

Win4Science Spotlight Series: **Prof. Daniela Quail**

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“Work with and for people who want you to succeed”: this is Prof. Daniela Quail’s primary advice for early career women researchers. Win4Science sat down with Prof. Quail to hear more about her insight on pursuing a career in research and the importance of mentors.

Prof. Quail earned her BSc and PhD at the University of Western Ontario followed by a postdoctoral fellowship at Memorial Sloan Kettering Cancer Center with Prof. Johanna Joyce. In 2017, she started her lab at McGill University and currently holds the highly competitive Tier II Canada Research Chair in Tumour Microenvironment research. Throughout each career stage, she studied different facets of cancer and tells trainees that, “sometimes it’s just a matter of a paper, or a person, or an experiment that inspires you to go in a different direction [...] that’s kind of the joy of science, is to follow [...] where those experiences take you.”

Her research at McGill focuses on tumor microenvironment and tumor immunology because “cancer casts a very wide net” that affects not only patients, but also their support networks. Prof. Quail was motivated to pursue basic science research in understanding the disease process, ultimately helping us understand why some patients respond positively to cancer immunotherapy over others. She noted that, “we are in this era of cancer immunotherapy where, for the first time, we are seeing curative treatment responses in some patients but not all patients.” By understanding why there is this difference, “we might be able to improve outcomes overall.”

Throughout her academic career, Prof. Quail has worked under successful women researchers who also served as amazing mentors and acknowledged that her field was “special because some of the pioneering work [...] was done by women [...] at a time also where there weren’t a lot of women faculty members, so they were trailblazers.” In particular, she admires [Prof. Mina Bissell](#) and the late [Prof. Zena Werb](#) who pioneered tumor microenvironment research emphasizing that “they stand out not only because of their innovative science,” but also because they “supported the next generation of women scientists in the field [and] made this wonderful culture [of women supporting women] that has persisted for multiple generations.”

Despite these positive experiences with mentors, Prof. Quail noted there are still challenges for women in science. She has both lived these challenges first-hand and became aware of them through the experiences of her mentors. As an example, the recent pandemic has disproportionately affected researchers with children, especially mothers. Prof. Quail finished her

maternity leave just before the pandemic began. Thus, it has been challenging setting up and running her lab since then. However, her effective time management and perseverance has paid off as she recently achieved a milestone, publishing a study in the prestigious journal *Nature Cancer* with the first graduate student to join her lab, Sheri McDowell, as first author.¹

Looking to the future, Prof. Quail hopes that academic institutions become more aware of the discrepancy in the number of women postdoctoral fellows and the number of women faculty members. “There are lots of women in science at the training stage. The problem is the bottleneck that comes later”. She notes that in many cases, the timing of starting faculty positions coincides with the timing for starting a family, but reassures that researchers should not let this deter them from pursuing academia. “Instead of trying to change your career path to accommodate discriminatory systems, find an institution that demonstrates a proven dedication towards equity in academia and somewhere where you can be confident you are going to get the support you need. Finding a community is important not only for women, but for all underrepresented groups in academia.”

As Prof. Quail continues her prestigious research program and mentoring a new generation of scientists, she holds hope for the future of women in STEM.

To read more about Prof. Quail’s research visit her lab’s [website](#) or follow her lab on Twitter (@DanielaQuail).

References

¹McDowell SA, Luo RB, Arabzadeh A, Doré S, Bennett NC, Breton V, Karimi E, Rezanejad M, Yang RR, Lach KD, Issac MS, *et al.* Neutrophil oxidative stress mediates obesity-associated vascular dysfunction and metastatic transmigration. *Nature Cancer*. 2021 May;2(5):545-62. [DOI](#)