

Former T Level student, Agatha Ward preparing solutions in the flow cytometry lab. MRC-LMB

Medical Research Council Laboratory of Molecular Biology

The first T Level Science student to complete a placement at the Medical Research Council (MRC) Laboratory of Molecular Biology (LMB) made such a strong impression with her maturity, conscientiousness, enthusiasm and curiosity that they offered her a degree apprenticeship.

Student success story

Agatha Ward, a former T Level student, is now pursuing a Laboratory Scientist degree apprenticeship at Anglia Ruskin University while working in flow cytometry at the LMB. Her career trajectory took a pivotal turn when she approached her mentor, Pier André Penttilä, Head of the Flow Cytometry Facility, with a bold request to create a position specifically for her.

"I was more than happy to support Agatha in pursuing a degree apprenticeship," Pier says. "She demonstrated the maturity, enthusiasm and curiosity needed for this field. These qualities are essential for becoming a successful technician, technical specialist, or even a scientist, and she exemplified them all."

Agatha says she gained the confidence to make the request after delivering a presentation at the LMB's Annual Technician Week in January 2024: "I was really excited about the opportunity to speak publicly. I loved musical theatre as a kid, so it felt great to be on stage again, this time talking about science."

Agatha's presentation detailed her experiences as a T Level student across multiple LMB facilities. The experience left her with a sense of achievement.

"She did an excellent job," Pier recalls. "I still get nervous giving presentations, so for a 17-year-old to stand up in front of a room full of scientists, some of whom are well-known, was incredibly impressive."

The LMB's commitment to technical careers

The LMB's involvement with the Technician Commitment (TC) was a key factor in its decision to host T Level students. As a TC signatory, the LMB is committed to enhancing the visibility, recognition, career development, and sustainability of technical staff. "One of our goals is to promote career progression for technicians," Pier explains. "Hosting T Level students is a great way to inspire young people and show them the exciting careers available in scientific research."

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Getting started with industry placements

To begin hosting T Level placements, Pier and her colleagues collaborated closely with their local T Level provider, delivering a comprehensive presentation on the science facilities at LMB. These included genotyping, flow cytometry, biophysics, media and glasswash, and light microscopy, giving students a clear understanding of what the placement would involve. Pier explains that the selection process included interviews that simulated real-world job applications: "We wanted to make sure the student was genuinely interested in our proposal and enthusiastic about what we do, as we knew this would have a huge impact on the success of the placement."

Agatha's placement experience

During her placement, Agatha gained hands-on experience in a variety of laboratory activities, including quality control checks on laboratory machinery, and PCR tests on mouse ear samples in genotyping (an experience she describes as "really awesome"). She was inspired by witnessing women in science excelling in technical roles. After exploring all five disciplines, she chose to spend her final three weeks in flow cytometry where she ultimately secured her apprenticeship.

The rewards of mentoring

While Agatha rotated through different facilities, Pier remained her primary mentor: "Mentoring is incredibly rewarding. Watching a student, full of curiosity and enthusiasm, grow into their role is amazing. Looking back at my career, I would have really benefited from a programme like this."

Pier also emphasises that mentorship is a two-way process: "You have to be an active listener and be open to learning about yourself. It's not just about passing on knowledge – it's about evolving as a leader. People assume the mentee benefits the most, but great mentorship is an exchange that helps both parties grow."



Pier André Penttilä, Head of the Flow Cytometry Facility, demonstrating to Agatha Ward, Degree Apprentice, correct pipetting technique when running samples on the Sony ID7000 spectral flow cytometer. MRC-LMB

Expansion plans and opportunities

Following Agatha's success, the LMB welcomed their second T Level student in March 2025. Interest in the programme has grown, with more facilities expressing interest in participating after seeing Agatha's progression to an apprenticeship.

Pier believes there are no significant barriers to hosting T Level students but acknowledges that some staff may worry initially about the time commitment required for mentoring: "We addressed this by distributing the student's rotation across multiple departments. This not only eases time pressures but also provides the students with exposure to a broader range of career pathways."

Shaping the future of science

Pier stresses the urgent need for technical specialists to address future scientific and technological challenges: "As scientists and technicians, we have a responsibility to educate the next generation. We serve the public by advancing knowledge and technology, but we also have to ensure young people understand the wide range of career options available to them."

Agatha's story highlights how first-hand experience in a research laboratory can be transformative. By hosting T Level students, the LMB is shaping the future of science – one talented technician at a time.

Advice

- Make T Level students and their success visible. Use existing tools to promote your experience, such as Technician Commitment meetings, regular communications with technical staff and internal events.
- Visit the T Level provider and tell the students about your facilities.

Impact

- **Sustainability:** building a next-gen talent pipeline that brings fresh, young talent into the technical workforce.
- **TALENT Commission R7:** investing in apprenticeship and trainee technician programmes and hosting T Level work placement schemes.