers in Chemistry have been making use of tablets with a pen for drawing and writing during their group tutorials. The students have responded well to this, as it means that molecules are drawn in real time and the students can see what the molecules look like when drawn by hand rather than specialist software like ChemDraw. This helps to set realistic expectations.

### Laboratories

Laboratories are an integral part of all the degree programmes within the School. Lockdown has proved particularly difficult for this – whilst some laboratories have been able to move online, others have needed careful organisation and co-ordination from the teaching technicians to timetable and run labs in a way that adheres to social distancing. They have also been incredibly helpful with making videos of laboratories so that they can be run virtually. Whilst we all (staff and students) would prefer that we conduct frequent practicals on campus, our efforts have ensured that no learning outcomes have been lost.

### Challenges

Understandably when switching to this new mode of teaching and learning, there are some challenges that remain. Student engagement is difficult to gauge during lectures and tutorials as we cannot feed off the usual subtle cues we see face-to-face. Frequently asking questions that require a response is one way to address this. Another challenge is being a perfectionist when it comes to recording the sessions. Sometimes this can mean recording and re-recording multiple times in an attempt to get the 'perfect' take – here, we need to manage our expectations as if we start going too far down this rabbit hole, it can take a full day to record one 1-hour session. Finally, the joy of auto-captioning is proving very problematic! Those lecturers who check their auto-captioning have found very bizarre subtitling of all sorts of things, from names of people and compounds to general words like 'fact'.

### Areas of excellence

**It is important to recognise when things go well and share these experiences so that we can all learn and apply these to our own teaching practices where they are relevant. Please send any examples that you have so that we can share these here – it is likely that online teaching is going to be a big part of academia from now on.**

- Canvas quizzes – students from all programmes have given positive feedback regarding the use of Canvas quizzes. Short quizzes can be made following each lecture, tutorial or lab for students to assess their knowledge. Try setting it to allow multiple attempts from now up until the resit period to help the students with their revision. Also provide a word version so that they can download and complete offline if their internet connection is problematic.
- Revision sheets – In addition to Canvas quizzes, Biomed students have commented on the usefulness of having worksheets or revision sheets that they can fill in during the lecture and use afterwards as a revision aid.
- Taking your time – When we first start teaching online, nerves and the anticipation of problems are high. This can result in us trying to cram too much material into too short a time frame, which is overwhelming to students and can cause them to disengage. Be kind to yourself and take your time – the students know that this is a learning experience for ALL of us, and have been good at providing feedback and advice when things could be done a little better.



## RSC Accreditation

The **Royal Society of Chemistry Accreditation** paperwork was submitted Thursday 10th September and we hope to have the outcome before Christmas. A huge well done to **Drs Clare Towse, Beverley Stewart and Jenny Waby**, and the accreditation team for all their hard work with this. It's so important for growing chemistry applications.

## Offering an Ear to Student Wellbeing

Heather Reeve

Back during the first lockdown I joined in with a wonderful set of technicians from across the country every Friday morning to just chat and work out problems together. Whilst engaged with this wonderful group I was encouraged to write a blog for the Technicians Commitment to show what I do as a technician at Bradford (<https://www.technicians.org.uk/blog-heather-reeve-technician-at-bradford-university>). Roll on to start of term I had long forgotten this little piece I wrote thinking it gets me out there but nothing will come from it to receive a surprise email from University of Liverpool asking me to talk at a webinar they were putting together! Little me, who thinks she is just doing her job! The reason they wanted me; because I help support our students with their wellbeing throughout the year.

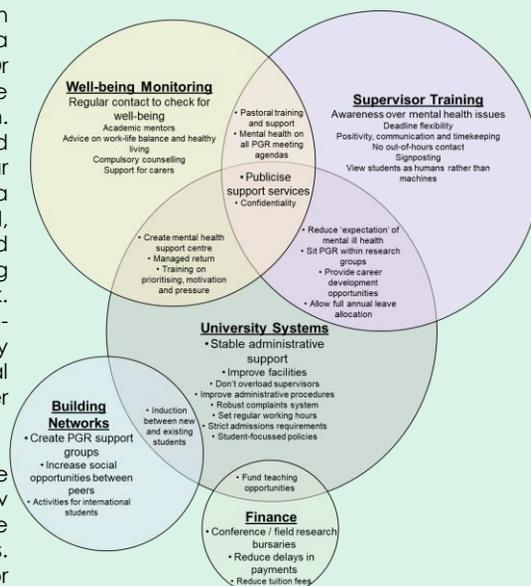
To me our student's wellbeing is one of the most important things to protect, especially this year where face to face teaching and contact has been less. Following this link at 43 minutes you can hear me discuss things I do for our students including understanding their LSPs, doing student check ins and just ensuring our students are supported in the laboratory (<https://www.liverpool.ac.uk/researcher/technicians-hub/community/>). As a technician I am seen as the non-official staff member where wellbeing and pastoral support is not part of my job but it is my every day commitment to the students and staff around me. I see the students more often than people realise, 6 hours a week normally, so I can notice when a student is struggling and sometimes the words 'What is wrong?' or even 'Do you want to talk?' is enough to break that barrier to help a student in a wellbeing issue. During my 4 years in teaching laboratories I have dealt with a lot of mental health issues and even issues regarding death of a loved one but my moto is if I can listen and offer some support or direct them to the people who can why wouldn't I.

I will listen to all and never judge what is going on so if you need an ear to listen please talk don't hide or keep it to yourself.

## Postgraduate student wellbeing

Recognition of the mental health crisis in postgraduate students has increased massively over the last few years, even before Covid-19 came along to disrupt their studies. Students report feelings of isolation and failure, intolerable levels of stress and anxiety, and this can have a lasting impact throughout their post-student lives. Here at Bradford, Dr Kirsten Riches-Suman led a team of researchers to examine what the local situation is like. This study was conducted BEFORE lockdown. Unfortunately, our students were very stressed in a way that impacted on their life outside university (>70%). When asked what in particular was causing problems, it was surprising that the thought of writing a thesis or conducting their research did not actually come up. Instead, a lot of the issues referred to administrative university systems that did not facilitate their progress. For example, reimbursement costs being delayed, inconsistencies in administrative support and paperwork. More details can be found in our publication (R Delderfield, M Ndoma-Egba, JR Boyne, K Riches-Suman, A learning development-faculty collaborative exploration of postgraduate research student mental health in a UK university. *Journal of Learning Development in Higher Education* Oct 2020;18.).

The university has been receptive to this and a number of things are happening to try and improve wellbeing for our students. New inductions now include a Q&A with current students, and within the school we have conducted staff training on mental health awareness. A suite of work is continuing to assess how we can address impostor syndrome and what role supervisors own experience can play in propagating or rectifying poor wellbeing practices.



# Admissions and Outreach

## Admissions

As I stare at my screen through the blur and indifference of 'Zoom fatigue' (with the startling realisation that 'burn out' really is a thing!), I look back over the last three months (and indeed 2020) with a sense of real pride in what we, as an outreach and admissions team, have managed to achieve. The notion, 12 months ago, that we could develop and deliver engaging, interactive online applicant experience days, would have been met with a healthy dose of scepticism. But the truth is, here in ChemBio, we have some of the most dedicated, innovative and responsive team members any 'Admissions tutor' could ask for, so before I pick out my 'highlights of the year', I'm going to name check them all. Deservedly.

The '**Biomed**' team, led by **Dr Mark Sutherland**: **Dr Gi Helfer**, **Dr Kirsten Riches-Suman**, **Dr Jenny Waby**, **Dr Anna Snelling**, **Dr Sobia Kauser**, **Dr Jon Fletcher** and **Dr Conor Meehan**.

The **Chemistry** team, led by **Dr Alex Surtees**: **Dr Anais Pitto-Barry**, **Dr Colin Seaton** and **Dr Philip Drake**.

It's important not to forget the excellent work done by our team of incredible **student ambassadors** also: **Alisha Noor Zia**, **Malika Zahedi**, **Sanah Rehman**, **Saarah Taj**, **Esther Gray**, **Dan Hall**, **Haesung Yun** and **Maria Azmanova**.

In the past month, both of our newly appointed admissions tutors have had a real 'baptism of fire' creating virtual events that will make applicants want to become students! This has involved a rethinking of what an AED should look like, and how you go about getting 'hands on' through a computer screen (when you don't have the luxury of Canvas to help). Among the highlights of these events have been the 'virtual lab' sessions. For the 'Biomed' and HCS applicants, this has been an excellent Gram staining lab run by **Dr Conor Meehan**. This has been really well received by applicants, and has led to a really engaging Q&A session. Having never done a gram stain myself, I also learnt something! For the Chemistry AED, **Dr Anais Pitto-Barry** and **Dr Alex Surtees** combined to deliver an introduction to NMR sample preparation and interpretation. This culminated in the applicants directing Alex how to prep their samples in real time. Neither of these activities would have been possible without the 'Learning Science' tutorials, so we are grateful to **Dr Jen Waby** for organising this for us.

**\*Shameless request for ideas alert\*** If you have ideas for engaging virtual activities, and would like to contribute to the on going outreach and admissions activities, please do contact either myself, Alex or Mark! We would love to have you on board.

## Highlights of 2020!

The moment literally nobody has been waiting for, my outreach highlights of the year! OK, so I may need to scrape the barrel a little bit, but I do believe we have had some successes (and some fun in between the COVID misery - Sorry, I went and mentioned it).

- 1) Despite possible dooms day predictions, our recruitment to UG and PG programmes was on par with previous years (and indeed up in some cases!). This in itself should be celebrated, because the amount of logistical nightmares the team had to deal with to make the transition made things really difficult. To every single person involved in this, please accept my sincere thanks.
- 2) The Webinar series we ran during the initial lockdown, and continued into Semester 1 was incredibly well attended. The praise for this has to go to the staff members who delivered truly excellent research seminars. Who'd have thought we could have attracted almost 40 people to talk about Fungi! I'm kidding, Steve. It was a really good talk. Thanks go to: **Dr Gi Helfer**, **Prof Anne Graham**, **Dr Kirsten Riches-Suman**, **Dr Conor Meehan**, **Dr Philip Drake**, and **Prof Steve Rimmer**. Don't worry if you didn't get an opportunity to present a webinar, we are running another series starting in January, please get in touch if you want to showcase your cool science!
- 3) I've mentioned the virtual lab sessions already, but I cannot stress enough how cool these have been! I'm a geek at heart, and so being able to take part in science at home (i.e. in my pyjamas) is really great.
- 4) Our student ambassador team! This should probably have been higher on the list. They have all been amazing. From leading Q&A sessions at AEDs, to presenting at UG and PG open days about their own student journeys. Feedback has been incredible. I really think we will see a difference in conversion due to the efforts these students are putting in. Thanks to everyone who has been involved.

I want to leave this rambling piece on a high note, so I will only mention in passing our next **AED dates**, **January 6<sup>th</sup> for Chemistry** and **January 20<sup>th</sup> and 27<sup>th</sup> for 'Biomed' and HCS...**

Thanks to everyone who has contributed to admissions and outreach activity this year, and have a great winter break!

# Admissions and Outreach

## Café Scientifique

The Café Scientifique is going from strength to strength and over the last couple of months we were treated with outstanding talks. In October, Prof Saiful Islam talked about green energy and this was followed in November by Prof Stephanie Dancer discussing smart cleaning.

The programme for the remainder of the year has been published and can be found on twitter @CafeScientifiqueBDF or the National Media Museum website

<https://www.scienceandmediamuseum.org.uk/whats-on/cafe-scientifique>

The next event will take place on Thursday 10 December from 18:30 via Zoom. Karina Croucher and Adrian Evans from the School of Archaeological and Forensic Science will discuss building community resilience through heritage. Karina will talk about death and dying, and how engaging with historical objects that portray death can help us talk about difficult subjects. Adrian has used photographs of historical sites to construct immersive realities for displaced people and will show how these tools can prompt conversations that can help people deal with their difficult circumstances.

Book your free place via the National Science and Media Museum.

If you have any questions or suggestions for future speakers, please get in touch with **Dr Gisela Helfer** or **Prof Anne Graham**.

## Television Appearance

On 15<sup>th</sup> September, **Dr Kirsten Riches-Suman** represented the Centre for Skin Sciences for filming a short piece for CITV. It was broadcast on Saturday 3<sup>rd</sup> October as part of ITVs Black History Month celebration in a magazine show called 'IRL Team Charlene'.

She spoke about the importance of melanin in protecting our cells from UV damage, the role of Vitamin D, and how this contributes to our skin colour. Whilst this was only a very short piece, it was an interesting experience to film it for TV. Kirsten is usually a confident speaker but as soon as the camera started rolling the nerves got the better of her and she forgot all her lines! Thankfully the camera woman was very experienced in calming people down and after about an hour had shot all the material she needed from multiple angles.

Judging by social media coverage, the piece was very well received with viewers commenting on how well the sensitive issues around racism and discrimination were handled. And on a personal note, it was a joy for Kirsten that her little boy could see his mummy on the TV ©



# Admissions and Outreach

## Burning Up the Airwaves

Lockdown has seen a marked increase in the number of radio interviews being conducted by our staff:

On 9th September, **Dr Jonathan Fletcher** did an interview on **Radio Leeds Breakfast Show** about the new restrictions on the number of people allowed to meet at social gatherings. On the 1<sup>st</sup> October, he followed this up with a **Radio Leeds** interview about the Imperial College Data Modelling which suggested a slowdown in the number of new cases.

On Friday 2<sup>nd</sup> October, **Dr Conor Meehan** gave an interview to **Times Radio** with Gloria de Piero on the new lockdown measures being imposed on the north of England.

On the 24<sup>th</sup> October, **Dr Gisela Helfer** gave an interview on the clock change to **Pulse 1 radio**, swiftly followed by another interview on the same topic on **Sputnik Radio Edinburgh** on 26<sup>th</sup> October.

## Webinars

On 16<sup>th</sup> September, **Dr Kirsten Riches-Suman** hosted an outreach webinar entitled 'Heart Disease and Diabetes' for prospective students. The session was very well organised and attracted a lot of interesting questions regarding genetic predisposition to type 2 diabetes and potential therapeutic avenues.

On 7<sup>th</sup> Oct 2020, **Dr Gisela Helfer** hosted a webinar 'Your body clock and how it affects your appetite' aimed at prospective new students. The webinar was an improved version of her previous webinar in June and she discussed the circadian control of appetite and body weight regulation and how understanding the underlying molecular mechanisms can help us to understand why disruption of our body clock can lead to obesity. The participants were really interested in the topic and asked many questions during the webinar and per email afterwards.



## Bradford Science Festival

After being cancelled in the summer the **Bradford Science Festival** consolidated itself and embraced the online world launching a new virtual spin-off festival during the October half-term. The events were well attended and matched the page views expected for the full summer Festival.

**Drs Gisela Helfer** and **Katie Hanna** produced a video on naked mole rats aimed at children age 8 to 12 years old. With their giant teeth and wrinkly pink skin naked mole rats won't win a beauty contest, but they are a truly remarkable species. They live extremely long, don't show signs of aging and are resistant to cancer. In the video, Gisela and Katie introduce Morris, the naked mole rat, and explain how his adaptation to life in the dark may help us improve human lives. Gisela and Katie had a lot of fun making the video and showing off our amazing naked mole rat colony. The video, entitled 'Dig deep into the underground life of naked mole rats', is available on the YouTube channel of the National Science and Media Museum until January:

<https://www.youtube.com/watch?v=n8eHBoeSW5Y>

**Dr Philip Drake** talked about the chemistry of COVID-19 testing and looked at the current PCR and immunoassay tests being deployed, tying them into the current knowledge on how the virus develops in the body and when each test should give a positive or negative result.



## A Day in the Life of a Chemistry Student in Lockdown Esther Gray

**Disclaimer: My life is not this put together; this is across two weeks of jobs and a day routine and even then, this has taken me three years to get into this pattern!**

Firstly, every day I wake up bright and early at 9am (obviously if it is the weekend I sleep until I can get up) and start my day with some yoghurt, fruit and granola and of course, coffee! Once I have become a functioning human, I attend my lectures at 10am. Within this photo showing my synchronous lecture, you can also see a plan and a to do list for the week. My advice for new students is to plan your week and it is a type of a task I do every Sunday. It really helps me to be on top of things, especially in year 3 when it can get hectic.

During this miserable lockdown we have had, during the day I do love to go out on a walk anywhere. From as small as going into town or to as big as going to the Ilkley Moors to get away from being stuck in the house all day. On this particular day it was raining and snowing but being locked in, resulted in not caring about the weather. Instead I sometimes I like to consume my time by putting on makeup just because I feel like it or I might want to feel glamorous whilst revising. This is just for me to feel like I could be going out somewhere which can make me feel a lot better rather than thinking my plan is to stay in.

And of course as a student my day usually consists of learning new material or doing coursework and on the rare occasion finally submitting something! This is a time I like to use when I am most committed and energetic, so I obtained the most amount of knowledge or get the most amount of productive work done.

For lunch I usually reheat something that I have made too much of during the week, here I have made a lovely chorizo mozzarella pasta bake and reheating it in the microwave to eat whilst I watch something on no particular streaming website. In the background is a meal plan for the month, this is another tip I like to share as it helps me buy the ingredients I need with no extra waste of food and it also makes me think I am ordering less takeaways when I really am not! Sometimes after lunch, I carry on with work or I have a video call with a couple of classmates. This one is with Aysha, helping me get through learning polymers and biochemistry for third year. I encourage others to do this as I have particularly missed seeing my classmates everyday and helping each other out or catching up.

Finally the day is nearly coming to an end where I love to eat something substantial. For this meal I have made a chicken seasoned with salt and herbs and cooked with chips and a lovely salad topped with cherry tomatoes. After dinner I like to wind down with a tea that usually helps me relax or boosts my immune system. This is definitely a routine I would recommend especially the immune system boosting teas, as I learnt the hard way in my first year, if you do not keep up a balanced diet you are more than likely to come down with glandular fever. And I can say from personal experience it is something you not need especially in the time of COVID.

On a Friday, I like to treat myself for making it to the end of the week with a glass of wine and a mince pie, especially in the time of December when I am finally looking forward to going home for Christmas! Every other weekend I usually do a deep clean of my room from washing clothes and bed sheet to hoovering and cleaning up. This helps me think it is a fresh start for a new week, but unfortunately I cannot keep it up every week!

And finally when lockdown was over and the north was slumped into Tier 3 and the first thing I did was go to the gym and unfortunately as you can see from this photo, I did not prepare myself for it. Especially when the only exercise for a month was walking....



## Lego DNA

**Daniel Khosravinia** was one of our first year BSc Biomedical Science students a few years ago. He moved on to study in London and has recently gained national attention for his initiative in designing a Lego DNA set.

Daniel says: "Briefly, Lego DNA is the first ever Lego model of the DNA structure and the history of its discovery. The detailed double helical DNA molecule, coding for a MDK tripeptide plus a stop codon, is based on a platform with 2 labs, the Franklin-Wilkins lab and the Watson-Crick lab. The FW lab contains 2 microscope cameras based on the actual instruments used to take DNA sample images, including Photo 51. Photo 51 and the Lego people (minifigures) of all 4 scientists above are also included.

The project is currently on Lego Ideas, an official Lego website where fans can submit their own designs. Designs that reach 10,000 supports will be considered as a real Lego set. This is the support link: <https://ideas.lego.com/projects/5bd5311e-5078-4a7b-8763-e9cfd8a38c42>. My aim in making this project was to increase the recognition of these scientists, who discovered a piece of information that is now seen as common knowledge. A major focus of this project is Rosalind Franklin. Even though her contributions were crucial, I realized that she was not as well recognized as the other researchers. I hope that the project can also promote science and STEM."

The adoption of Lego DNA is dependent on voting milestones. If it reaches a certain number of votes, then it will be considered to make into a proper commercial set (I, for one, would be first in the queue for it!). Please visit the link above to register your vote for Daniel and to see this fantastic idea become a reality.



## Life Sciences PGR Symposium

The School was extremely well-represented at the Faculty of Life Sciences PGR Symposium on 1st September:

- **Nehnah Siddique** (Biodegradation and synthesis of polyurethanes; **Prof Stephen Rimmer** and **Dr Jon Fletcher**)
- **Laia Rafols** (Antitumor activity of organocobalt complexes containing bulky ligands; **Prof Nic Barry**, **Dr Will Martin**, **Dr Steve Shnyder**)
- **Sumaia Sabouni** (Developing a prediction tool for adverse outcomes in women with gestational diabetes mellitus; **Prof Anne Graham**, **Prof Qahwaji**)
- **Sehaj Singh** (Exploration of the interaction between functionalised highly-branched poly(N-isopropylacrylamide) and antibiotic resistant bacteria and development of further applications; **Prof Stephen Rimmer**, **Dr Jon Fletcher**)
- **Rachel Sedman** (The impact of the scalp dermal environment on hair ageing biomarker; **Prof Julie Thornton**, **Prof Des Tobin**)
- **Paul Norton** (Effective removal of antimicrobial resistant bacteria from chronic wounds; **Prof Julie Thornton**, **Dr Maria Katsikogiannini**)
- **Maria Azmanova** (The potential of electron-deficient metal complexes in the fight against cancer; **Prof Nic Barry**, **Dr Steve Shnyder**)
- **Ali Algaddafi** (Design of a novel heating coil system and high effectiveness cooling system; **Dr Philip Drake**, **Dr Tom Swift**, **Prof RA Abd-Alhameed**)

Congratulations to all the speakers, and especially to **Maria Azmanova** who won first prize for her talk and 1st prize for best abstract for second year in a row. **Rachael Sedman** also did very well and won third prize for her talk.

## Undergraduate Student Reps

The student reps for **BSc Biomedical Science** are: **Aisha Aslam** and **Awaba Mussadiq** (both Year 1); **Claire Blissett** (Year 2); **Naila Khan**, **Meha Shafiq**, **Sanah Rehman** and **Maryam Ahmed-Sani** (Year 3)

Awaba has this message: "Hi everyone. My name is Awaba, I am a first year Biomedical Science student rep. I am from Bradford. I decided to study Biomed because I know there is quite a few options you can have with a Biomed degree and I liked that variety. Also, from high school and sixth form, I enjoyed the lab practicals that we did, and I knew I wanted to do something like this for university.

As a Student Rep, I want to make sure that everyone gets the best possible experience they can have for university. I want to be a bridge for the students if they have any issues but are too uncomfortable or don't want to talk directly to a staff member about it, I want to be there to help them and let them know that I can get their issues through and make sure they are resolved."

The student reps for **BSc Healthcare Science** are: **Sumaiyah Chopdat** (Year 1); **Nifemi Adekugbe** (Year 2); **Heera Younus** (Year 3).

## Don Whitley Scientific Prize

For over 25 years, Don Whitley Scientific has sponsored a prize for the graduate who achieves the highest marks in the microbiology option of the Biomedical Science degree. This years winner was **Taheer Ali**.

## Graduate Success

**Dr Shabana Akhtar** has accepted a post as assistant professor in Biomedical Sciences at the University of Lahore in Pakistan. She starts this new post at the end of November this year. Congratulations from Prof Diana Anderson and the School.

## Seminar Speaker

**Maria Azmanova** gave a seminar to the Faculty of Life Sciences as part of the Institute for Cancer Therapeutics (ICT) seminar series.

## 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](mailto:k.riches@bradford.ac.uk)) or **Dr Andrew Tedder** ([a.tedder@bradford.ac.uk](mailto: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](mailto:ambassador@bradford.ac.uk) before the application.

## 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](http://www.linkedin.com) and join the community!

**Bradford University School of Biomedical Sciences**  
**Bradford University School of Chemistry**

