

Life, Health and Chemical Sciences (LHCS)

Welcome and Notices

Welcome to our packed second edition! We would like to mention a few opportunities :

- **Virtual Student Internship** (paid) – we are pleased to offer an opportunity to work with our school this summer – see the [Opportunity Hub](#) for details and to apply
- A programme of **Summer events** including the [Opportunities with Chemistry event](#) (7pm on 8 July) and the talk '[Pandemics, vaccines and Covid-19 mythbusters](#)' (7pm on 22 July)
- **Project module update** – let us know your thoughts! Watch out for our next Student Consultative Forum on this topic.
- **Choosing your next module** – please visit the [Module choice forums](#) for information, including videos from the module teams about what to expect.

Athena Swan Bronze Award



Athena Swan
Bronze Award

We are pleased to report that the School succeeded in renewing its Athena Swan Bronze Award in April this year.

This award recognises our efforts to support all our staff and students through inclusive and equitable practices and our continuing commitment to achieving gender equality. To find out more, please visit our [Equality and Diversity](#) page.

We plan to recruit a student and an AL to the team; please look out for further details.

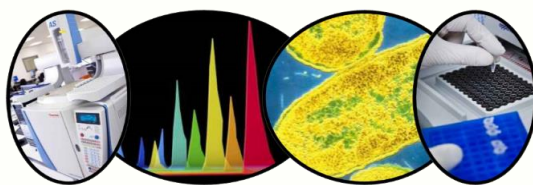
'Thank you very much to all of the LHCS Athena Swan self-assessment team for their commitment and hard work. We will keep up the good work and continue to make changes that matter for all our staff and students.'

[Jane Loughlin](#) (co-chair LHCS Athena Swan SAT)

LHCS 2021 Online Summer School – register [here](#) by 16 July

LHCS invite you to participate in the free 2021 Online Summer School (OSS). Five experimental techniques commonly used in chemistry and/or biology laboratories will be used to answer investigative questions on a range of topics:

- Using HPLC to detect pharmaceuticals in wastewater
- Identification of counterfeit medicines by FTIR spectroscopy
- Evaluating the degree of organic pollution in effluent through biochemical oxygen demand (BOD)
- Quantifying microorganisms in effluent and UV-vis spectroscopy
- Characterising the microorganisms in the effluent via PCR



The investigations will run from 26th July until 22nd August and should take you approximately 6 hours each week to complete. A weekly Adobe Connect session will introduce each investigation and include a presentation on related research being conducted at the OU by PhD students and other OU researchers. There will have an opportunity to present (oral or poster) at a student conference on a topic of your choosing. There will be mentoring available to help you decide on a topic and prepare your presentation. A digital badge for the 2021 OSS can be collected upon completion of at least 3 of the 4 end of investigation quizzes. Please register for the 2021 OSS by 16th July [here](#)

A huge thank you to all our Student Buddies and Guides of 20/21!

Meet one of our students

I started studying with the OU in 2014, initially on the Open Degree, as I was drawn to the flexibility that it provided. However, it quickly became apparent that my interest was in biology, and I later switched onto R58 Biology. I am currently studying my final modules, and will hopefully graduate in the summer. Most of my degree has been studied alongside my career as a professional footballer, and I am incredibly grateful for the opportunity that the OU has given me to further my education on a part-time basis. Overall, the experience has been challenging and rewarding in equal measure!



One aspect of OU life that I have particularly enjoyed is the [Online Journal Club](#) (OJC). It allows students to deliver a short presentation on an article they have found interesting. I have been an OJC 'regular', and it has been great to practice my presenting skills. I would highly recommend the OJC to any students who have yet to participate.

Recently, I have also been acting as a Student Guide – using the experience I have gained over the years to provide advice to students who are new to the university.

I am incredibly proud of what I have achieved so far at the OU, and I am very excited about applying what I have learned throughout my studies in my career beyond football.

-Tom Adeyemi
(current student on S317
Biological science: from genes to species)

Understanding ADHD

Would you like to enhance your understanding of ADHD? In March 2021 the OpenLearn course '[Understanding ADHD](#)' went live.



Image by Ana Collins

Authored by Associate Lecturer Ellie Dommett for a new module SK298, Brain, Mind and Mental Health, it was adapted by module team members [Claire Rostron](#) and [Katherine Leys](#) for OpenLearn. The course is intermediate level, estimated at 12 hours of study. After just 6 weeks the course had 982 enrolled learners, 9197 visits, and 282 completions, so it is proving to be extremely popular. This adds to the very successful Understanding Autism OpenLearn course (more about this in the next edition).

Attention Deficit Hyperactivity Disorder (ADHD) is a neurodevelopmental condition arising as a result of atypical development of the nervous system. This results in persistent and inappropriate levels of inattention, hyperactivity and impulsivity. This course covers prevalence, diagnosis and risk factors for ADHD including evidence for a genetic basis, as well as environmental risks. However, the main focus is on understanding the neurobiology of ADHD and its management.

SK298 is one of the core modules in the BSc in Health Sciences and ADHD is just one of 6 conditions (also including Autism, Addiction, Psychosis, Depression and Dementia) covered by the module.

Spotlight on Curriculum Manager Hazel Church

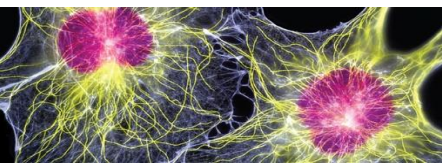
Modules at the OU each have a team associated with them. This team includes at least one Curriculum Manager (CM). The CM provides project management, day to day administration and is the focal point for information about the module.

I first came to the OU campus in Milton Keynes after applying for a job. I was an OU student and sat in the car revising for my final exam while I waited for the interview. A few weeks later, I moved my family to Milton Keynes to start working as a CM. It was stressful waiting for my results with new colleagues who had produced the very modules I had spent the last six years studying. I think we were all relieved that I passed!

Since starting to work at the OU I have managed over 26 modules and currently manage SXHL288 Practical science: biology and health, S315 Chemistry: Further Concepts and Applications and the new S390 Science project courses. A CM is key to a module running smoothly. As an analogy of the CM role in a module team, I am sharing these photos which were taken on a recent family camping holiday!



Making an early start on S294 Cell Biology



If you have registered for S294 in October 2021, you'll be given access to the website from early July through your StudentHome page. We have a lovely group of experienced S294 tutors available to support you through the summer, with online tutorials and forums.

The emphasis is on consolidating understanding of core concepts from Level 1 study, but you will also have access to the online versions of S294 books, activities and quizzes, and the opportunity to take part in an online journal club. Students in previous presentations have found the S294 Early Start very useful; so, if you have time, please do take advantage of this entirely optional opportunity.

Not studying S294, but want to start preparing for your next module? Have a look on the [Science Study site](#) where you can find preparatory resources for all our undergraduate modules.

Introducing our Board of Studies (BoS)

The BoS oversee the development and performance of the modules and qualifications across the School. Membership of the Board includes our qualification leads and managers, module team chairs and representatives from the Student Support Team, Careers and Employability Services, the Library and elected representatives from the Associate Lecturer (AL) and student communities. External oversight is provided by our External Advisor, Professor Nicola Woodroffe (Sheffield Hallam). Please read on for thoughts from Ray, one of our three AL reps, and Kelly, one of our three student reps on the important role that they play. You can contact the representatives or the BoS via our email: STEM-LHCS-BoS@open.ac.uk.

Ray Jones: "It is our remit to consider the AL perspective in connection with the modules taught by the School, and to input the views of the group of OU staff primarily concerned 'at the coal face' with delivery of the teaching and learning and with consideration of the student experience. We input to proposals for new modules, to the development of those modules in terms of structures, content and assessment, and to their delivery. We contribute AL opinion into reviews and proposed modifications of ongoing modules, and to the School Strategy for the future. All BoS business can and should benefit from the views and wide experiences of ALs. It is our job to solicit views from AL colleagues prior to Board meetings, and to report back to those colleagues after the meetings."

Kelly Britton: "Starting an undergraduate degree with The Open University was a dream come true, so to give back, I applied to be a BoS rep for LHCS. I was keen to contribute a student voice to the various aspects of how qualifications and modules were designed and managed, and it also gave me a lot of insight behind the scenes. I have met so many amazing LHCS OU staff, and fellow students, who strive to make the student experience as best as it can be. Being on the BoS has helped me develop my communication, teamworking and problem-solving skills and has been a truly invaluable experience."

Do you have something to share or would like to get involved in the Newsletter? We'd love to hear from you at STEM-LHCS-Teaching@open.ac.uk. Please include 'newsletter' in the e-mail subject header.

The LHCS Newsletter, brought to you by Fi Moorman, Karen New, Eleanor Crabb, Sushila Rigas, and Simone Pitman.

With grateful thanks to Becky Kinge for design.

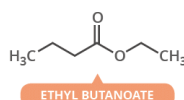
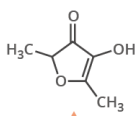
[The Chemistry of Mangoes](#)
[Compound Interest \(compoundchem.com\)](http://Compound Interest (compoundchem.com))

THE CHEMISTRY OF MANGOES

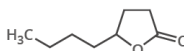
MANGO FLAVOUR & AROMA COMPOUNDS

A large number of compounds contribute to the flavour and the aroma of mangoes. The cultivar, maturity, and geographical origin of the mango all influence the compounds present.

270+ VOLATILE COMPOUNDS DETECTED IN MANGOES



γ -OCTALACTONE



Esters such as ethyl butanoate account for fruity notes in mango aroma. A major contributor to sweet notes is HDMF (4-hydroxy-2,5-dimethyl-3(2H)-furanone). Lactones such as γ -octalactone can lend a coconut-like aroma, while terpenes are also found in significant quantities and make minor contributions.



MANGOES & CONTACT DERMATITIS



Possible R groups

$(\text{CH}_2)_{14}\text{CH}_3$
 $(\text{CH}_2)_7\text{CH}=\text{CH}(\text{CH}_2)_5\text{CH}_3$
 $(\text{CH}_2)_5\text{CH}=\text{CHCH}_2\text{CH}=\text{CH}(\text{CH}_2)_2\text{CH}_3$
and others...

URUSHIOL

Mangoes belong to the same family of plants as poison ivy. Urushiol, a mix of similar organic compounds which are found in poison ivy and can cause a rash to develop on contact with the skin, can also be found in mango skin. This means that some people who are sensitive to urushiol get contact dermatitis when chopping or eating mangoes.



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