

# Bradford ChemBio

What's been going on in our school for the past three months...  
October – December 2022



@UoBChem

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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...

Happy new year to all – we hope you are all settled back in to work now and are surviving the January blues! It is always a hectic time of year with the end of semester 1, exams, marking, starting semester 2 and January intakes (not to mention research deadlines) but February is on the horizon and hopefully things will start to level off.

This newsletter is covering the last quarter of 2022, and we are delighted to welcome a number of new staff and PGR to the school. It was a busy time for attending conferences both locally and internationally, and congratulations to all who received grant funding or published their work during this time.

Outreach has been particularly strong with funding awarded to promote STEM in schools and colleges, and we were very happy to hear about our PhD student **Gwyn Dahlquist-Axe** speaking to school children about research all the way over in British Columbia!

Please do keep sending in your good news stories – it is truly enjoyable to read about the wealth of experiences and impact that you have across all sectors and it is important to celebrate these successes when we have them! You don't have to wait until the next call to email us – we're happy to receive items as and when for collation. Whilst we do scour Anne's fortnightly briefing, feel free to contact us with more detail (or photographs, flyers etc) for inclusion in upcoming editions.

All the best,

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



## New Roles

**Dr Parisa Naeem** (Ethical Tissue) has been appointed to a second role as attainment tutor for the School of Pharmacy and Medical Sciences.

Our thanks go to **Dr Alex Surtees** for all of his hard work on Chemistry admissions over the last few years, alongside his role in Forensic Science within SAFS. Alex is moving full time to SAFS, although I am sure he will still champion Chemistry programmes to interested applicants. **Dr Debbie Crawford** has agreed to take on the chemistry admissions lead so please support her in every way you can be timely responses to any requests for help with visits onto campus or external events.

## Welcoming new students

To officially welcome our new cohort of **MSc students** to Bradford, **Dr Andrew Tedder** and **Dr Gisela Helfer** held a social event so that the students got some time to meet each other and the academic team outside of lectures. They held a fun quiz on the 24th of October where students and staff not only showed off their amazing knowledge on biology, dog breeds, album covers, etc but also were challenged with some 'impossible to know' questions on our academics (Do you which academic has the smallest head circumference?). Thanks to all students and staff who attended, it was a fun afternoon!

## New Technician

My name is **Maria Tsarjova** and I am originally from Estonia. I have an unwavering passion for the field of biology. My interest in the sciences prompted me to embark on a journey to England, where I earned a degree in Biomedical Science from the University of Bradford. My love for the field of science only grew stronger as I went on to complete a Master's degree in Skin Science and Stem Cell Biology from the same institution. Throughout my studies, I have acquired a profound understanding of the field, which has only served to deepen my love for it.

In addition to my academic pursuits, I have also worked as a bartender during my studies. This experience not only helped me become more independent but also provided me with the opportunity to interact with a diverse group of people. I am now eager to continue my career at the University of Bradford, the very institution where I have invested so much of her time and energy.

## New PhD Students

Hi. My name is **Gareth Richardson** and I have just started my PhD at the **Institute of Cancer Therapeutics** with **Dr Helen Sheldrake**, **Dr Mark Sutherland** and **Dr Steve Schnyder**. My project here at Bradford is focusing on the targeted protein degradation of integrins in cancer, using technologies such as PROTACS and LYTACS.

I completed my BSc at Keele University where I did a dual-honours degree in Biochemistry and Medicinal Chemistry. I then decided to focus more on medicinal chemistry, moving to Nottingham Trent University to complete my MRes under Dr Cross. In this, we were developing a new method for drug conjugation onto aromatic peptides.

I am looking forward to developing my project here at Bradford and hoping to get to know everyone over the next few years. Outside of work I am quite a keen long distance and cross-country runner. I've joined Bradford Airedale Athletics club since moving up here and started competing in the local cross-country league.



Hello, I am **Juliet Yakubu**, a 1st year PhD student with the **Polymer Research Group** under the supervision of **Professor Stephen Rimmer** and **Dr Jonathan Fletcher**. We are looking at microbial pollutants in rivers and will be focusing on the development of other methods of detecting bacterial contamination from industrial sewage discharge. This completely novel approach will be using the Polyurethane Foam functionalized with selected antibiotics for the adsorption of a selected bacteria as model organisms. This research's success will make it easier to track contamination sources and simplify the current methodological approach to detection of microbial contamination in water bodies. It is a privilege and honour working with the Polymer Research Group and I am looking forward to a fulfilling career afterwards.



## New Lecturer

Thank you for the warm welcome to the UoB. I recently have joined the Faculty of Life Sciences on the 28th of November 2022 as a part-time Assistant Professor in Histopathology. My role essentially will be to help facilitate the development and delivery of the new distance on-line based BSc (Hons) Applied Healthcare Science Apprenticeship programme for 2023-24.

My background is exclusively NHS based. I have spent 28 years as a highly experienced Biomedical Scientist practitioner in multiple Diagnostic Histopathology laboratories throughout England, Scotland and Ireland. I have thoroughly enjoyed exploring new places and different laboratory systems, but alas I am ready to hang up my forceps and lock my microtome for an exciting and challenging role in academia.

I am looking forward to acquiring a new set of academic skills and cannot wait to get cracking with the Fellowship in Higher Education. I also look forward to sharing the wealth of my technical and knowledgeable lab expertise to enable a much more inclusive experience for students, which I am hopeful will contribute to a high calibre of IBMS registrants.

Whilst transitioning, I am currently trying to grasp the functionality of Canvas, Echo360 and Teams which for a non techie, is a minefield to say the least!! I will be reaching out to some of you lovely folk for guidance and assistance with this (and maybe a brew/coffee too ). When I'm not tying myself up in knots over the tech side of life, I unwind with a bit of a ramble up in the hills, plenty of staycations and travels abroad, allotment gardening and subjecting family and friends to the delights of my culinary skills (speciality being, authentic chicken karahi dishes which, may I add are a taste sensation!). Feel free to reach out for a recipe or even a demo session.

**Soofia Sharif** (BSc, MSc, FIBMS)  
Assistant Professor in Histopathology



## Schlumberger Foundation

Dr **Stephen Hickey** has successfully attracted a **Schlumberger Foundation** Postdoctoral fellow for two years to his team through their flagship program "Faculty for the Future". The candidate, **Jenna Geralde Yanke Mbokana** joins us from Yaoundé in Cameroon.

The Schlumberger Foundation recognizes the link between science, technology, and socio-economic development and the program's long-term goal is to accelerate gender equality in STEM by generating conditions that result in more women pursuing scientific careers through alleviating some of the barriers they encounter when enrolling in STEM disciplines. The program is committed to gender parity in science in the interests of sustainable development and recognizes that full access to and participation in a STEM curriculum is essential for the empowerment of women and girls.

## Bosom Friends

Dr **Chris Sutton** received a donation of £5000 towards his research into diagnostic applications of nipple aspirate fluid from the patient support charity **Bosom Friends Bradford** (Bosom Friends Bradford – Supporting those affected by breast cancer in the Bradford area).

Bosom Friends Bradford has been running for more than 30 years with the aim of providing friendship and support to those with breast cancer and their families. They are a patient-led group, but also receive tremendous help from the Breast Care Team at Bradford Royal Infirmary. Bosom Friends is a registered charity which relies entirely on fundraising and voluntary donations. In addition to individual support to women and their families, they have supported a Complementary Therapist at the Cancer Support Center, provided resources for the Breast Care Ward and enabled PhD students to attend conferences.

Over the last 5 years Chris has worked with Bosom Friends to gain feedback on new approaches to breast health monitoring which led to a nationwide survey for education and opinion on unmet clinical needs for early detection of breast cancer.

The donation will be used to purchase equipment, to be installed in the Proteomic Facility in ICT, that will enable development of high-throughput assays to characterise therapeutic targets and diagnostic biomarkers in breast cancer research."

## RSC funding

Dr **Anna Wu** recently successfully obtained a **RSC research enablement grant** (£10K pound), for a project to develop artificial nucleotides. This grant enables recruitment of an RSC research associate in collaboration with Prof. Gavin Miller: Chair of RSC Carbohydrate chemistry.

## Papers in Press...

Costa T, Knaapila M, **Stewart B**, Ramos ML, Justino LLG, Valente AJM, Dalgliesh R, Rogers SE, Kraft M, Allard S, Scherf U, Burrows HD. **Nanostructuring with surfactants: The self-assembly of a new poly(thiophene-phenylene) conjugated polymer bearing azacrown ether pendant groups.** *Langmuir* 2022;38(39):11845–11859

Fonseca A, Lobo J, Hazard FK, Gell J, **Nicholls PK**, Weiss RS, Klosterkemper L, Volchenboum SL, Nicholson JC, Frazier L, Amatruda JF, Bagrodia A, Lockley M, Murray MJ. **Advancing clinical and translational research in germ cell tumours (GCT): recommendations from the Malignant Germ Cell International Consortium.** *British Journal of Cancer* 2022;127:1577-1583

Giordano N, Guha G, **Stewart B**, Kjelstrup-Hansen J, Knaapila M. **Second order phase transition and stabilizing CH···H and CH···S interactions in naphthyl end-capped bithiophene at 3.5 Gpa.** *Journal of Physical Chemistry C* 2023;127(2):1156–1166

**Livesey TM, Mahmoud LAM, Katsikogianni MG, Nayak S.** **Metal-organic frameworks and their biodegradable composites for controlled delivery of antimicrobial drugs.** *Pharmaceutics* 2023;15(1):274

**Mahmoud LAM, Telford R, Livesey TC, Katsikogianni M, Kelly AL, Terry LR, Ting VP, Nayak S.** **Zirconium-based MOFs and their biodegradable polymer composites for controlled and sustainable delivery of herbicides.** *ACS Applied Bio Materials* 2022;5(8):3972-3981

**Mahmoud LAM, dos Reis RA, Chen X, Ting VP, Nayak S.** **Metal-organic frameworks as potential agents for extraction and delivery of pesticides and agrochemicals.** *ACS Omega* 2022;7(50):45910-45934

**Naeem P, Baumgartner A, Ghaderi N, Sefat F, Alhawamdeh M, Heidari S, Shahzad F, Swaminathan K, Akhbari P, Isreb M, Anderson D, Wright A, Najafzadeh M.** **Anticarcinogenic impact of extracellular vesicles (exosomes) from cord blood stem cells in malignant melanoma: A potential biological treatment.** *Journal of Cellular and Molecular Medicine* 2023;27(2):222-231

**Riches-Suman K, Delderfield R.** **Developing supervisors with ability, awareness and confidence to drive inclusive cultures for postgraduate researchers.** *Proceedings of Researcher Education and Development Scholarship Conference* Oct 2022

## RCUK appointments

**Prof Julie Thornton** has been successful in joining the **BBSRC Pool of Experts** for the next 3 years.

**Prof Anne Graham** is a member of the **UKRI Talent Peer Review College** (formerly Future Leaders Fellowships Peer Review College)

## Obesity meeting

Dr Gisela Helfer attended the **Obesity** hybrid meeting in London on 10-12 October 2022. The meeting was a scientific discussion on causes of obesity: theories, conjectures, and evidence. Obesity has been described by the WHO as the largest health threat facing mankind. Obesity is manifestly an issue of energy balance, yet there is surprisingly little consensus on why such energy imbalance develops. This meeting included presentations by world experts discussing the current ideas about mechanisms underlying obesity and how we may tackle it.

## ASC Nurses UK

Dr Tom Swift provided a 10 minute speech to the **Association of Stoma Care Nurses UK Annual Conference**. The presentation to the ASCN congress detailed the collaboration between the University of Bradford and Trio Healthcare, outlining the material requirements of adhesive wound dressings and recent innovations in the sector.

## NVBF

Asare Amankwah presented his PhD work as a poster at the **Northern Vascular Biology Forum** held at the University of Liverpool on 7th December 2022. His poster was entitled: 'Rho kinase inhibition promotes vascular smooth muscle cell dedifferentiation in cardiovascular disease'.

## Tissue engineering

Omera B gave a presentation on her work with Dr Gillian Westgate, Dr Sobia Kauser, Prof Julie Thornton and Dr Jacobo Elies with LabSkin at the **8th International Conference on Tissue Engineering and Regenerative Medicine 2022**, 21st -23rd November 2022, Dubai. Her presentation was entitled 'Innovative methodology for the construction of robust and reproducible pigmented human skin equivalent models at commercial scale'.

## BITEG 2022

Dr Maria Katsikogianni and Prof Julie Thornton's PhD graduate Paul Norton presented a talk at **BITEG 2022** at the University of York (White Rose Biomaterials and Tissue Engineering Group):

- Surface engineering of novel polydimethylsiloxane composites to attract bacteria: Potential to treat infected wounds and reduce AMR

Additionally Dr Tom Swift presented a poster, and chaired a session at this conference.

- Polymer additives as modulators of skin contact biomaterials



There is an invitation for the University of Bradford to host this conference in Dec 2023, and anyone with an interest in this conference who has not been approached is invited to contact Tom to let him know

## Invited seminar

On the 30th of November, Dr Gisela Helfer gave a staff seminar at **Nottingham Trent University** and discussed her work in neuroendocrinology, energy balance and naked mole rats. The talk went smoothly with a very interesting discussion at the end. Gisela had a lot of fun in Nottingham and met up with her collaborator to discuss future research projects. By the way, **Conor Meehan** says hi!



# Admissions and Outreach

## Admissions

The process of recruiting for the 2023/2024 academic year is well underway as well as promoting the courses at schools for the 2024/2025 intake.

Starting on a positive note the number of offers and applications for Biomed are still up on last year and there has been an increase in Chemistry applications since the start of the year with numbers closer to last years application total. Healthcare science has had good interest with a number of students interviewed and offers made.

Over the coming months there are a number of AEDs taking place to help convert those students who have applied as well as Open days. The purpose of the Open days is to get students to apply for the upcoming academic year (applications still open for 2023/2024) and promoting the 2024/2025 academic year. There will also be outreach programmes to schools and colleges starting in the next few months, please get involved. Call outs will be sent via email. It is British Science week from 10 – 19 March and Oldham Sixth form college has asked the University of Bradford to talk on degrees and potential careers associated with Chemistry, Biomed, Optometry, Pharmacy and Clinical Sciences courses. Any interactive elements/hands on experiments/use of equipment/demos will also be greatly received. I will not be available over this period so volunteers for Chemistry and Biomed are required.

Thanks to those who have put their names down to help with AED and Open days, the spreadsheet still isn't full so I will be volunteering staff next week to fill the spreadsheet. Please put your name down.

<https://unibradford.ac.sharepoint.com/sites/chembio-allstaff-group/Shared%20Documents/Forms/AllItems.aspx?id=%2Fsites%2Fchembio%2Dallstaff%2Dgroup%2FShared%20Documents%2FChembio%20Admissions%2FOpen%20Day%20AED%20Taster%20Day%20Activity%20Resources&viewid=99b94870%2D623f%2D4802%2Db506%2Ded272201eea8>

Thanks

**Dr Mark Sutherland, Director of Marketing and Admissions**

## BBA Rising Stars Interview

**Dr Kirsten Riches-Suman** was interviewed by **BBA** as part of her Rising Stars Award. Kirsten talks about her research in cardiovascular disease, confidence, and advice for keeping track and celebrating your achievements. The full interview can be found here:

<https://www.elsevier.com/life-sciences/biochemistry-genetics-and-molecular-biology/journals/bba/bba-rising-stars-announced>



## Optician magazine highlight

**Prof Stephen Rimmer** was highlighted in **Optician** magazine for his work on smart hydrogel lenses that can detect two types of bacteria and fungus, and it's implication for patient testing and comfort. The full article can be found here:

<https://www.opticianonline.net/features/contact-lens-developed-to-detect-bacteria-and-fungus>



# Admissions and Outreach

## College outreach funding - RSC

**Dr Tom Swift** and **Dr James Machell** received £400 from the **Royal Society of Chemistry** to sponsor outreach events during Chemistry Sustainability Week (7 – 13th November 2022).

Four groups of A-Level and BTEC chemistry students from two colleges visited our STEM laboratory as part of our Chemistry Week work.

They were guided through the synthesis of either aspirin or banana oil and enjoyed a tour of our research laboratories and a discussion about issues in the scale-up and manufacture of chemicals.

The students really enjoyed the visit, and it was great to hear their strong opinions on the use of plastics. Many agreed that recycling or improving biodegradability would be better for the environment.



## Canadian outreach

Second year PhD student **Gwyn Dahlquist-Axe** presented an introductory lecture on her research to an 8th grade class (year 9's) at **Shoreline Middle School** in Victoria, British Columbia. While in British Columbia, Gwyn also conducted a guest lecture at the University of Victoria to undergraduate archaeology students demonstrating the intersections between archaeology and biomedical science.

## BBC Future

BBC Future has launched the '**Unloved World**' series about biodiversity for unappreciated but valuable species. Their article 'Why naked mole-rats don't seem to age' features the ongoing study of **Dr Gisela Helfer** and **Dr Pete Nicholls** on reproduction in naked mole rats. Naked mole rats have many unique traits which make them an ideal model system to study 'healthy' reproductive aging. In this BBC Future article, Gisela explains why they are the perfect model to learn about human reproduction, and how they can help us to understand puberty and menopause and discover future interventions that delay or reverse reproductive aging. The full article can be found here: <https://www.bbc.com/future/article/20221206-what-naked-mole-rats-can-teach-us-about-treating-cancer>

## BCB Research Matters

The last (regular) edition of '**Research Matters**' on BCB Radio 106.6FM was broadcast on Sunday 16th of October. **Dr Gisela Helfer** co-hosted the show together with Marcus Rattray. In this final edition, they reflected on over three years of broadcasting BCB Research Matters.

While the show has now finished, BCB Radio are very keen to keep the link with the University and there will be more radio shows in future, but in slightly different formats. Watch this space!



## Schools outreach funding – Biochem Soc

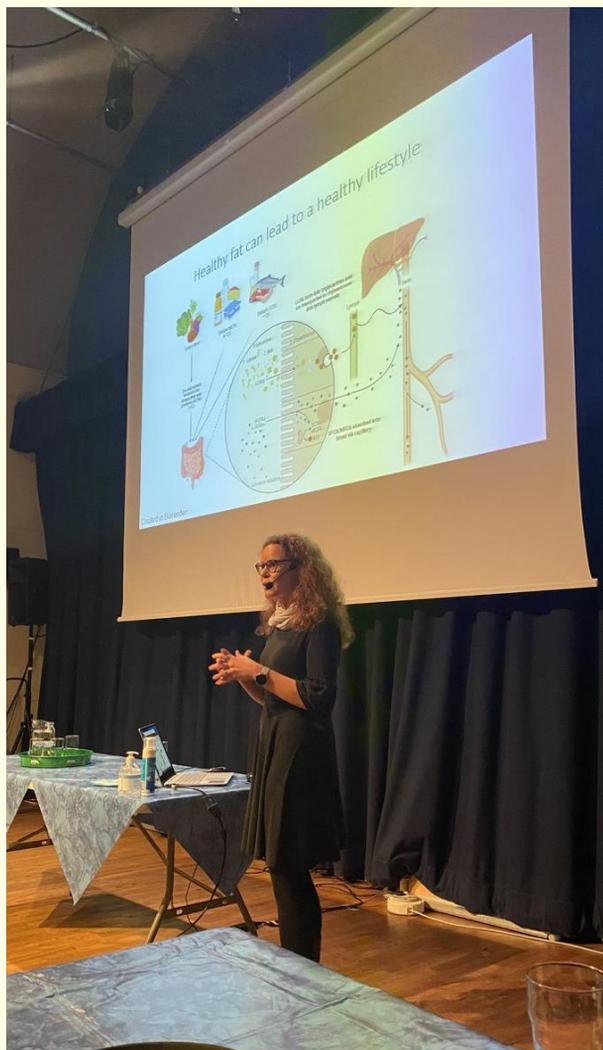
**Dr Yvonne Nyathi** has been awarded a Scientific Outreach Grant by the **Biochemical Society**. This pays £993.00 towards travel and buying equipment necessary for her planned outreach into schools. She will buy a Virtual Reality Headset to enable virtualisation of protein structures to complement the models she uses for public engagement.

# Admissions and Outreach

## Otley Science Cafe

Dr Gisela Helfer was invited to talk at the **Otley Science Festival 2022**. She gave a talk on 'Why do we gain weight? – It's all in your brain!' as part of the Science Cafes on 16 November.

The room was packed with about 60 attendees all interested to join Gisela on a journey through cutting-edge neuroscience research to explore why it is so difficult for many of us to lose weight, how the brain undermines our dieting efforts and why some people are hungrier than others. According to one participant, Gisela blew the mind of the audience!



## Working Class Academics

Dr Kirsten Riches-Suman was an invited expert panel member at the recent Alliance for Working Class Academics international conference on **Poverty: Pathways, Challenges and Transitions**. She discussed the systemic barriers to people of a working class background in accessing and progressing in academia.

As part of a group with Prof Mary J Owen (University of Minnesota), Dr Sarwan Singh (City University of London), Dr Sharon Clancy (University of Nottingham) and Dr Will Curvis (University of Lancaster), Kirsten had a lively debate on how issues with class status appear right from the beginning of school education, and how visibility of people from working class backgrounds in careers that are considered non-traditional for that demographic is a valuable tool for addressing educational and societal inequality.

## Café Scientifique

We had some great Café Scientifique talks over the last few months, with diverse topics ranging from children's television to antibiotics to autism.

The next event will take place on January 19, 2023 at 6:30pm with Dr Gareth Addidle discussing 'Vulnerability and risk – a policing paradox' followed by Dr Sarah Knight with 'When hearing isn't the same as understanding: the challenges of listening to speech in noisy environments' on February 16, 2023.

For more information and to book your free tickets please visit the National Science Media Museum website <https://www.scienceandmediamuseum.org.uk/whats-on/cafe-scientifique> or follow us on twitter @BfdCafe.

Programme director **Gisela Helfer**



## PhD Success

Congratulations to **Aqib Ahmed** who passed his PhD viva on 13th October. His supervisors were **Dr Andrei Mardaryev** and **Prof Julie Thornton**, with Dr Colin Jahoda and **Dr Mike Fessing** as his examiners. The title of his thesis was "**The role of ten eleven translocation enzymes in the hair follicle mesenchyme**".

Congratulations to **Maria Azmanova** who passed her viva in December. Maria was supervised by Dr Steve Shnyder and **Dr Will Martin**, and her examiners were Prof Klaus Pors, Dr Anais Pitto-Barry, Prof P McGowan and Prof Tasnic Munshi. The title of her thesis was "**Development and evaluation of organometallic anticancer drug candidates**".

## Progression Success

Congratulations to all who have passed their progression vivas and the best of luck with the rest of your PhDs!

- **Sirli Anniko** (supervisors **Dr Peter Nicholls**, **Dr Krzysztof Poterlowicz**, Prof Sherif El-Khamisy)
- **Jake Hill** (supervisors **Dr Briony Yorke**, Dr Jonathan Denniss, **Dr Yvonne Nyathi**)
- **Alisah Hussain** (supervisors **Dr Kirsten Riches-Suman**, **Prof Julie Thornton**)
- **Sabia Khan** (supervisors **Prof Anne Graham**, **Dr Kirsten Riches-Suman**)
- **Damilola Makanjuola** (supervisors Dr Talat Nasim and **Prof Colin Wright**)

## WTUN Student Competition

**Mohammad Ihsun**, a PhD student supervised by **Dr Bev Stewart** and **Dr Stephen Hickey**, has won a prize from the **World Technology Universities Network Student Competition 2022**, for his proposal "Recycling Solar Panels and Providing Them at Subsidized Price to Poor People, Remote Communities and Small Businesses". The proposal was supported by a YouTube video which can be viewed at:

<https://www.youtube.com/watch?v=fahWEVRrHEA&t=67s>

## Winter Graduations

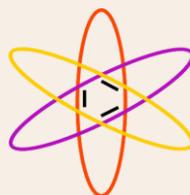
Congratulations to all our students who graduated in December – we are proud of each and every one of you!



# 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.



# ChemSoc

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



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