



Pathways to **SCIENTIFIC LABORATORIES**



Application Form Questions

To enable you to prepare your responses before beginning the form, we have provided the questions you will be scored on, below:

Q1. Why are you interested in the scientific sector and in particular, the laboratory you are applying for? (200 word limit)

Q2. What do you think you will gain from undertaking the Pathways to Scientific Laboratories programme? (200 word limit)

Q3. What skills and qualities do you possess that demonstrate your suitability for working in a laboratory support role? (200 word limit)

Q4. The final question is specific to the laboratory that you would like to apply for so please see further in this document for the relevant question to answer.

To apply for the Pathways to Scientific Laboratories programme, please complete the application form found on the Pathways to Scientific Laboratories [website](#) with your prepared answers. Please note, this is the only way to apply for the programme.



Applications close at 1:00pm on 22 April 2026.



Application Form Questions (cont'd)

Question 4 is specific to the laboratory that you would like to apply for so please only answer the question relevant to the lab you wish to apply to.

Lab 1 (Aquatic Resources Centre)

How do you approach working with animals in a research environment, and what ethical considerations do you think are important in animal-based research? (350 word limit)

Lab 2 (Imaging Suite)

Shared laboratories rely on a range of digital tools, such as booking systems, user databases, or inventory/management software. As part of the internship, you may have the opportunity to help support or develop these systems under supervision.

Please describe your experience (if any) with digital tools or databases, and explain whether you would be comfortable helping with this type of task. You do not need prior experience to answer this question. (350 word limit)

Lab 3 (RILD Research Labs and NIHR Exeter CRF Facilities)

The RILD site hosts staff from multiple organisations. What do you think are the advantages of researchers working in close proximity with clinical teams?

And can you identify potential problems arising from multiple organisations working together and how would you address these? (350 word limit)



Application Form Questions (cont'd)

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Lab 4 (Exeter Sequencing Facility)

Is there a key NGS technique you would like to learn more about and why? (350 word limit)

Lab 5 (St Lukes Laboratories)

What information do you think would be necessary to include in a laboratory induction for Medical and Sport Science laboratories? (350 word limit)

Lab 6 (Living Systems Institute)

If you had the chance to spend a day with an LSI research group, which one would you choose and why?
What interests you about their work? (350 word limit)

Lab 7 (Centre for Cytomics)

A researcher runs the same sample on two flow cytometer instruments (same manufacturer, same model) and the results are noticeably different between the two datasets.
List at least two possible reasons why this might happen and explain how you would investigate to identify and resolve the issue for each individual reason. (350 word limit)

Lab 8 (Hatherly and Washington Singer Laboratories)

What support do you think technical teams provide researchers and students who work in laboratories? (350 word limit)



Application Form Questions (cont'd)

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Lab 9 (Mass Spectrometry Facility)

You are planning your weeks work on the LC-MS. You have the following sample sets to be run:

1. An MSc student has 6 repeat samples from a metabolomics run last week that did not finish correctly. The whole sample run was 42 samples. They tell you that they need the data before next week to finish their report.
2. A friend of yours has asked if you can run some tap water samples for them as they think there is something wrong with the water at their home. They have 3 samples, it should not take too long.
3. A pilot project (collecting data for a grant application; deadline: 1 month's time) which requires 10 protein samples and you have been given the first 5 to run.
4. A commercial client wishes to run 25 environmental samples for untargeted metabolomics of pesticide residue and has sent them on ice from freshly-prepared plant seedlings. You have run samples for them before and you have a good working relationship with them.



Application Form Questions (cont'd)

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Lab 9 Mass Spectrometry Facility (Q4 cont'd)

5. A group leader has contacted you urgently about a project that you completed with them last year. You have already completed all the samples, analysed the data and sent it to them. They are ready to publish the rest of the results, but are unhappy with your assessment of the data and want you to run them all again. There are 15 metabolite samples.

6. Another group leader has contacted you directly to run some priority samples for their PDRA. You know nothing about the project, but the samples have just been dropped into your lab by the group leader, with some instructions. He says the samples are ready to run.

The system is set-up from last-weeks failed run with the MSc student (1), but requires alteration (about 1 hour) before running any of the other projects.

What order would you run the samples in and why? Are there any samples that you would not run and why? (350 word limit)



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