

The ups and downs of open science - perspectives from early-career and established researchers

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Overview

Across scientific disciplines, it has become apparent that open science practices can boost a researcher's career in many ways, from increasing scientific rigour to garnering recognition. While we observe the successful pioneers of open science thrive and shine, it is easy to forget the many challenges faced by those who aspire to open science practices; early-career researchers may feel that openly presenting their ideas confers risk without much reward or long-term career prospects, while established researchers may struggle with the additional duties of open science practices while running a research group. Despite these challenges, we strongly believe that open science can bring a positive impact to a researcher's career as well as to the whole community. In this symposium, the Open Science SIG will present recent successes of open science while also attempting to raise awareness about the blind spots and challenges that open science can bring to a researcher's career. Participants will learn from four researchers from diverse backgrounds with their own perspectives of the ups and downs of open science.

Lecture 1: *The tipping point: how a small question changed everything*

Benjamin De Leener Presenter

My supervisor once came to me and asked if I wanted to file for a patent for the software technology we've been working on. This moment was the tipping point of my career in open science and academia. This presentation will focus on how small choices coupled with hard work can produce a high impact on a researcher's career, on the direction that a research lab can take and, if done properly, how open science can impact a whole community. Furthermore, I will discuss the difficulties for the principal investigator of a research laboratory to balance the need for resources when going open with the

benefits for his/her own career and of his/her lab members and provide adapted solutions for both worlds.

Lecture 2: *Making open science work for you as an ECR (grad student or postdoc)*

Stephanie Noble Presenter

Open science practices can substantially alter the science and careers of ECRs. Without the established reputation and independence of more senior researchers, however, ECRs are particularly at risk of the downsides of open science. I will examine how/which open science practices can best complement your priorities as an ECR, reflecting on the ups and downs of my experiences with using large open datasets, openly releasing data/code/papers, open/inclusive collaboration, and funding open science-oriented projects. Furthermore, I will discuss how to avoid major challenges that open science can pose disproportionately to ECRs, especially how to convince your PI to support these practices by aligning your priorities with theirs.

Lecture 3: *Off the beaten PI track*

Cassandra Gould Presenter

The realisation of open science requires diversification of the academic workforce, not only in the transitional period, but also for the maintenance of new infrastructure and behaviours. This brings a welcome opportunity to expand the breadth of roles in academia, with a growth in the range of career paths which can be determined to be “successful” according to an individual's own criteria. Importantly, this will increase the opportunities for skills and ambition to be cultivated in directions which fall outside of the traditional PI track. In this talk, I will describe my own rewarding journey into Research Support, how this has reinvigorated my passion for research, my desire to develop others, and enumerate opportunities for growth and development. The dark side of this move, however, is a deep recognition of how far we have to go, and how much further/quicker/more effectively we could progress with greater resources. This talk is a call to arms: Join me in applying pressure to your intuitions to support your ambition to contribute to research in a way that maximises your skill, authority, and expertise, and puts you to best use in realising their vision for an open academic culture.

Lecture 4: *Open science opens doors*

Subapriya Suppiah Presenter

Succeeding in academia requires multidisciplinary skills, hard work, and sprinkles of luck. In this presentation, I will discuss the advantages of open science, how it opens doors and how it can help both ECR and PIs gain recognition and visibility for their works. Particularly, by getting more involved in open access journals and open science initiatives, students are feeling recognized and can get better visibility for their research and can advance their own careers. I will also share my experience on how multidisciplinary team involvement in open science, e.g. data sharing, encouraging reproducibility of data, open access publication platform, helps open up opportunities for career advancement as well as how increased relationships between researchers and MDs can translate into meaningful and impactful clinical practices.