

# Bradford ChemBio

What's been going on in our school for the past three months...  
September – November 2019



@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...

We're sure you're all ready for a well-deserved winter break after a long term – we hope you all have some relaxing time planned before the exam season starts in January. As always, we have had a very busy quarter – there were a great number of conferences and research visits crammed into September before teaching started, and we look forward to the continued collaborative successes these trips bring. We have an excellent piece from one of our Chemistry graduates, Lizzie Smith, about the influence her time at Bradford has had on her career. We've also been very busy with lots and lots of outreach activities – read on to find out about or charity work and fundraising, school visits and work experience, public lectures, radio shows and Twitter campaigns. Finally, we've also got an overview of all the great work the ChemSoc is carrying out to engage students in their studies and really enjoy everything that a University life has to offer!

We hope you have a wonderful break and look forward to seeing all your achievements over the coming months,

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



## Athena SWAN

### News from the EDOC

This has been a very busy term for all of our staff and students. The EDOC has been working hard on the next staff survey and to organise our upcoming Athena SWAN seminars.

### Athena SWAN seminars

For the coming term we have two exciting Athena SWAN seminars and workshops lined up. The seminars will be in our usual Wednesday seminar slot around Women in STEM and International Women's Day which are on the 11th of Feb and 8th of Mar, respectively. For Women in STEM Day (12th of Feb) we have invited **Dr Flavie Vial** who is a senior scientist at the Animal and Plant Health Agency in York. Flavie will be speaking about 'Tackling (un)conscious bias in STEM'. The workshop following her talk is mainly aimed at our postgraduate and postdoctoral students, but everyone is warmly welcome. For International Women's Day (4th of Mar) we have invited **Prof Janet Lord** from the University of Birmingham. Janet is originally from Bradford and she is very much looking forward to coming back to her home town to talk about her exciting research on the effect of ageing on immunity and give us some insights on her career development. More information on the seminars and workshops will follow in the New Year.

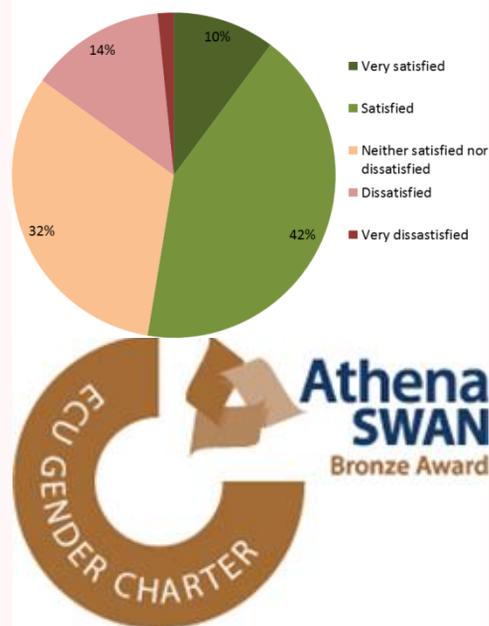
### Staff survey

Due to the recent strikes, we have decided to postpone the launch of the staff survey to allow everyone to have an input. The staff survey will help us to understand our School's culture, whether staff and/or students feel supported and whether there are any particular issues that need addressing. We are working hard to implement the actions outlined in our action plan and I think it is fair to say that we have already had some successes but we also appreciate that there is much more work that needs to be done (see figure). We hope you will again participate in the anonymous survey and highlight the areas where we do well, but particularly, let us know where we need to take action to ensure that our School is a good place to work for everyone. If there are any particular issues that you would prefer to discuss in person, please get in touch. The staff survey will go live soon and you will be all invited to participate via email.

The EDOC wishes all our staff and students a merry Christmas and a successful and happy New Year!

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

### How satisfied are you to work in the School?



## New Lecturers



My name is **Dr Anaïs Pitto-Barry** and I am a new lecturer in Inorganic Chemistry. I was born in Lyon, also referred to as "the gastronomic capital of the world" by many writers. I did my undergraduate studies in Clermont-Ferrand (famous for the rugby team and the Michelin tyres) and Rennes with various internships in France, Belgium and Switzerland, both in academia and industry. After completion of my MSc, I went back to Switzerland to pursue my PhD under the supervision of Professor Robert Deschenaux. My PhD focused on the synthesis of organic dendrimers for applications in liquid crystals and metallic drug delivery. I started collaborating with Dr Nicolas Barry at this time of my career.

After my PhD, I was awarded a prestigious Swiss National Science Foundation Early Career Fellowship and decided it was time to go to an English-speaking country. I joined the groups of Professors Rachel O'Reilly and Andrew Dove at the University of Warwick to work on the self-assembly of polymeric materials. I developed a set of skills, ranging from synthesis to characterisation of polymers and their self-assemblies, using state-of-the-art international facilities such as Diamond Light Source or the Australian Synchrotron. The escapes to sunny Melbourne in the middle of the UK winter were always a bonus. I continued working with Dr Nicolas Barry, Swiss National Science Foundation Fellowship holder and Leverhulme Early Career Fellow, and we developed together a methodology which allows the imaging of the nucleation and growth of metallic nanocrystals in real time and real space in a transmission electron microscope.

I joined the School of Chemistry and Biosciences as a post-doctoral researcher in 2017 to work with Dr Nicolas Barry, Royal Society University Research Fellow, on the development of electron-deficient metallic complexes for applications in materials and bioinorganic chemistry. On top of my research projects, I also taught third year students about (bio)inorganic chemistry and supervised undergraduate students in the research lab. Life took an unexpected turn in October 2018 with the diagnosis of a serious health issue but I still managed to deliver my teaching as planned. 2019 started with more medical treatment, then the successful submission of my teaching portfolio for becoming a Fellow of the Higher Education Academy, two articles I am really proud of on the nanocrystallisation project in Chemical Communications and in Angewandte Chemie International Edition, and the promotion to Lecturer in Inorganic Chemistry in September. I will continue teaching (bio)inorganic chemistry to students and empower them with (soft) skills to allow them to thrive in their next adventures. On the research aspect of my job, I intend developing a platform of polymers that will be used as cargo vehicles for drug delivery. I am particularly interested in targeting difficult-to-treat cancers, such as melanoma and brain cancers, using binary radiotherapy.

Away from research, I enjoy baking, reading, and needle-crafting, as well as going outdoors weather permitting.

## New Technicians



My name is **James Wright**. Although I'm new to the G Floor technical team I may look familiar because I've worked over in the BSU for the last 11 years. I've also done portable appliance testing (PAT) in almost every part of the Faculty, so you've probably seen me around at some point! My job is now split 50/50 between the BSU and G Floor. My role in BSU is

to look after laboratory animals on a day to day basis, ensuring that they have everything they need and are healthy and comfortable as well as following home office legislation. I assist with research projects and have good dissection skills. On G Floor I'm helping the Teaching Focussed Technicians with class set up and clear away, providing PPE to the students, and ensuring high standards of lab housekeeping. In this dual role, I'd really like to develop my dissection skills to make any surplus tissue from BSU available for use in teaching and student projects – I'm looking forward to learning some of the fixing and embedding techniques required in a histology lab. Outside of work I enjoy cooking on my fire pit, home brewing and good drop of whiskey. I also enjoy long walk with my Labrador Luna – and the Mrs, of course.

## New PhD Students

**Mrs Asiye Busra Boz Er** started her PhD in September. Asiye is supervised by Dr Helen Sheldrake (ICT) and **Dr Mark Sutherland**. She will be based mainly in the ICT but will also use specialist facilities in the School of Chemistry and Biosciences to examine the role of the microenvironment (integrins) in resistance to targeted cancer therapies with a focus on melanoma and Braf wild-type vs V600E mutation.

In October CSS welcomed a new PhD student **Paul Norton**, funded by a UoB RDF studentship and supervised by **Dr Julie Thornton**, **Dr Chien-Yi Chang** and **Dr Maria Katsikogianni**. His project is entitled "Effective Removal of Antimicrobial Resistant Bacteria from Chronic Wounds".

My name is **Laia Rafols Parellada** from Barcelona, Spain. I obtained my BSc in Chemistry and my MSc in Applied Materials Chemistry at the Universitat de Barcelona under the supervision of Dr. Arnald Grabulosa in collaboration with Prof. Patrick Gamez. My final degree and master projects entailed the preparation of organometallic compounds and their potential as antitumoral metallodrugs. Once I finished my MSc I had the opportunity to expand my knowledge in this field joining the Barry group to carry out my Ph.D. It is a great chance for me to learn more about the chemistry and the biochemistry of electron-deficient organometallic complexes and their possible applications.



## FHEA Success

Congratulations to **Dr Bev Stewart** who has been accepted as a **Fellow of the Higher Education Academy** in October 2019. Bev would like to thank Sarah George and Ruth Whitfield for their mentoring and guidance.

## Farewells



In October, **Dr Amber Leckenby** left the Biomed team to start a new position in Oxford. Amber was appointed to cover maternity leaves in September 2018 and within a short time she became a valuable member of our team. From day 1, she was always ready to bail us out when and wherever needed – whether that was to

take on Open days, run labs on short notice or cut her holiday short to paddle with us on the Dragon boat. While Amber was only with us for a year, her enthusiasm for teaching and the contributions she made to students and staff made a lasting impact. We will all sadly miss her but we wish her all the best for her new adventures in the Cotswolds!

In October **Prof Kevin McElwee** left to take up a post in Germany, but will remain as a collaborator on ongoing projects in the Centre for Skin Sciences

We would like to wish a fond farewell and the best of luck for the future to **Dr Rianne Lord** who left us in September to join the University of East Anglia as a Lecturer of Inorganic Chemistry. Rianne is currently enjoying life in Germany (as the picture demonstrates!) during a secondment at the Technische Universität München, where she is August-Wilhelm visiting Professor.



## Honorary Chair

In November, **Mr Ajay Mahajan** the Clinical Director of the Plastic Surgery and Burns Research Unit (PSBRU) was awarded an honorary Chair of Plastic Surgery by the University of Bradford in recognition of the academic work of the Unit, which sits under the umbrella of CSS. Well done Prof Mahajan.

## Promotions

Congratulations to **Dr Gisela Helfer** who has been promoted to Senior Lecturer in Physiology and Metabolism.

## New SME funding for spectroscopy projects

The Centre for Chemical and Biological Analysis in the Faculty of Life Sciences are embarking on a 3-year project to help SMEs in the region to enhance their organisations through high-field NMR spectroscopy. This £1.6m project, **CAYMAN** (Chemistry Assets for Yorkshire Manufacturing), involves establishing new high-field nuclear magnetic resonance (NMR) facilities in the Centre for Chemical and Biological Analysis to deliver NMR training and 30 fully funded research and innovation projects to regional SMEs.

The funding, of which the **England European Structural and Investment Funds Growth Programme 2014-2020** have contributed £800k, will pay for the updating of laboratories, establishing a team of experts, the purchase of a new NMR machine, business training, and project delivery. The collaborative projects will use the new NMR facilities and world leading academic expertise to investigate how they may be used to characterise macromolecular materials and complex chemical mixtures to help develop new products and optimise current manufacturing processes.

**Dr Richard Telford** heads up the Centre for Chemical and Biological Analysis. He said "Chemicals are crucial in so many manufacturing sectors; it's a very competitive environment leading to firms needing to continuously innovate. Around 97% of chemical firms are SMEs, and the region is home to a substantial chemical cluster, so this should be welcome support for businesses in the Leeds City Region. We just need to spread the word."

The CAYMAN project started in October 2019 and the team (lead by **Professor Stephen Rimmer / Dr Richard Telford** and also including **Dr Jason Jones, Dr Tom Swift, Dr Alex Surtees** and two new roles to the University; a Project Manager and a Business Development Manager who are to be appointed) expect to deliver the first set of training in Spring 2020. The project runs until August 2022. A launch event is being organised on 29 January for SMEs to find out more about how they can benefit. More details will follow.

If you have SME contacts who you think may be interested in finding out more about this opportunity, please contact Richard Telford or Jason Jones. Please also get in touch with them if you know of any event/networking opportunities in the region where you think they can promote this opportunity.

### Funding

The England European Structural and Investment Funds Growth Programme 2014-2020 is established by the European Union to help local areas stimulate their economic development. By investing in projects the funds will help to support innovation, businesses, skills and employment to improve local growth and create jobs.

The Northern Powerhouse is a key aspect of this Government's approach to addressing the productivity gap in the North and ensuring a stronger, more sustainable economy for all parts of the UK. Alongside over €1.5 billion of European Regional Development Fund support for businesses and communities across the North, the government has awarded £3.4 billion in three rounds of Growth Deals across the Northern Powerhouse.



**European Union**  
European Regional  
Development Fund



## Papers in Press...

Azmanova M, Soldevila-Barreda J, Hani HB, Lord RM, Piito-Barry A, Picksley SM, Barry NPE. **Anticancer activity of electron-deficient metal complexes against colorectal cancer in vitro models.** *ChemMedChem* 2019

Chen Z, Zhang Z, Ma X, Duan Z, Hui J, Zhu C, Zhang D, Fan D, Shang L, Chen F. **Newly designed human-like collagen to maximize sensitive release of BMP-2 for remarkable repairing of bone defects.** *Biomolecules* 2019

Dalgarno K, Melo P, Ferreira-Duarte A, Waldron K, Swift T, Gentile P, Magallanes M, Marshall M. **Osteoinduction of 3D printed particulate and short-fibre reinforced composites produced using PLLA and Apatite-Wollastonite.** *Composites Science and Technology* 2019

George S, Rowland J. **Demonstrating the impact of your teaching: benefits of Higher Education Academy Fellowship for librarians.** *Health Information and Libraries Journal* 2019

Grether-Beck S, Marini A, Jaenicke T, Goessens-Rauck P, McElwee KJ, Hoffmann R, Krutmann J. **Autologous cell therapy for aged human skin: A randomized, placebo controlled, phase-I study.** *Skin Pharmacol Physiol.* 2019

Hughes ZE, Joseph ER, Thacker CR, Symons BCB, Silva AF, Popelier PLA. **A FFLUX water model: flexible, polarizable and with a multipolar description of electrostatics.** *J Comput Chem* 2019

Kang H, Wu WY, Yu M, Shapiro J, McElwee KJ. **Increased expression of TLR7 and TLR9 in alopecia areata.** *Experimental Dermatology* 2019

Piito-Barry A, Barry NPE. **Effect of temperature on the nucleation and growth of precious metal nanocrystals.** *Angewandte Chemie* 2019

Smart TJ, Hamed RB, Claridge TDW, Schofield CJ. **Studies on the selectivity of proline hydroxylases reveal new substrates including bicycles.** *Bioorganic Chemistry* 2019

Thornton MJ. **Shedding more light on photoageing.** *British Journal of Dermatology* 2019

## NECB 2019

Dr Kirsten Riches-Suman and Prof Anne Graham attended the **North of England Cell Biology Forum** in Manchester in September 2019 to present their research on gestational diabetes and vascular health, and the influence of SOCS3 on vascular disease. Both posters were well received and generated a lot of interesting discussions.

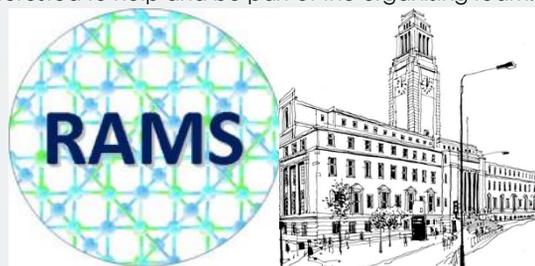


## Funding Successes

Prof Steve Rimmer and Dr Tom Swift have won £80,000 to scale up synthesis of polymer for detecting infection from the **Grow MedTech** fund.

## Upcoming Conferences

We are delighted to announce that a bid submitted by Dr Sanjit Nayak to host the next RAMS-2020 (**Recent Appointees in Materials Sciences-2020**) conference has been successful, and we will be hosting this very important conference in Bradford during 7th and 8th of September in 2020. The current team of organisers is: Dr Sanjit Nayak, Dr Philip Drake, Dr Nadeem Javid, Dr Colin Seaton, Dr Beverley Stewart, and Dr Thomas Swift. The team is not final, and we are still looking for anyone who would be interested to help and be part of the organising team.



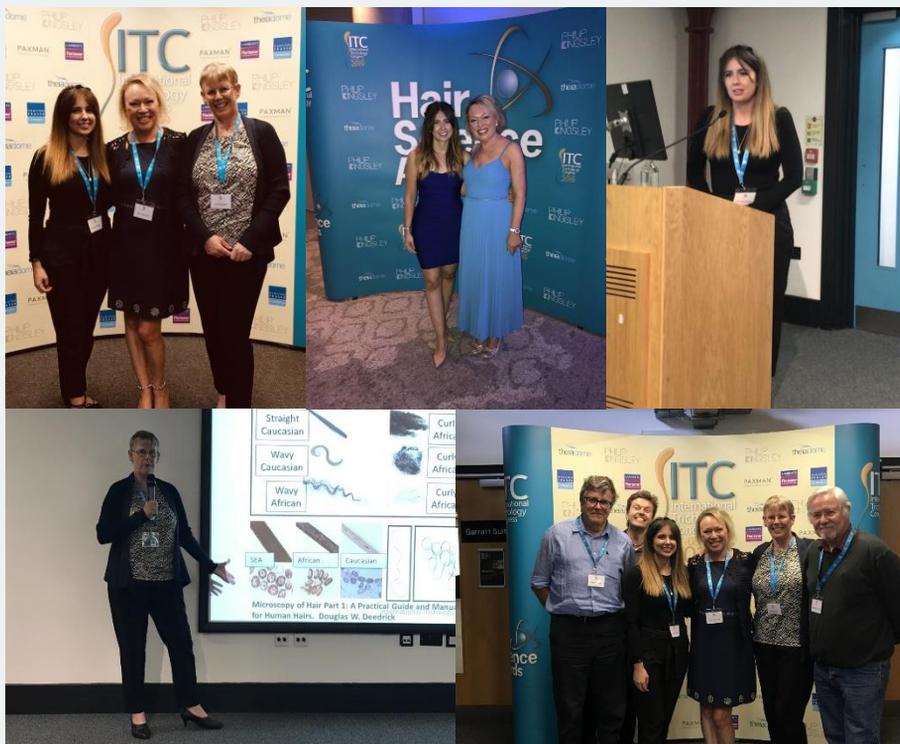
On the 7th April, we are also excited to announce that the University will be holding the **Northern Cardiovascular Research Group** meeting. This is an annual event that hosts the leading cardiac and vascular researchers from across the north of England, and is the first time that the event will be held in Bradford. It will be organised by Dr Matthew Hardy, Dr Jacobo Elies (both School of Pharmacy), Dr Kirsten Riches-Suman and Dr Munir Hussain. Follow @NorthernCardio1 for all the most recent updates. We look forward to seeing you all there!

## RAPS 2019

Dr Tom Swift presented at the **Recent Appointees in Polymer Science (RAPS)** conference in Leeds on Wednesday 5th of September. Here he presented a talk entitled 'Some Advantages of Disperse (in size and branching) Polymer Systems'.



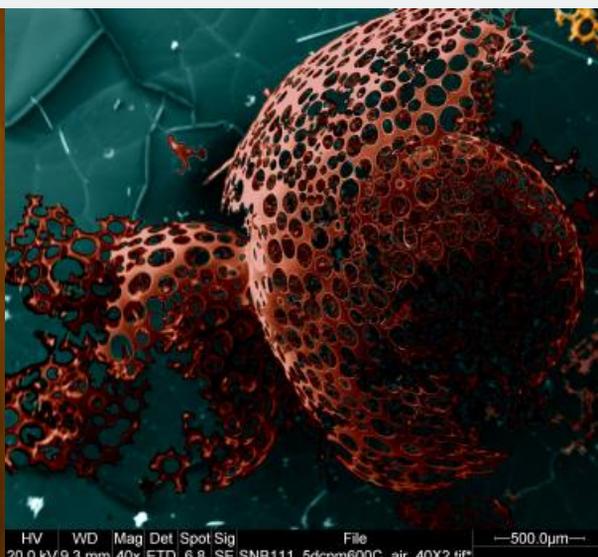
## International Trichology Congress



Dr Gill Westgate and Miss Rachael Sedman were both invited speakers at the **International Trichology Congress** held in Manchester in September. Gill gave a talk on 'The Science of Curly Hair' and Rachael's talk was entitled 'Getting Under The Skin of Hair Aging'. The Centre for Skin Science always plays an active part in the International Trichology Congress as it is a great opportunity for scientists and clinicians to share their knowledge, and both talks were very well received. On the evening of the congress **Dr Julie Thornton**, Dr Gill Westgate and Rachael Sedman, attended the Hair Science Awards 2019, which celebrated the achievements in both science and trichology.

## RAMS2019

Dr Sanjit Nayak has presented his group's work on the use of new types of precursors to prepare microporous carbon for hydrogen storage applications in **RAMS2019** in Liverpool on 10th of September. An image from his group also won the first prize from RSC for a scientific image competition.



## DOSA

In September, **Prof Stephen Rimmer** and his research group attended the **Diagnostics for One Health and User Driven Solutions for AMR (DOSA)** 1st year review conference in Edinburgh. The Bradford team met with groups from the UK and India to present their work developing diagnostic tools to help combat antimicrobial resistance primarily in India. Prof Rimmer gave a presentation on the binding of bacteria to highly branched polymer chains and how this causes solvatochromic dyes in the polymers to give a visual colour change. **Dr Steven Carter**, **Mr Edward Dyson** & **Mr Sehaj Singh** also presented laboratory demonstrations on how this can be used as a diagnostic tool in the dairy industry with several proof of concepts on display. With mountains and castles in the background the team enjoyed the discussions on how the project will progress in the 2nd year and is now hard at work preparing for the second year review in Delhi.



## IIT Delhi

Prof Stephen Rimmer visited IIT Delhi for project discussion and then gave a keynote lecture at Advances in Polymer Science and Rubber Technology at IIT Kharagpur.

## CSN 2019

**Dr Lijun Shang** attended the 2019 **Annual Congress of Chinese Society of Nephrology (CSN)** in September 17-21, in Hangzhou, China, and given an invited talk on the Structure, function and regulation of Kir4.1 and Kir4.1/Kir5.1 potassium channel, and their implications in kidney function. It was well received and have attracted lots of potential collaborators.

## ETRS 2019

In September **Dr Julie Thornton** and **Lucy Trevor** from the PSBRU attended the annual meeting of the **European Tissue Repair Society** in Munich, where Lucy gave a talk entitled "Modulation of the migration, proliferation and metabolism of dermal fibroblasts from irradiated breast skin by pre-adipocytes: applications for wound healing"



## Anticancer Drug Candidates

Dr Anaïs Pitto-Barry has had a busy quarter, presenting the work of the Barry group on anticancer drug development at the **French Bioinorganic Chemistry summer school on Metals in Biology** at Marseille (France) in late September. Anaïs then presented her latest results on nanocrystals at the **Royal Society Discussion Meeting** on "Dynamic in situ microscopy relating structure and function" in October 2019. Anaïs also presented the work of the group on the development of anticancer drug candidates at the **1st Workshop on Metals in Medicine** at the Ecole Nationale Supérieure de Chimie de Paris in November 2019.

## TopNOTCH

Dr Nicolas Barry gave a talk entitled 'Controlled growth of precious metal nanocrystals' at the **TopNOTCH workshop** organised by Prof. Baumberg FRS, in Jesus College, Cambridge.



## AMS Edinburgh

In September, Dr Gisela Helfer went to a public engagement workshop on '**Engaging with the Public on Animal Research**' to Edinburgh. The workshop was fully funded by the Academy of Medical Sciences and allowed Gisela to learn best practise for communicating work involving animals, and to practise her communication skills with experts and peers. The workshop was very enjoyable and informative and additionally to discussing openness in animal research, looked at general communication styles and techniques for engaging audiences in presentations, discussions and interviews. This will, without a doubt, be very useful for Gisela's future public engagement activities.

## ESDR 2019

Dr Andrei Mardaryev, Dr Mike Fessing and Dr Steve Sikkink from CSS attended the 49th European Society for Dermatology Research conference in Bordeaux, France 18-21 Sept 2019. Mike gave a talk in the main program and both Mike and Andrei participated in a Skin Epigenetics workshop organised by Prof Vladimir Botchkarev and Prof Benitah from Barcelona, both giving talks. It is a testament to Vladimir, Andrei and Mike's efforts that Skin Epigenetics is now a firm fixture as a satellite workshop to this annual conference. Over 100 delegates attended the workshop which followed the conference.

### Talks

The ATP-dependent chromatin remodeler BRG1 controls epidermal keratinocytes migration during human cutaneous wound healing - **Carl Kelleff**, R Bhogal, Natasha Botchkareva and **Mike Fessing**

### Workshop talks

DNA hydroxymethylation and TET enzymes in the control of skin development and regeneration - **Mike Fessing**

DNA hydroxymethylation and TET enzymes in the control of hair growth - **Andrei Mardaryev**

### Poster walks

The chromatin architectural protein CTCF regulates expression of pro-inflammatory cytokines in the skin cells - **Andrei Mardaryev**

Diabetes-associated high glucose levels negatively affects cultured human fibroblast subpopulations isolated from haired skin - **Stephen Sikkink**



## UK-Russia Collaboration

Dr Nicolas Barry gave a Keynote lecture at the **UK-Russia Workshop on Biomaterials** at Lancaster University in October.



## RSC

Prof Stephen Rimmer and Dr Refaat Hamed presented to the Executive of the Chemical Biology Division of the RSC with MRC, BBSRC, EPSRC and Wellcome on the Northern scene at Chemistry/Biology interface along with Heads of Chemistry and Biology and representatives from the other leading institutions in the area: Leeds, Sheffield, York, Liverpool, Durham, Newcastle and Manchester. The event could be forging a N8 (actually N7 as Lancaster were involved) + Bradford bid for major funding as well as forging us into the Northern group of Universities in the Chemistry/Biology interface area. The benefits of these networking and community forming events are significant and we considered that something on the lines of EastChem or West Chem could emerge into next year. We do seem to be in a very competitive position in this area and I will keep all posted as we progress. RSC Executive are formulating a plan but there is likely to be an initiative within N8 plus Bradford with RSC lobbying for us.

## ISHRS 2019



In November **Dr Gill Westgate** was invited as the Norwood Lecturer to give the basic science Keynote at the **International Society of Hair Restoration Surgeons Congress** in Bangkok where she gave a talk on the role of dermal adipose tissue in hair growth, including data from **Rachael Sedman** and **Lucy Trevor**. Gill is currently organising the **19th European Hair Research Society** conference in Sheffield (June 18-20) which will also showcase work from CSS.





In November, **Dr Julie Thornton** attended the **Times Higher Education Awards** ceremony in London, the "Oscars" of higher education, hosted by Julian Clary. She was short listed for "Outstanding Research Supervisor of the Year" and was accompanied by **Prof Anne Graham** who submitted the nomination, and two of her current PhD students, **Rachael Sutherland-Sedman** and **Lucy Trevor**. Although she didn't win the award, to make it into the top eight for this national award is an outstanding achievement in itself and we are incredibly proud of Julie and her continued mentorship and guidance of the next scientific generation.



## From 'Student-led' to 'Peer-led' lectures

In last academic year 2017/2018, **Dr Lijun Shang** initiated a trial on "student-led lecture" where a short lecture of about 20 mins on his Human Physiology module was created and presented by our previous student, Daniel Khosravinia, (the top student on the cohort and transferred to King's College London, still the top student over King's) to the entire class at the end of semester 2 under Lijun's supervision as the module leader.

The content of "student-led lecture" can be a summary of part or whole of module, extra information, a case study that facilitates understanding and provides further clarification of a certain topic, or a topic that most students lack understanding in. Various student-led lectures can have different variations of these topics with different proportions of each, depending on the class, and relative student understanding of topics. Lectures can even have components separate from the ones listed but are generally chosen to match topics that are most needed by other students. These lectures act only as supplementary material and will not replace the teaching lectures delivered by the lecturers. Their aim is to improve student understanding and interactivity. Further on, "student-led lecture" can help to develop students' transferable skills, stimulate their passion for learning, and enhance students learning experiences, especially through interaction between peers.

Daniel started to prepare this from Jan 2018 and had 5 meetings with Lijun to discuss the content of his lecture, to polish his power point and to rehearse his lecture. After the last revision class, Daniel gave his lecture on "Excretory System" where he integrated teaching on human body into one day exercise of his study. It was extremely well received. Students were all not only impressed by Daniel's teaching, but also felt stimulated and wanted to experience themselves.

To maximum disseminate this successful trial on student-led lecture, Lijun and his students presented it at UoB Learning and Teaching Conference 2018, and the Physiological Society annual conference 2018 in London. They were all well received, and people were impressed by the teaching innovation from Bradford. Daniel has brought this exercise to King's College and he since gave two lectures on his further courses. One is on Gene cloning and Expression, reviewing its concepts in the theme of p53 protein, another is on bioinformatics tutorials. All were very well received.

After the UoB Learning and Teaching Conference in 2018, colleagues cross the campus were very interested in this initiative and wanted to do further collaborations. Ruth Lefever from Student Centre came to Lijun and asked to do something together. After half year's preparation, we extended this to "Peer Led Lectures (PLL)" to our Biomedical Science Programme which is a new peer support scheme they are piloting this year with **Dr Jon Fletcher** and **Dr Sobia Kauser**, paired with Ruth and Leanne Hunt. Staff can suggest topics that could be covered in PLL, but it's intended to be student-led. Now 7 Stage 3 PLL Leaders are currently supporting stage 2 students with intension in the near future to talk about semester 2 and the support for stage 1 students (led by stage 2 Leaders). Lijun and his team meet regularly and monitor this process closely and are hoping to have more information about the progress to report soon.

### Online Reading Lists

The **UoB Learning and Teaching Committee** have agreed that from January 2020, module leaders will be responsible for creating and editing reading lists for their module(s) using the online reading list software. Training (a one hour workshop) and 1:1 support will be advertised from November onwards by subject librarians Sarah George (Archaeology, Forensics, Biomedical Sciences, Chemistry, Integrated Science), Maureen Pinder (Clinical Sciences, Pharmacy), Jennifer Rowland (Optometry). By the end of the workshop module leaders will be able to:

- create and structure an online reading list
- edit a reading list, e.g. add, remove resources
- add an annotation to a resource to give guidance to students
- access the analytics tool to find out how students are using a reading list
- know where to find additional help

You do not need to book onto a workshop, just turn up at a time to suit you. If you are unable to attend any of the scheduled times, please contact your Subject Librarian. Workshops for departments or groups of staff can also be arranged via your Subject Librarian.

13-12-19, 16:00 – 17:00: Richmond Building, room J31  
08-01-19, 12:00 – 13:00: JB Priestley Library, room 0.17

### Echo360 for Lecture Capture

Interested in using Echo360 for Lecture Capture and/or Interactive Learning? Sign up to a workshop now!

Echo360 is a piece of software newly available to the University which can be used to capture lecture recordings and to add some interactivity into teaching sessions. The University is currently running a Lecture Capture Pilot in a small number of lecture theatres and with a small number of staff and students, but we'd like to give all academic staff the opportunity to come and 'have a go' with Echo360 and see whether it's something they'd like to incorporate into their teaching. To this end, the Learning, Teaching and Quality Enhancement (LTQE) team are running a series of hands-on workshops on the following dates: Friday 25 Oct (10-12), Wednesday 6 Nov (1-3), Wednesday 11 Dec (1-3)

These workshops can be booked onto via MyView (search 'lecture capture'). Any queries about the workshops, please contact [aqpo@bradford.ac.uk](mailto:aqpo@bradford.ac.uk).

## National Pathology Week

As we have a large cohort of Biomedical Sciences students, the biology teaching labs at the UoB promoted **National Pathology Week** in conjunction with the Institute of Biomedical Science. Some of our visitors were already placed in hospital laboratories and were interested in the IBMS as a professional body. A large number of first year students visited the floor and will be yet to decide which discipline of Biomedical Science to follow, hopefully the materials available will help to guide them'

The story was shared on the IBMS News site (<https://www.ibms.org/resources/news/npweek-2019/>) and across social media channels. Students can find out more about becoming a Biomedical Scientist and the opportunities for career development from **Tracey Warnett** at her invited talk.

## CATCH Meeting

We hosted **CATCH** for a full day meeting in the Norcroft Lounge. CATCH is the Yorkshire/Humber chemical skills agency for a meeting on apprenticeships and training opportunities in the chemical sciences. 55 delegates registered to attend the event where opportunities in the chemical sciences were presented to representatives.

## Bradford-China Exchanges

Chemistry and Biosciences hosted a meeting with the **Chinese University of Petroleum** at the end of October to discuss possible student exchanges and joint programs and we will be hosting a visit from Beijing University of Chemical Technology on December the 12th. These are on going faculty discussions with several FoLS schools.



## Where My Bradford Degree Took Me

This edition, we are talking to **Lizzie Guest**, one of our Chemistry graduates who has gone on to a successful career in the cosmetics industry.

### What did you do at Bradford?

I completed MChem Chemistry with industrial Experience and graduated in 2016 with a Merit.

### What are your lasting memories of your time here?

From my first interview until the day of graduation, the enthusiasm and sense of community from everyone at Bradford has stuck with me. The thought of moving away from home can be a daunting one but with the support of staff and students alike, the campus becomes your second home and as cliché as it sounds you will make friends for life. I also received tremendous support and guidance from **Dr Richard Telford** who was my personal tutor during the final year. This community spirit makes studying easier, especially during the final year when juggling full time work with exams, coursework and the final dissertation (no pressure!). A broad but thorough range of topics was covered throughout the course, offering different routes along the way. One of my chosen areas of study was thermal analysis which involved investigating the different structures of chocolate; not every course can offer you that! The emphasis on personal development also offered from the Life Science department becomes invaluable, especially when moving from student life onto the first step on the career ladder, from CV work to confidence building through delivery of presentations.

### How do you think your studies here have played a role in the development of your career?

The chemical and analytical techniques I had learned at undergraduate level have been valuable but the discipline of studying and working full time was paramount for my career development. My placement year was completed with a contract manufacturer of personal care products, something that was completely new to me. After graduating, I then completed a Diploma in Cosmetic Science through a distance-learning course. This then developed my cosmetic knowledge further and I am now involved in delivering presentations to hopefully inspire the next generation of cosmetic scientists. The interpersonal skills developed at university are also important when dealing with customers. It is one thing to have knowledge but another being able to deliver it to an audience with different levels of experience to you.

### What advice would you give students currently on your course?

I would advise all students to seize as many opportunities as possible during their time at university. You will meet people from different social settings and have access to staff who are internationally renowned. My advice to anyone would be to get involved and build relationships! I was always a bit shy when it came to doing group presentations but you soon realise and appreciate that every activity is a learning opportunity. By recognising your preferred methods of learning early on, it will aid the revision process for example and you can spend more time studying rather than blind panicking that you cannot absorb all of the information presented to you. Recognising the strengths and weaknesses of your course mates will help create a positive learning environment through teamwork. Also, utilise the support from the teaching staff. Even if you are not taught by someone who specialises in your chosen topic for your final dissertation, for example, the chances are that there will be someone in the faculty who can and will help you. Embrace every opportunity both social and academic and you will no doubt have fun whilst creating a solid platform for your chosen career!



# Admissions and Outreach

## Admissions

It has been a crazy few months from an outreach and admissions perspective, as you'll see over the next few pages! We've had four official Open days, where staff and student ambassadors from across Chemistry and Biomedical science, UG and PG have worked tirelessly to put on talks, activities and tours designed to showcase what our school has to offer to prospective students. I'd like to take this opportunity to thank all of those that have participated in these events, without who's support these days would not be able to run. I'd like to extend particular thanks to **Dr Conor Meehan** and members of the Barry group, particularly **Dr Anais Pitto-Barry** and **Dr Joan Soldevila Barreda** for providing interactive content for visitors to get 'hand's on' with when they visit.



## Upcoming Admissions Events...

Our 'currently scheduled' outreach events timetable is shown below. These events are fixed and so will certainly be happening, but I foresee that there may also be several other events that will be announced over the next three-four months. While I understand this makes planning difficult, this is, largely speaking, out of my hands. That said, the Admissions committee is likely to make some significant changes to how outreach events are managed, and we hope to announce these soon.

Date	Outreach Activity	Team
11-12-2019	Applicant Experience Day	Biomed.
15-01-2020	Taster Day	Biomed. & Chem.
29-01-2020	Applicant Experience Day	Biomed.
05-02-2020	Applicant Experience Day	Biomed. & Chem.
14-03-2020	Applicant Experience Day	Biomed. & Chem.
25-03-2020	Taster Day	Biomed. & Chem.
22-04-2020	Applicant Experience Day	Biomed. & Chem.

# Admissions and Outreach

## Work Experience

During the half term school holidays CSS labs were visited by Amy Lovewell, an A-level student from **North Halifax Grammar School**, who had contacted **Dr Andrew Tedder** at UoB about the possibility of doing some work experience in a Biology focused lab. Amy joined CSS for a full week and assisted **Dr Stephen Sikkink** isolating and purifying four different plasmid vectors for future research projects to gain some microbiological experience.

Following her week in the lab Amy (pictured with the results of a successful plasmid transformation!) said 'I thoroughly enjoyed the week that I spent doing work experience at the University of Bradford, and I'm now a much more confident and knowledgeable scientist and student. My microbiology based project was really interesting, and involved transforming, expanding and purifying plasmid DNA from *E.Coli* bacteria cultures. This allowed me to learn a range of new skills, for example following protocols, using new equipment, and familiarising with general laboratory health and safety regulations, which will remain with me for the rest of my working life. My supervisor, **Dr. Stephen Sikkink**, was beyond helpful, and explained the procedures and theory of the experiment brilliantly, to enhance my learning. Overall, this experience has further encouraged me to go down this exciting career path, and equipped me with the essential skills to do so. I would definitely recommend this excellent University.'

Stephen would like to thank Amy for her invaluable help during the week and I'm sure everyone wishes her every success in her upcoming studies and future science career!



## Charity Work

On my evenings and weekends I travel to Halifax to help at **Christians Together** whom runs a variety of different project helping those in need. Primarily I assist with 3 different projects the first is Saturday Gathering where we serve a 2 course meal to families, homeless, recovering addicts and those living in poverty. Second project I assist with is The Banqueting Table where we serve food 3 days a week on a 'pay as you as able' basis however this is often to the homeless or those living in poverty so donations are often low. The third project I am currently assisting with is Winter Shelter where we provide an evening meal, a bed and breakfast to those who would be sleeping on the streets, this year the Winter shelter is open for 6 months rather than the regular 3 months to help more people off the streets of Halifax and into permanent accommodation.

We get surplus food and items from a variety of different supermarkets in Halifax. in the past 8 weeks from 1 Tesco alone Christians Together have prevented 561kg of surplus food ending up in landfill turning all of it into meals and food parcels for those in need.

At the moment we are appealing for long life milk and canned meals (eg stew, currys) but any donation, including toiletries, are welcome for the variety of projects they undertake. Please if you feel you can donate something to help those in need please can you drop off any donations to me in J6.

Many thanks,

**Heather Reeve**

The <sup>==</sup>Banqueting Table



# Admissions and Outreach

## BCB Research Matters

**Dr Gisela Helfer** was invited to discuss her research on the **Research Matters** radio show at **BCB radio** (106.6FM and online) on 20 Oct 2019. Gisela talked about the biological clock and how it controls our basic physiological functions such as eating and sleeping. She explained new science revealing that the times when we eat, sleep, exercise and work is crucial to our health and that disruption of our clock system can lead to long-term health problems including obesity. She highlighted her recent research findings on tanycytes, specialised glial cells in the brain and how understanding their daily rhythms will help us understand why disruption of the biological clock can lead to obesity and how this can be reversed. Gisela received a lot of positive feedback after her radio interview and it even led to an invitation to her old school in Austria to talk about her life as a researcher in the UK (!).

Research Matters is a Bradford Community Broadcasting programme hosted by Prof Marcus Rattray (see <https://www.bradford.ac.uk/researchmatters/> for more information).



## BBC Radio Leeds

**Dr Martin Brinkworth** was interviewed on **BBC Radio Leeds** in the context of Fertility Week. Martin was asked about the problem of male & female infertility, what was the nature and scale of the problem, and what the options are for addressing it. Martin stressed the hidden nature of the problem for both sexes and the inequality with which each is regarded in Society. Furthermore, he highlighted the profound toll it can take on mental health and the patchy though often excellent treatments available.

## Science Festival

**Dr William Martin** and **Dr Nicolas Barry** presented their 'Molecular Music: the sound of Chemistry' project at the September Science Cafe during the **Otley Science Festival** to showcase their partnership with Ilkley Grammar School.



## Café Scientifique

The programme for **Café Scientifique** is in full swing and we heard some great talks and had some interesting discussions over the last few months. Café Scientifique is a friendly place where anyone can come to hear about and learn the latest ideas in science and technology. Café Scientifique is a free event, everyone is welcome and it takes place monthly in the National Media Museum. Details on the programme can be found here <https://www.scienceandmediamuseum.org.uk/whats-on/cafe-scientifique>. You can also follow us on twitter @BfdCafe or facebook [www.facebook.com/BfdCafe](https://www.facebook.com/BfdCafe) for more information.

The next Café Scientifique will take place on 23 January 2020 as part of the National Media Museum Lates event and will be given by **Dr Ben Jennings**. Ben will talk about Wet Futures: Understanding wetland heritage in contested environments.

# Admissions and Outreach

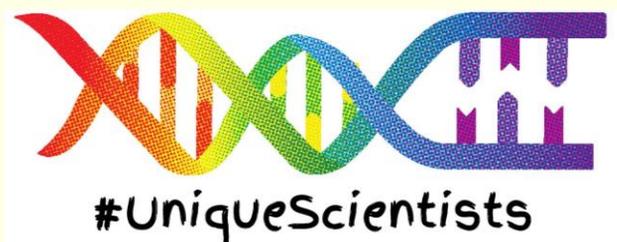
## Get Ahead of Hair Loss

Being well known in the world of hair research brings many advantages to CSS - not only does **Dr Gill Westgate** leverage her connections to generate grants with industry but she also gets involved in national and international events. In September, she helped to organise the second **Get Ahead of Hair Loss charity day** at the RSM London. Open to the public, this day showcases what options are available for treating and coping with hair loss and talks from experts including clinicians, psychologists, surgeons, trichologists and hair product scientists were hugely appreciated by all delegates. Gill talked on curly hair in the popular ethnic hair session and also on evidence behind natural plant actives for thinning hair.



## Unique Scientists

In November, **Dr Kirsten Riches-Suman** was featured on **Unique Scientists**. This is a global initiative to celebrate diversity in STEM and demonstrate that scientists are not all Caucasian middle-aged men with crazy hair and a bad dress sense. Kirsten is one of 26 scientists highlighted from the UK and used the opportunity to talk about being a mother in STEM, the importance of work-life balance and mental health in academia, as well as her love of castles, whisky and mixology! You can read the full interview here: <https://uniquescientists.com/2019/11/17/unique-scientist-dr-kirsten-riches-suman/>



## School Visits

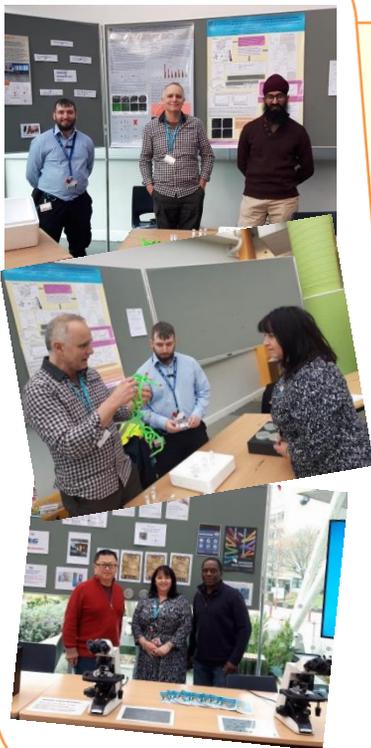
**Dr Philip Drake** visited Allerton High School to talk to Year 12 students about careers in Science in a wide-ranging discussion that covered everything from how long it takes for research to become commercial to the ethics of using mouse models in biomedical research! The teacher has reported that more pupils are asking about Bradford and that they didn't realise the kind of work we do here so we're hoping we've inspired them to join our courses here at UoB!



# Admissions and Outreach

## World Antibiotic Awareness Week

In November the School celebrated **World Antibiotic Awareness Week** (#WAAW2019 #KeepAntibioticsWorking #AMR) by hosting a public exhibition in the atrium highlighting the microbiological projects we work on at the University, and hosting the inaugural Prof Kevin Kerr Memorial AMR lecture by Prof Phillip Howard who gave a very entertaining talk about antibiotic use and resistance across the world.



# Admissions and Outreach

## Twitter Campaigns

Joining in with **Twitter** campaigns are a simple and easy way for us to improve our outreach and help to spread the word on all the exciting research that we are involved with as a school. These are the campaigns we've been involved with this quarter – keep an eye out over the coming months for exciting news on the other types of research we do!

**Dr Gisela Helfer** @g\_helfer  
#IamABiologist trying to understand how appetite and body weight is regulated in the brain  
#neuroendocrinology  
At the moment I am analysing some new and exciting data from #Helferlab @UoBBio

**Anne M Graham** @DoctorAnneG  
Travels to Kraków captured whereas those to Manchester for NECB weren't accompanied by photos  
#conferences #IamABiologist @UoBBio

**Kirsten Riches-Suman** @doctorriches  
#IamABiologist who uses patients' cells to try and find out what diabetes does to blood vessels. I also teach @UoBBio students about chronic disease. Here I am with cells I isolated from a very sexy little vessel the other day! #WomenInSTEM @RSB\_Yorkshire #RichesSumanLab

**Andrew Tedder** @DrATedder · 11 Oct  
#IamABiologist (an Evolutionary Ecologist) working predominantly on life history evolution, mainly 'what are the underlying mechanisms that allow populations to adapt to their environment'. For me, this involves #genomics and #bioinformatics. @RoyalSocBio @UniofBradford

**#IamABiologist**

**Kirsten Riches-Suman** @doctorriches  
Reflecting on my research on cardiac fibroblasts, heart bypasses and our amazing doctors and nurses in improving cardiac care on #WorldHeartDay The advances over the years have been massive but there's still more to do so please support @TheBHF @heartresearchuk!

**#WorldHeartDay**

**Kirsten Riches-Suman** @doctorriches  
Today is #WorldDiabetesDay - this picture might not be exciting to most people, but it represents what I do on a daily basis at @UoBBio to examine the links between #type2diabetes and #cardiovascular disease. Research really can save lives #diabetes #donate #UoBResearchculture

**#WorldDiabetesDay**

**UoBBio** @UoBBio · Nov 6  
Joining in with #NationalPathologyWeek here @UoBBio with our Yr1 students today! Thanks to our teaching Tech teams for helping out.  
@IBMScience @bradford\_pathol

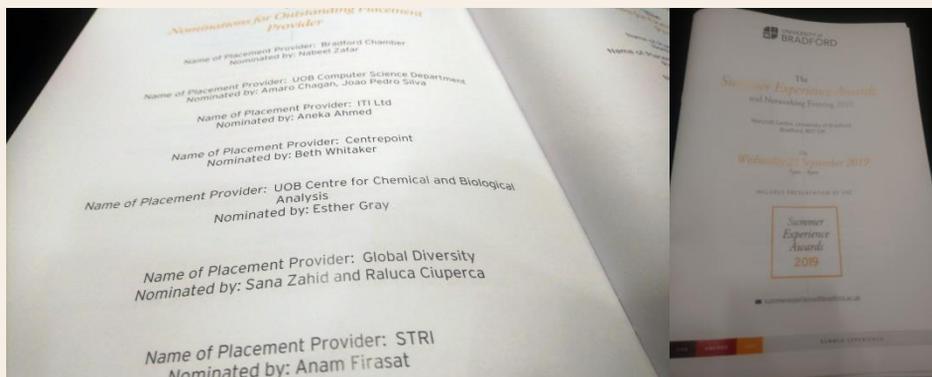
**University of Bradford** @UniofBradford  
The biology teaching labs have been promoting #NationalPathologyWeek in conjunction with @IBMScience. Lots of first year students visited the stand and are yet to decide which discipline of ...  
Show this thread

**Dr Samar Betmouni** @bradford\_pathol · 2h  
Day 1: #NationalPathologyWeek2019 🙌🙌🙌  
Q3: What do people want to know about pathology?  
A "What is pathology" google search produced this "people also ask" list 📄  
Over the coming days - I'll try and answer these questions with focus on #Histopathology  
#DiscoverPathology

also ask	People also ask
pathology used for?	What is histopathology used for?
general pathology?	Is histopathology and biopsy the same?
does a clinical pathologist do?	How can histopathology be used to diagnose?
is pathology and its branches?	What is the difference between pathology and anatomy?
what are the two main branches of pathology?	How is histopathology done?
who is father of pathology?	Can a biopsy tell stage of cancer?
what is the difference between pathology and laboratory?	Does biopsy mean cancer?
why is pathology relevant?	

**#NationalPathologyWeek2019**

## Summer Experience Awards



Massive congratulations to Chemistry student **Esther Gray**, who has won an award at the UoB Summer Experience Awards! Esther's award was 'highly commended' for her summer placement work on beeswax in the Analytical Centre this summer.

## PhD Successes

**María Azmanova** presented her work at the **Faculty of Life Sciences Postgraduate Researchers Annual Symposium 2019** and was awarded the prize for best abstract. Congratulations, María!



**Mhmoued Abdulmwli** passed his PhD viva voce on Wednesday, October 2nd. His PhD supervisors were **Professor Diana Anderson** and **Dr Rajendran C Gopalan**.

## New York City Marathon



**Lucy Trevor**, PhD student, research assistant and Plastic Surgeon in the PSBRU, completed the **New York City marathon** on 3/11/19 in 4 hours and 53 minutes, raising \$2,660 for Team for Kids in the process. Well done Lucy!

## 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 Charity Cake Bake!

On Wednesday 13<sup>th</sup> November, ChemSoc members led by **Jake Wilson** and aided by **Esther Gray**, **Aidan Fletcher**, **Sophie Nutell**, **Aysha Patel**, **Markus Ernsberg**, **Elsa Seyr** and **Wahid Hamaway** baked and sold cupcakes to raise money for DementiaUK. It was a very successful, fun and interactive event in which they raised £59.64.

## ChemSoc Invited Seminar

On the 13<sup>th</sup> of November, ChemSoc invited Prof. Fishwick, the head of Chemistry at the University of Leeds, to give a guest lecture. Focussing on overcoming antibiotic resistance, the lecture showed the challenges in both the computational and practical aspects of designing novel antibiotics using cutting edge research. It was well attended, and generated very positive feedback. Students were also preferentially given the chance to have their questions answered. All in all, it was a wonderful event, enjoyed by many. ChemSoc would like to thank the Chemistry department for help in organising the event, and especially **Prof. Stephen Rimmer** for hosting.

## Upcoming ChemSoc events

ChemSoc presents a demonstration of 'Crazy Chemistry' led by **James Machell** (@STEMBradford). The session will take place on Wednesday 11<sup>th</sup> December between 13.00 - 14.00 in the STEM labs.

This promises to be a great event, and so we'd like to encourage as many of our students and society members to attend as possible.



## 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)

## 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**



## Follow us on Social Media...



Our School has two dedicated Twitter accounts which we encourage you to follow to see all our latest updates:

**@UoBBio**  
**@UoBChem**

You will also find that many staff have their own Twitter handles that they use for work so please follow these too.