

ABE UK newsletter

Welcome

Continuing professional development

2024, how did we do?

Kit loan

How to take advantage of our free kit loan

Millionth student celebrations – Norfolk schools mark global science education celebration

How two schools marked this milestone

Featured ABE resource – foundational skills on LabXchange

Micropipetting and other skills

UK service supplier team

Could you be part of the team?

In-school support from the specialists

How can we best help you?

ABE/UH mug

Do you have yours yet?

Amgen Biotech Experience Master Teacher Fellowship

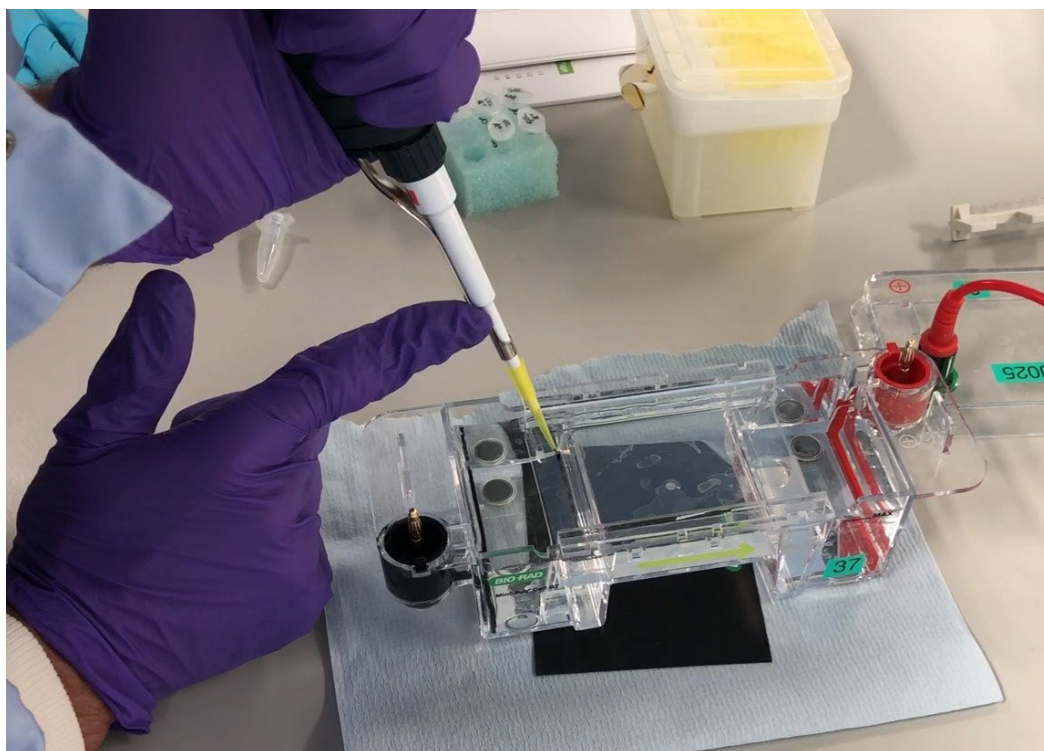
Stipended opportunity

Meet our new Hull hub colleagues

Meet Mauro and Tyler

And finally – a word from Phil

Why trust science?



Picture: Loading gels

Welcome

By Dr Eddie Orija, director, UH Centre for STEM Education

Welcome to the October ABE UK Newsletter, please let me start by introducing myself. My name is Eddie, I joined our Centre for STEM Education and ABE UK programme as director in May this year; I also continue in my Anglia Ruskin University role, teaching engineering mathematics. Although my area of expertise is mathematics education, I am excited about all STEM education and our ABE programme. I look forward to working with you and meeting as many of you in person as possible.

In this issue, I would like to share some fantastic initiatives with you, including the Master Teacher Fellowship programme (deadline for submission 21st October 2024) and the ABE volunteer programme. There is some guidance in your use of LabXchange in both lesson preparation and students' learning. We make an open call for science teachers to participate in wider paid ABE UK resource and curriculum development roles. We share information about kit loan opportunities and report on the UK's 9th September Millionth student celebrations activities. We welcome new colleagues and outline opportunities to further engage in the world of biotechnology and ABE curriculum development.

Continuing professional development

We were delighted to deliver our summer Amgen Biotech Experience CPD to teachers and technicians across the country at our Cambridge, Hatfield, Hull and Norwich hubs, and our new hub in Kent - thank you for your engagement and commitment to ABE!

In the spirit of one of Amgen's key values, to collaborate, communicate and be accountable; Amgen UK would like to hear from ABE teachers and technicians, about their experiences and thoughts about the programme. This is a great opportunity to extend your scientific network, showcase your school's work, and contribute internationally to ABE programme. Your first-hand feedback from your school is really valued and would ensure a better tailored volunteer. We really appreciate your input in our continued partnership with Amgen UK. Email stem@herts.ac.uk with your own feedback, and if you can provide a short video clip that would be even better!

All I can say is that the students say it is the highlight of their year. Having done the first practical in Year 12 they really look forward to doing the next practical in Year 13.... Please do not stop running the Amgen experience as it has inspired some of our students to follow a path in science. (Dr Challoners Grammar School)

The Amgen Biotech Experience has provided our students with the unique opportunity to carry out their own cloning projects in the classroom. This experience complements and consolidates the A Level Biology course whilst also providing a fantastic enrichment opportunity. Students find the cloning project exciting and engaging. The knowledge that the techniques employed in this course are used universally in molecular biology labs all over the world fuels students' enthusiasm.

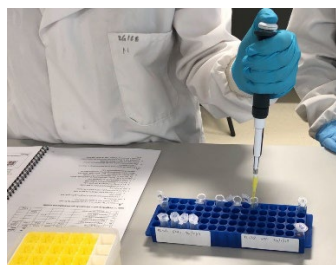
The Amgen course also offers CPD to school staff. Training provided by the University of Hertfordshire ensures that teachers and technicians are confident in molecular biology techniques, applications and delivery of content to students. (St Albans Girls' School)

Watch your inbox for details of our next CPD – we hope to announce dates soon.

Kit loan

Kit loan from our hubs will continue in the 2024-25 academic year for schools where staff have attended ABE training within the last 3 years. The kit comprises the equipment to run the labs with 12 pairs of students – we assume that your students will work in pairs. We can provide reagents and consumables for you to run the labs multiple times to accommodate more students; however, the amount of equipment in the kit does not change.

All schools that borrow kit must complete a risk assessment in advance of the loan. Please check current CLEAPSS guidance for updates. Schools that wish to borrow kit, subject to the above, should complete the [school planning form for 2024-25 \(DOCX - 0.18 Mb\)](#). A signed Health & Safety and Insurance advice form will need to be returned prior to borrowing the kit: [H&S and Insurance advice form](#).

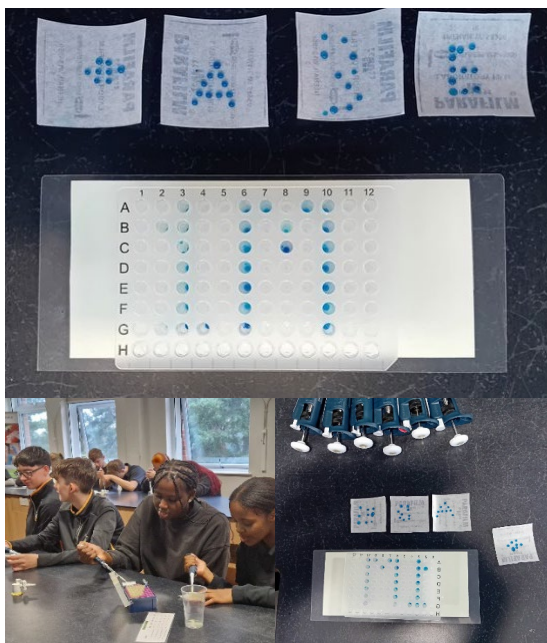


Please submit your completed **Kit Loan requests** to your Hub Leaders as soon as possible.

CAMBRIDGE kit users: please remember that your kit should now be collected from Shiree at Cambridge Regional College and NOT Gail at Homerton! CRC is located just off the A14 (directions here - <https://www.camre.ac.uk/about/our-locations/cambridge-campus-location/>). Shiree will be offering kits collections/returns, Monday to Friday between 9 and 3pm. CRC Reception will be the place to report to when collecting/returning kit. There is a large visitors carpark next to reception and you will need to register your car at reception to avoid a parking fine in the post later!

The whole team in the UK extend their best wishes to Gail in her 'ABE retirement' and are so, so grateful for all she has done to help launch, refine and polish the offering of ABE across the UK.





Millionth student celebrations – Norfolk schools mark global science education celebration

On Monday 9th September, the ABE programme celebrated reaching over 1 million students. To mark this milestone, the UK programme CPD lead and our personal ABE hero, Dr Phil Smith, ran classroom sessions at Ormiston Victory Academy and Sheringham High Schools in Norfolk. Both schools have participated in the programme for over 5 years and were excited to have the opportunity to do something practical and fun so early in the UK academic year. Year 10 students in both schools learnt a new handling technique and produced novel illustrations of the day's social media hashtag, #ABE1M, set in the context of life in a biotech lab. To access the ABE 1 Million resources, so that students who work with the programme this year can appreciate its global reach see the materials here - <https://amgenbiotechexperience.com/celebrating-1-million-teacher-toolkit>

Featured ABE resource – foundational skills on LabXchange

Micropipetting and other essential biotech skills improve students' comprehension of scientific principles and equip them for future careers in science and research. Additionally, these skills promote critical thinking, attention to detail, and collaboration, which are crucial in laboratory settings. ABE's micropipetting lab has a [corresponding pathway on LabXchange](#) (a free online platform for science education from Harvard University, sponsored by the Amgen Foundation). Through simulations, videos, and interactives, students can explore the concepts before embarking on the lab or use these digital resources to deepen their understanding. For an introduction to the LabXchange platform for virtual science learning, please view the [Teacher Resources](#) page, the [Subjects](#) page, or the [Get Started](#) page or see the new LabXchange supplement on the 'Find out about LabXchange' part of our website.

Here are some of the comments direct from students who were given the opportunity to use the kit regarding new skills and how participating in the programme helped their learning.

I learnt the importance of precision to get the correct results, and that it requires a lot of patience, also how restriction enzymes are used. This was helpful to solidify knowledge learnt in lessons in a practical way.

I got to use restriction endonuclease, which was really exciting as I saw its role come to life and it really helped me embed textbook knowledge and to fully understand its function. The experiment opened my eyes and showed me that there is more to biology than just memorising things.

I really liked practicing fine motor skills in gel electrophoresis and gaining a better understanding of the mechanism behind it.

Could you be part of our UK service supplier team.....?

We are seeking science teachers to join our UK service supplier team and add to the wealth of expertise and specialisms to support resource and curriculum development work. With the aid of the extensive science materials available on [ABE Curriculum & Resources](#), the UK service supplier team are able to actively support teachers in their use of [LabXchange](#). This could include how to best deliver sessions for a specialist science area/age range, by, for example, formulating a lesson/study plan based on LabXchange resources that is linked to OCR, AQA, Pearson, Eduqas examination specifications. Please get in touch with me on either e.orija@herts.ac.uk or 07983525661 if you would like to discuss this further or to register your interest.

... Or would you like in-school support from the specialists?

Amgen UK staff are keen to volunteer in ABE schools to deliver talks to groups of students about science careers/industry, and/or to support learning in ABE sessions. Please complete [this form](#) to register your interest, providing as much detail as you can on the form so that we can match you with an Amgen volunteer. Please contact stem@herts.ac.uk with any queries on this initiative.

Do you have your ABE/UH mug yet?

We are always looking for ways to make participating teachers and technicians feel appreciated, and we are familiar with the staff room hunt for a clean mug. With both of these factors in mind, we urge you to look out for your ABE/UH mug when next you take advantage of our kit loan. We might not be able to actually make your cuppa, but we know you'll at least have a clean mug!



The [Amgen Biotech Experience Master Teacher Fellowship](#) is a stipended year-long professional experience, with benefits including technical curriculum advisement from subject matter experts. Fellows will be asked to dedicate 6–10 hours per month toward fellowship activities and meetings. Fellows' time will be compensated through a stipend of \$2,000 (approx. £1,500). Grant applications for the 2024/25 cycle are open for all teachers with three or more years' experience in our ABE programme. This is a great opportunity to develop your expertise in an area of personal interest in the biosciences and contribute to the development of ABE programme and resources. [Applications must be made by 21 October 2024 via this form.](#)

Meet our new Hull hub colleagues

Originally from Argentina and currently a lecturer in Biotechnology and Biochemistry, Mauro Rinaldi loves the reach of the Amgen Biotechnology Experience programme and is very proud to contribute to it! Mauro researches microbes to convert waste biomass into high-value chemicals, displacing petrochemicals and creating new, greener, more sustainable bioprocesses, and is passionate about teaching Biotechnology. Mauro believes anyone can learn it and help us deliver the solutions to meet our global goals.

Tyler Howell-Bray is a lecturer in Biology at the University of Hull, specialising in molecular and microbiological teaching. Having grown up in a less affluent area of London and taking a non-traditional route into HE, Tyler is passionate about expanding the horizons of young people and supporting them in the development of their own STEM aspirations. Tyler's research focuses on protein form and function, how they cause disease, how this influences metabolism and how this can be used for societal benefit. Tyler is excited to engage with schools in the Hull area via the Amgen Experience and spread enthusiasm for the subject!

And finally – a word from Phil

Science broadly, but the world of biotechnology particularly, is regularly faced with challenges in the press about 'dangerous' future developments. ABE is keen to boost scientific literacy. It is important that our young people are equipped with the skills to sift misinformation from science fact. Some colleagues have recently written an essay about this challenge and shared some teaching tools to support this, we encourage you to take a look at <https://whytrustscience.org.uk/>

Please continue to check our [website](#) for updates about the next network meeting and our summer 2025 ABE UK Conference.