



Name: Hugh Dircks, PhD

Position: Microbiology Group Manager

Affiliation: Asahi Beverages

Location: Melbourne, Australia

Pronouns: He/Him

Please briefly describe your current role in your position

Define and manage microbiological surveillance and reporting programs, manage the supply of brewing yeast strains, and lead quality and food safety projects.

What is your terminal and/or current position in academia?

PhD student

How did you hear about your current position? Was it a career option that you were aware about during your educational process?

Brewing and beverage microbiology was not something I had considered since completing my studies - my focus for the first 7 years of my career was firmly around chocolate and the microbial ecology of cacao/cocoa.

How did you end up working at your current affiliation?

I had been working for 3 years at Mars Inc in their Global Cocoa quality team. I was approached by my current employer and offered the position of Brewery Microbiologist. I love to learn new things and the thought of learning a new microbial ecology (beer, brewing) was appealing. It also fit well with, and supported, some other changes to my personal circumstances. I worked for 3 years as the Brewery microbiologist, 1 year in the Brewing team leading fermentation and yeast stream and have been in my current position since the beginning of 2021.

How long have you been working at your current affiliation?

6 years

What type of position is your current job?

Hybrid (Remote & In-Person)

Is your role more a managerial or individual contributor role?

Manager

What are the defined roles of your position?

My role is very much applied microbiology - understanding the microbial ecologies of our production environments (generally to ensure that there are zero to minimal populations!)
I lead the routine microbiological testing and reporting program for Asahi beverages in Australia and New Zealand - supporting and overseeing the microbiological lab teams at our various facilities. This supports Asahi's food safety and quality program, ensuring our customers have great beverages, every time. (Answer continued on next page)



What are the defined roles of your position? (Answer continued from Page 1)

I also manage the brewing yeast strains required for our various beers -working with various culture collections and the breweries themselves. (Good yeast means great beer). This includes monitoring the yeast against any strain variation or contamination.

I contribute subject matter expertise to various projects - ranging from new product development, raw material risk management or development of new processes and technologies.

What are your day to day tasks that you perform in your position?

A typical day will involve:

- *Calls with Breweries or soft drink sites to review microbiological results and follow-up actions*
- *Project meetings and time preparing, running and writing up trials*
- *Reviewing cleaning and sanitation plans, or auditing facilities*
- *Calls with external microbiology service providers*
- *Calls with other science and technical teams to advise on microbiological questions or risk management*

What do you like best about your job?

I like the opportunities to apply my knowledge to manufacturing teams and environments, the wide range of challenges and projects I can contribute to, and the range of people I get to meet and work with.

What do you dislike about your job?

Compared to my previous academic and specialist roles, I miss proximity to and time with researchers in microbial ecology and molecular microbiology.

If your job is outside of academia, what is similar and what is different about your current job and your terminal position in academia?

As noted earlier, my role is much more about application of knowledge, and is more of a generalist role. The technology being applied is generally 10-20 years old. Primary research and development comes secondary to quality assurance and risk management for processes and products.

How did your microbial ecology education prepare you for your current position?

My qualifications and experience, and the education I received at UNSW, particularly from Professor Graham Fleet and Professor Julian Cox, have equipped me to think critically and curiously about any microbiological questions: Understanding the factors which influence microbial ecologies, that populations of microorganisms are complex and can change rapidly, and the range of tools available to monitor microorganisms are critical in my role.

What skills do you wish you learned during your educational process that would better prepare you for your current role (e.g. machine learning, management skills, etc.)?

Data and programming skills are increasingly important - I strongly recommend microbiologists take every opportunity to gain training and experience in computational methods and tools.

For medium to later careers in industry, business skills, for example the ability to estimate and communicate a compelling business case or idea are critical.



Do you have any recommendation and/or tips for early career microbial ecologists looking for jobs similar to yours?

In general, I recommend being doing your research about your prospective employers - become familiar with the major players in the sub-field or industry you are interested in. Get to know their products and brands - and in as much detail as you can manage. Also find out about their locations, company history, their stated values and the market they play in. Usually a lot of this is available from the company websites and LinkedIn - but even better is if you can make a contact at the business(es) who is happy to have a conversation with you.

If you are interested in roles in Brewing, I strongly recommend you explore continued education/technical training with the Institute of Brewing and Distilling. The Diploma of Brewing is a great place to start. (More information at <https://www.ibd.org.uk/ibd-qualifications>)