PhD Panel Notes

- All first-year PhD students.
- Daniel: Engineers bacteria, turning them on and off in a system.
- Chibuzo: Looks at enzymes in bacteriophages.
- Tyler: Looks at how the circadian clock affects the cell cycle.

Q1: How did you find/decide your PhD topic?

- Chibuzo: Interested in AMR. Started emailing people. Did UG in Nigeria, Master's at Newcastle, training in Germany.
- Daniel: First worked on genes, then did iGEM and enjoyed it. Went down the synthetic biology route and merged his interests with his supervisor.
- Tyler: Worked with his supervisor in the past (Daniel and Tyler both did this).

Q2: What was your UG?

- Tyler: UG BioMed, MBio, then PhD – all at Warwick.
- Daniel: UG BioChem, MBio, then PhD – all at Warwick.
- Chibuzo: UG in Nigeria, Master's at Newcastle, training in Germany.

Q3: Advice on getting into a PhD?

- Daniel: Get lab experience as soon as possible (e.g. URSS). Research labs are different to UG teaching labs. Don't be too fussy too early; try different lab and non-lab work to figure out what you want to do.
- Tyler: Had no real aim going into UG. Did a URSS summer placement to test whether he liked research.
- Chibuzo: Didn't know he wanted to do research until his summer placement. Did a Master's in Public Health at Newcastle, missed the lab, then went to Germany for lab work. It's a journey; it's okay to change your mind.

Q4: Did you ever doubt studying Life Sciences/research?

- Chibuzo: Yes, throughout UG, Master's and PhD. His overall goal is to fight AMR; keeps a reminder of this in his room.
- Daniel: Never properly doubted biology, but it's been painful. Some projects had little reward apart from training. Research is a very slow process.

- Tyler: Experienced painful periods and burnout during his Master's. The paper his Master's was based on turned out to be incorrect – this happens in science.

Q5: What's the PhD journey like?

- Daniel: First year, you get told a lot. Second year, you start arguing with your supervisor. By third year, you know what you're talking about. Need motivation, as there's not much money in it. Can feel overwhelming at first.
- Chibuzo: First time working with phages, so it's very new.

Q6: What's the PhD application process like?

- Daniel:
    - Look at what PhDs are available.
    - Project-based: apply to a specific project and supervisor; declining in popularity as you're less independent and tied to the supervisor.
    - DTPs: apply to a training scheme with funding and opportunities to develop skills.
    - Self-funding is possible but not advisable.
    - Have some connection with the supervisor if possible.
    - Briefly explain in your email why you're interested and why you're suitable.
    - Apply to lots of positions due to competition (30 applicants per position; Warwick had 3,000 applicants, 1,000 shortlisted, 50 finalists for 12–13 positions).
- Chibuzo:
    - Consider which country to do your PhD in; systems differ.
    - USA: apply to a department, do lab rotations in first year, then choose a lab.
    - Europe/Australia: often apply directly to a PI and a specific project.
    - UK: DTPs are a major route.
    - Imperial has a President's PhD Scholarship, mainly for international students or minority groups.
    - Email as many people as possible.
    - Applications involve a lot of luck and competition; apply widely to reduce the impact of luck.

- Tyler: Applied to only one programme, tailored specifically for him. Don't apply to just one.

Q7: What is the timeline?

- Tyler: Start looking in November.
- Daniel: Earliest deadlines are late October; most close in February and March. Contact supervisors at least three weeks before the deadline so they can help with your CV and application.

Q8: What does a typical PhD day look like?

- Chibuzo: Lab from 8am, checking bacteria and preparing experiments until 2:30pm. Most days involve lab work, emails and meetings. Tries to write every day (even 100 words), and prepares slides and reads for presentations. Sometimes has teaching responsibilities.
- Tyler: No consistent day-to-day experience. Some days are all lab work; others are reading papers. Lots of paperwork and research plans. PhD is a job with flexible hours (e.g. 9–4 or 9–6).
- Daniel: Biggest commitment is lab work, but days vary. More things going on than in UG, including a three-month placement in a partner university lab.

Q9: How do you find PhD seminars?

- Tyler: Check the end of the long SLS weekly emails. Links to the SLS page, where seminars are arranged by clusters.

Q10: How to prepare during UG for a PhD?

- Daniel: Develop a broader range of skills. Get involved in lab work and learn software (Python or R are useful for biology). You don't need a first-year summer project, but definitely do one at least once.
- Tyler: Many PhD students have worked in industry for years, so you need to stand out if applying straight from UG/Master's.
- Chibuzo: Expand your skillset. Worked in different labs, learned some programming, attended a Python bootcamp and Biology Hackathon. Make use of every opportunity. Network, ask questions and reach out to PIs, PhD students and postdocs. Don't be afraid to ask anyone anything.