

**T**he Frontier Pathology Microbiology and Infection Service at Brighton and Sussex University Hospital Trust (BSUH) was approached by Brighton and Sussex Medical School and asked to host some Ethiopian PhD research students. We were keen to support this and were quickly able to encourage participation from the microbiology department at East Sussex Healthcare NHS Trust in Eastbourne.

The request originated through existing links with the Armauer Hansen research Institute (AHRI) and Haramaya University in Ethiopia. They are jointly organising a post-graduate research program in microbiology. They have identified that the students have limited understanding of general microbiology routine procedures due to a lack of well-established diagnostic laboratories in the country.

By September, when the first students, Desalegn and Kedir, arrived for four weeks, we had created a plan, designed to balance some beneficial output from the students for the host lab, along with varied observation and some limited hands-on experience. By spending time in more than one location, it offered the students experience of differing techniques and ways of working within a UKAS framework.

### The placements

The first week they were both at the laboratory at Brighton, where they received an induction focussed on health and safety. A tutorial around quality management systems and UKAS accreditation, including audit, was provided. The remainder of the week was devoted to the students completing a small verification, which was of benefit to the department. The students were rotated around for a week each in virology and bacteriology in Brighton and a week in Eastbourne. Each of the students also conducted a witness audit.

Biomedical scientist Harry Chaplow looked after each student one day offering a tutorial. He will use the experience as evidence for his specialist portfolio.

He said: "Part of the rotation through bacteriology included a day looking at faeces specimens being processed on the EntericBio multiplex RT-PCR system, as well as follow-up culture and identification. Both students were interested to see the differences in our methodology for processing faecal samples, the isolates we most commonly isolate, and the difference between PCR methods they have used before and the EntericBio

system itself, including its absence of an extraction stage."

### Projects

We were also able to organise a tour of blood sciences and histology at Brighton, plus a day trip to see the Frontier Microbiology service provided to Surrey and Sussex Healthcare NHS Trust (SaSH). The Brighton and Sussex Medical School was also able to host them for a day.

Each student prepared a talk about their PhD projects, which they presented to the staff at Brighton, Eastbourne and Crawley. They were very well received. Their presentations were: Kedir Bofe: *Epidemiology of Mycobacterium Leprae Infection Among Household Contacts of Previously Undiagnosed Leprosy Patients in Fedis Woreda, Eastern Ethiopia.*

Desalegn Ayana: *Molecular Epidemiology of Hepatitis B Virus Genotypes Variants and Mutations among HBV Mono-Infected Individuals and HIV Co-Infected Individuals.*

After their return to Ethiopia, the students prepared a report for their university, including the benefits of their time in Sussex. Being exposed to the routine microbiology benches supported by automation is highly beneficial for the students, they said and listed the benefits. See box, right.

IMAGE: ISTOCK



### Valuable experience

Teams in the hosting laboratories also found the experience fruitful. Specialist biomedical scientist Kelly Olliver said: "It is often both exciting and daunting when we have visitors to the laboratory, ensuring that we as professionals meet their expectations and provide a fulfilling and worthwhile experience whilst still maintaining the needs of our service.

"Frontier microbiology already has strong links with Brighton and Sussex Medical school and it was wonderful to hear that we could further extend those links to AHRI.

"When Des and Kedir arrived, they quickly adapted and began to share their experiences of living and working in Ethiopia, their research was fascinating and we had many conversations over lunch and coffee discussing the numerous challenges including obtaining therapeutic medicine and managing outreach projects, all of which are often taken for granted in the UK. I learned a lot from Des and Kedir and my experience of hosting overseas PhD students extended far beyond the science.

"In our profession it is so easy to get bogged down with routine, it was

Below. Desalegn Ayana (far left) with three of the laboratory staff from Eastbourne Microbiology.

### STUDENT BENEFITS

- ✓ Getting familiar with the advances in diagnostic technology
- ✓ Getting exposure from being attached to different individuals using different automations for diagnostic activities
- ✓ Sharing experience on automated and manual approach in diagnosis
- ✓ Learning some techniques which can be applied in the diagnostic laboratory
- ✓ Learning the different systems used to qualify and register a laboratory professional/biomedical scientist
- ✓ Learning the different techniques used to detect AMR and challenges related to AMR
- ✓ Learning how to communicate with different professionals
- ✓ Learning lifestyle and cultural activities.

somewhat refreshing to listen to new ideas and approaches and actually share together some of the amazing and cutting-edge techniques we are fortunate to be a part of. I hope we can continue to learn from each other and am excited about developing our relationship further."

Frontier Pathology and ESHT Microbiology are now looking to host more Ethiopian PhD research students in 2019 and seeking opportunities to develop these links further. **DMS**

# NEW IDEAS AND APPROACHES

**Jackie Longbone**, Deputy Head of Service for Microbiology and Infection at Frontier Pathology, explains the benefits of welcoming overseas PhD students.

