

# *The* Bulletin

of the Royal College of Pathologists

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The Royal College of Pathologists  
Pathology: the science behind the cure

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**On the cover:** *Heroes* by Johnny Ma Kwok, winner of the 2020 Art of Pathology competition, 11–17 category.

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were fairly sure they wanted a career in pathology. Afterwards, 59% said they were either likely or very likely to pursue a career in pathology, with another 38% considering it as a possible option. Most encouragingly, 95% said they would recommend the event to others.

**Foundation Fellowship Scheme**

In 2020, the College launched its new Foundation Fellowship scheme. The scheme aims to support high-calibre Foundation doctors with an interest in pathology and to engage them with the work of the College.

All Foundation doctors whose rotations include a post in any pathology discipline are eligible to apply for an RCPATH Foundation Fellowship through a competitive selection process.

I am grateful to Dr Mike Masding, Co-Chair of the UK Foundation Programme Office and Lead Foundation School Director, Health Education England (HEE), for supporting and promoting these Fellowships through the Foundation Schools Directors Committee.

The appointed Fellows enjoy a number of benefits, including College membership, the opportunity to attend various College events and educational meetings, and opportunities to present at events such as the Foundation taster event and undergraduate summer school.

The scheme was oversubscribed and many excellent applications were received. I am delighted to report that 24 Foundation Fellows were selected

**Box 2: Foundation Fellows appointed.**

Hawa Abdulrahman	Kemal Gilanli
Movin Abeywikrema	Veda Kudva
Rishi Agrawal	Kashing Leung
Adam Andreani	Raihan Mohammed
Owain Blackwood	Sam Morfett
Rhona Boyle	Poobalan Nayanatara
Bethan Carter	Soumya Ojha
Ryan Clark	Sojin Park
Amarpreet Devi	Rebecca Prince
Lerryn Edgehill	Sidhant Seth
Enea Fotis	Phoebe Sharp
Leanne Gale	Stefani Widya

(see Box 2). Congratulations to them all. We extend a warm welcome and hope that they enjoy and benefit from this new scheme.

If your department hosts Foundation doctor posts, please do encourage those rotating through next year to apply for a Fellowship. Applications for next year will open in summer 2021.

**Dr Angharad Davies**  
**Joint Lead for Undergraduate and Foundation Education (Foundation)**



Professor Berne Ferry

higher specialist scientific and clinical knowledge. Trainees also benefit from networking with other HSST trainees and have opportunities to learn from and collaborate with experts in their field.

The programme provides trainees with full funding of £3,000 per annum for the academic element, which can consist of a Professional Doctorate (DClinSci) in their chosen field and a PgDIP in Leadership and Management for scientists with or without a previous PhD.

In addition, trainees benefit from a £13,000 annual training budget for five years, to support the other training costs of the programme, including conference fees, professional examinations, travel and accommodation, and research costs.

The HSST programme is made up of 20% study time and time spent attending academic workshops and undergoing professional assessments.

The majority of HSST trainees are in-service candidates and therefore have important NHS service delivery roles in their departments, which complement the aims of the programme, providing practical experience and opportunities to put into practice the skills learnt on the course.

To find out more about HSST from scientists who have completed or are currently undertaking this programme, please see the five trainee profiles beginning in the opposite column and continuing to page 260.

**Trainees emerging after HSST completion**

The initial HSST cohorts are now beginning to complete the programme and move into consultant scientist roles across the NHS, implementing the skills that they have developed. Understanding and recognition of this programme continues to grow in the healthcare science community and among colleagues in other healthcare professions, including medicine and pharmacy. Gradually, too, Trust managers and HR personnel are beginning to acknowledge and understand its value.

We are now seeing life science HSST candidates take on significant clinical and scientific responsibilities, becoming clinical leads of departments and, where appropriate, running clinics. This increase in scope of practice is easing the burden in pathology areas where significant workforce gaps have been previously identified

**COVID-19 pandemic: stepping up to the mark**

During the COVID-19 pandemic, HSST trainees have risen to the challenge and taken on additional roles and responsibilities to support the response. Some have been redeployed to critical areas, others have supported stretched clinical services, and all have contributed to additional service provision. The adaptability, resilience and innovative thinking shown are testament to these trainees and their experiences on the programme.

*continues on page 259*

**HSST trainee profiles**



**Paula Waits**  
**Fellowship in Molecular Pathology of Acquired Disease Year 5**

The HSST training gave me the opportunity to rotate into all areas of the oncology genomics team to ensure both the breadth and depth of training essential for this ever-evolving multidisciplinary role. This is especially important when sitting RCPATH examinations and completing OneFile competencies

It also means I have representation on many senior leadership team meetings within my department, covering areas such as health and safety and quality assurance. I get to engage with clinical teams, have greater involvement in multidisciplinary team meetings, attend key external meetings and disseminate key findings with the wider team.

I particularly enjoyed the PGDip in Leadership and Management from Manchester University. This was unlike any other training that I'd done previously and has given me the tools to become more confident in my leadership role.

**Expectation versus reality**

Being part of the first cohort of the HSST was certainly not without its challenges, as any of the first cohort will tell you. Navigating around the reality of the training, versus the expectations of the training, was especially challenging and tested negotiation skills to the maximum. However, now that this programme has been widely adopted, this is no longer as much of a challenge for subsequent trainees.

While I thoroughly enjoyed the PGDip in Leadership and Management, going back into an academic environment and writing essays for a non-scientific subject was also somewhat of a challenge, although a good one.

OneFile competencies were also an enormous challenge, so my advice is – do them as you go along, as it will be much easier in the long run.

**Tough but worth it**

The HSST is a fantastic opportunity to enhance your skills, both as a scientist and as a leader in the molecular pathology field. It will give you the benefit of continued learning in a

**Higher Specialist Scientific Training in pathology: an overview**

**L**isa Ayers and Professor Berne Ferry summarise the key aspects of the Higher Specialist Scientific Training programme, which prepares healthcare scientists for consultant posts.

The five-year, work-based Higher Specialist Scientific Training (HSST) programme is the most senior-level training provision for healthcare scientists. It is open to the four countries of the UK, is managed and delivered by the National School of Healthcare Science (NSHCS), and funded by Health Education England (HEE). It is designed to prepare healthcare scientists for the challenging role of consultant scientist in the NHS, and is supported by an underpinning part-time, doctoral-level programme.

**HSST and pathology specialties**

Training for pathology specialties and life sciences is implemented through partnership with the

Royal College of Pathologists (RCPATH). Information on the wide range of HSST curricula available can be found at [www.rcpath.org/trainees/training/training-by-specialty.html](http://www.rcpath.org/trainees/training/training-by-specialty.html).

In these subjects, HSST trainees are required to gain Fellowship of the RCPATH by undertaking their specialist FRCPath examinations. Gaining FRCPath is essential, along with research, leadership and high-level clinical competence, for completing the programme.

**An outline of training and support provided**

HSST offers a blend of training for essential skills required in senior scientific roles in the NHS, including leadership, innovation, research, and



Lisa Ayers

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## HSST trainee profiles *continued*

structured format and should, ultimately, allow you to progress into more senior management roles. Never, though, underestimate how tough this five-year training programme is, but also never forget just how rewarding it can be.



**Lewis Darnell**  
Genetics/  
Genomics  
Year 5

As a life sciences trainee, I undertook the Leadership and Management A unit modules with the University of Manchester while simultaneously studying to take the Royal College of Pathology exams to obtain a fellowship.

I work as a clinical scientist in the Molecular Genetics department at Nottingham University Hospitals NHS Trust. Much of the HSST training revolved around that role, including service management, quality assurance, service development and training others.

My research projects led to the introduction of a new testing service in the department and, separately, evaluation of an improved method for diagnosing patients with rare recessive genetic conditions.

I achieved the fellowship of the Royal College of Pathologists through a combination of examination and research. Both of the research and development projects I undertook as part of the HSST were successful.

### Single workflow, multiple benefits

The first led to the introduction of a single workflow to allow efficient testing of a variety of cancer and non-cancer services. This not only reduced the cost of testing, but also led to faster results, estimated to save over 900 hours of staff time per year. It also allowed for the introduction of a testing service for autosomal dominant polycystic kidney disease without further impact on staffing or resources.

My final research project resulted in a genetic diagnosis for four families with rare genetic disorders, allowing me to complete the doctorate portion of the HSST.

As I was part of the first HSST cohort, the most challenging part was knowing how to plan my workload. With so many organisations involved,

and the training being such a big task, the course was often adapted and added to around us. It wasn't always clear what stages were next, what exactly we needed to do and how we were to go about doing it. Now that trainees are starting to complete the training, this will be much less of an issue for future cohorts.

### Transferable knowledge

HSST opens doors to many experiences that you may otherwise not have had, from networking with colleagues from other sites to attending higher-level meetings at your own Trust. This gives you a good overview of a wide variety of tasks and the chance to discover what you like, what you're good at and which areas need improvement. Overall, you gain a wide-ranging experience of science in the NHS that's transferable to a variety of future roles.



**Josephine McCullagh**  
Transfusion  
Medicine  
Year 4

As a blood sciences trainee I had the option to study for the full DClinSci or to complete some but not all elements of the training. I chose the former, which meant that I would need to complete: Section A: Postgraduate Diploma in Leadership and Professionalism for Healthcare Sciences; Section B: FRCPath part 1; and Section C: Doctoral Research and FRCPath part 2.

I've enjoyed two main elements: being involved in research and my honorary contract with NHS Blood and Transplant (NHSBT).

### Exploring the clinical academic pathway

I've been involved in several interesting research projects, primarily my doctoral research project, which involved collaboration with many different organisations. We've been looking at the feasibility of introducing a whole-blood component in the pre-hospital setting. Working in research at this level made me realise how much I enjoy this aspect of my role. It's helped me to explore becoming a clinical academic, a career pathway that I would very much like to pursue.

I've been working collaboratively with NHSBT, developing valuable skills, knowledge

and networks, while remaining in the hospital setting. This opportunity to work across different organisations throughout my training has really added depth and breadth to my knowledge and experience – and likely wouldn't have been available to me outside of HSST.

So far, the postgraduate diploma in Leadership and Professionalism for Healthcare Sciences has been the most challenging aspect. Not because the content of the course is particularly difficult, but because it is very different to any other form of study I have previously completed. It is less scientific or clinically focused and concentrates more on social sciences.

HSST has helped me in so many ways to develop as a leader and apply what I've learned in the workplace. But it's not always easy to find the correct headspace to appreciate fully the training while juggling a full-time job, research, Royal College exams and a personal life. That said, HSST has benefited me greatly, providing me with a firm foundation in leadership skills.

### Happy to discuss

I'd urge anyone interested in the HSST training programme to visit the National School of Healthcare Science website, where there is a wealth of information on the programme.

I would also strongly encourage them to get in touch with current trainees. There are now many more HSST trainees on the transfusion medicine specialty pathway than when I started. Current trainees can offer an excellent perspective and useful advice from their own experience. I'm happy to discuss HSST with any aspiring transfusion medicine candidates, especially those from a hospital setting.

Finally, anyone interested in this programme really should discuss it with their department.

### Change in eligibility criteria increasing access

In September 2020, the National School of Healthcare Science released a joint statement with the RCPATH, Academy for Healthcare Science (AHCS), Institute of Biomedical Science and Manchester Academy of Healthcare Science Education regarding a change to eligibility for entry to HSST from 2021, allowing entry for the first time to senior biomedical scientists with appropriate experience and qualifications.

All four nations of the UK support this opening up of eligibility criteria. It is hoped, too, that it will allow for wider participation in the programme and support recruitment in those specialties with the greatest workforce needs, including haematology, transfusion and microbiology.

Clinical scientists and biomedical scientists will have to complete the same academic and professional components, and achieve Fellowship

Support from your department and clinical/training supervisors is important and can make a huge difference in your journey throughout the programme.



**Tom Bullock**  
Transfusion  
Science  
Year 5  
Completed  
training

The HSST transfusion science curriculum is broad and consists of two stages, with the subject matter in each stage of the curriculum examined in the FRCPath Part one or Part two exams. It also includes doctoral research and development.

Stage one covers topics such as haematology, blood group systems, transfusion therapy, donor-recruitment testing and processing of blood components, among others.

Stage two covers modules including clinical bioinformatics, genomics and personalised medicine, science communication, adverse reactions to transfusion and therapeutic apheresis.

### Research relevant to the day to day

My doctoral research project focused on red blood cell microvesicles in sickle cell disease and their role in vaso-occlusive crises. It gave me the opportunity to perform research into an area relevant to my specialty using techniques unfamiliar to me, such as confocal microscopy. As a red cell immunohaematology specialist, I often provide

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of the RCPATH by examination, to complete HSST and join the Higher Specialist Scientist register with the AHCS. Therefore, all healthcare scientists will exit the programme with the same consultant-level skills.

The high-level scientific expertise, research skills and leadership training that HSST trainees are beginning to bring to the NHS will benefit patients and provide the agility and scope needed to develop many different clinical teams across the healthcare spectrum in the UK.

**Lisa Ayers**  
HSST Training Programme Director  
National School of Healthcare Science

**Professor Berne Ferry**  
Head of the National School of  
Healthcare Science

## HSST trainee profiles *continued*

transfusion advice for patients with this disease. So, it was invaluable in my day-to-day role to learn more, as a part of my thesis, about the pathophysiology of the condition and treatments for these patients.

HSST was primarily a work-based programme, involving a combination of experiential learning, case-based discussions, work placements and teaching, undertaken primarily at my workplace or on placement.

The FRCPath curriculum was both challenging and enjoyable, giving me the opportunity to learn about areas I had not encountered in my previous role. I especially enjoyed attending donor sessions and haematology clinics, meeting both the donors and the patients we provide with the blood components necessary to their treatment and recovery.

### Shaping real leaders

Much of the programme was challenging at times, but the PGDip leadership modules at the University of Manchester business school were particularly tough. This part of the programme centres around social sciences and is designed to ensure candidates develop into leaders capable of self-reflection and questioning their actions to improve.

It pushed me outside the comfort zone of my scientific discipline, forcing me to reflect on my weaknesses and strengths as an individual, and helping me to continually develop and adapt my practice as a consultant clinical scientist.

I would recommend HSST to any healthcare scientist looking to develop as experts in their field of practice. The programme provides a career framework that prepares scientists to provide advice at consultant level, working alongside medical colleagues to offer patients the best possible care.



**Dr Victoria McCune**  
Microbiology  
Year 5  
Completed training 2019

One of the most enjoyable parts of HSST was the opportunity to take on a different challenge and develop my clinical knowledge and skills, working in a new environment within the Infection Service team.

Combining scientific and laboratory skills with knowledge and understanding of clinical pathways and management has given me a different perspective on fostering innovation and improvement in the microbiology service.

### Juggling required

The programme also provides a structured opportunity to undertake patient/service-focused research and build wider multidisciplinary and academic links. This was something that I found to be very useful in preparing me for my new consultant role.

At times, it was overwhelming juggling the requirements of the Doctor of Clinical Science (DClinSci) programme, service provision, work-based learning and preparation for the FRCPath examinations.

### Work, rest and plan

There is a large amount of learning to cover over the five years and demands on your time can be significant. It is important to plan your workload wherever possible, incorporate revision and wider learning into everyday practice and to understand when rest is needed.

HSST requires a significant commitment to postgraduate learning. I would encourage those considering this training to do their research to fully understand what is really required during the programme and what the role of a consultant clinical scientist involves.

There are many resources available on the internet via the National School of Healthcare Science, the Academy for Healthcare Sciences and NHS Employers. Speak with other HSST trainees and consultants in the discipline to understand their experiences.

It is worth stressing that HSST is a bespoke learning programme, so it is important when embarking on it that you understand your individual learning needs and reflect on your previous training and experience.

### Exciting time for the challenge

The consultant clinical scientist role in microbiology is increasingly being recognised and developed to support new ways of working in the laboratory. As pathology networks develop, and medical consultant roles in our discipline become more patient facing, there will be an even greater need for senior scientists with detailed knowledge of laboratory and quality-management systems to help manage and shape the laboratories of the future. This is an exciting time to take on the challenge of HSST.



Dr Esther Youd

## Diversity and inclusion: a College perspective

**D**iversity and inclusion are essential to ensuring the College serves all its members. Dr Esther Youd outlines plans already in motion to embed a real and continuous change in our culture.

Over the last year there has been increased focus on racism in society, in particular with the killing of George Floyd in the USA and the Black Lives Matter movement. This came at the same time as a recognition that people from some Black, Asian and minority ethnic (BAME) groups were at much higher risk from coronavirus disease (COVID-19) than white groups. These two things have caused a concentration across society as a whole on racism and, in medical arenas in particular, on its impacts on health.

At the College Trustee Board, we have been conscious for some time that the composition of Trustees (all white), although largely elected by College Fellows, does not reflect the broad diversity of College membership.

Diversity in the healthcare setting can refer to a number of characteristics, such as race, ethnicity, gender, sexual orientation, religion, physical abilities and disabilities, to name just a few. Additional features, including socioeconomic background, education, language, culture, age, seniority and geographical location, can introduce further points of difference but the list can of course be wider.

Diversity brings immense value – and diversity of thought is important to facilitate proper scrutiny of decision-making and ensure the College is serving all its members.

Trustees and the senior management team agreed that this is an important area for further action and improvement. We do need to understand why people want to get involved at the College and ask the question – how inclusive are we?

### The Diversity and Inclusion Advisory Group

The Trustees have now commissioned a Diversity and Inclusion Advisory Group to discuss these key issues and to advise the Board on what steps need to be taken. I have volunteered to lead this group and am keen to see the College become a fair, inclusive, open, honest and representative organisation that welcomes you and allows you to participate and succeed, no matter what your background or identity.

The response to the call for volunteers to join this new group was extremely positive and I am proud to chair such an enthusiastic group of members, who all want to help shape a better College. We have College members and College staff involved, trainees from foundation, specialty training and Medical Training Initiative, consultants, medics and clinical

scientists, members from devolved nations, part-time and full-time workers, and academics, from teaching hospitals, from district general hospitals and from outside the NHS.

The invitation to participate was shared and promoted by colleagues at the British Association of Physicians of Indian Origin (BAPIO), The Association of LGBTQ+ Doctors and Dentists (GLADD) and the Disabled Doctors Network (DDN).

The advisory group membership is formed of people representing a huge range of characteristics, experience and expertise (26 in total at the time of writing), as highlighted in Table 1 on page 262.

The group met first on 22 October 2020 to agree terms of reference and the broad areas on which to report to the Trustees. These include:

- the diversity of College committees, Council and Trustee Board
- how inclusive the College is for members and staff of diverse backgrounds and identities
- what steps can be taken to improve equality, diversity and inclusion at the College
- a remit to cover all functions of the College for members and staff
- providing advice on matters of diversity that impact on pathology practice
- exploring opportunities to establish relationships between the College and networks or organisations that can help the College improve diversity and inclusion.

We had an open discussion about diversity and inclusion, with some important themes emerging that will form the basis of more in-depth discussion at future meetings. These included:

- covering the need to widen participation
- supporting people to better understand how the College works and to get involved
- reviewing how inclusive the College appears on the website
- how to empower people
- mentoring
- increasing the transparency of appointments processes
- use of technology to overcome the London-centric view
- making our diversity visible
- opening doors
- challenging traditional assumptions
- having diverse role models.