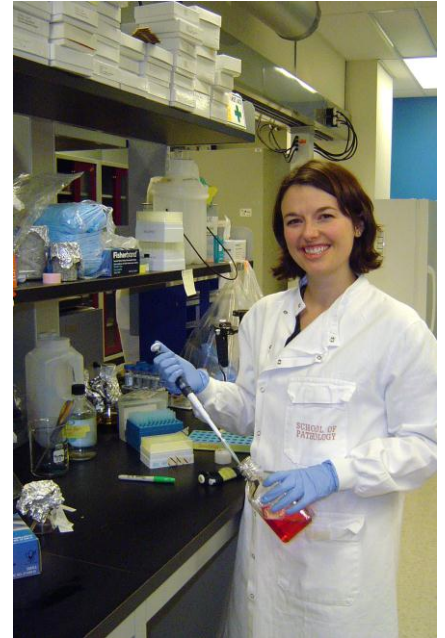


## An Interview with Dawn Bowdish, Ph.D.

**Dawn Bowdish, Ph.D. - G. Jeanette Thorbecke Award Winner 2011**  
**Assistant Professor**  
**Dept of Pathology and Molecular Medicine**  
**McMaster University**



### **Have you always been interested in scientific research?**

*In high school I was interested in language and women's studies and didn't consider a career in science until I participated in a local science program that allowed students to work on a science project at McMaster University. My project was in physiology studying the function of alpha1-adrenoreceptor agonists under Drs. E.E. Daniel and C.Y. Kwan and from there on out I was hooked! I had the guidance of a wonderful post-doc Amy Low (who guided me throughout my project and seemed to have the ideal job – doing science and traveling and talking about her science throughout the globe. My interest in infectious disease research developed further during my undergraduate years at the University of Guelph where I got my degree in Microbiology. My first microbiology professor, Dr. Norman Gibbons, had a way of putting things into the bigger picture and introducing the human aspects of microbiology and infectious diseases. Realizing that I wanted to pursue a career as an academic scientist I had the opportunity to work as undergraduate thesis student in the lab of Dr. Joe Lam at the University of Guelph who encouraged me to pursue my PhD with Dr. Bob Hancock at the University of British Columbia. There I studied the role of anti-microbial peptides in host defense against infection. As I worked towards my Ph.D., I became more interested in host defense and developed this during my post-doc at the University of Oxford in the lab of Dr Siamon Gordon at the Sir William Dunn School of Pathology. My research investigated the role of macrophage receptors in recognition and response to pathogens and I continue to focus on that research area with the goal of developing novel immunomodulators in my current position at McMaster University.*

### **Can you give us a brief description of your current research and what most excites you about it now?**

*My main interest centers on the macrophage recognition of bacterial pathogens and commensals, especially in the upper respiratory tract. One interesting angle of this response is how this recognition changes with age. For example; why is a macrophage in an aging individual unable to respond to pathogens compared to macrophages from younger individuals resulting in an inability to control respiratory infections? In addition I am interested in the evolution of scavenger receptors and how they associate with commensal and pathogenic bacteria encountered in the upper respiratory tract.*

### **During your graduate and post-doc years did you have mentor(s) that helped guide you along the way?**

*I have been very fortunate to have had two wonderful mentors during my training years. Dr. Bob Hancock was an inspiration. Not only did I learn about science but I learned important aspects of career development; things such as self-promotion, assertiveness and asking for what I want. His advocacy for women was not just talk but he actively promoted his trainees and advocated for tenure changes so women would not be disadvantaged as they came up for tenure. My post-doc supervisor Dr. Siamon Gordon was also equally committed to career development and used his vast network of resources and connections to help me throughout my time with him and as I started my independent career. Both mentors were wonderful advocates for women and understood the difficulty of work / family balance and equally importantly also pushed me to try harder and take on a task even when I felt unsure of myself – this has*

*been something I have taken with me and try to instill in my trainees. I realized how important it is to truly mentor your trainees not just in science but in career development. I also appreciated how important it was to actively pursue changes in the workplace environment to make it friendlier to woman and minorities. In my current position I feel very fortunate to have a close-knit group of faculty from McMaster's Immunology Research Centre who have all been amazing mentors. They've all been great mentors, helping me navigate all the challenges of a new faculty position and supporting me during my recent maternity leave. In general I don't believe in luck but I'm very aware that I've always been fortunate in being surrounded by remarkable mentors!*

**What was (were) the biggest challenge(s) you faced in pursuing your career?**

*The biggest challenge I faced was during my post-doc years. I had moved into a new field and my project was technically difficult due to relatively poor reagents to use. Ultimately this was probably for the best as it caused me to diversify my approach and I learnt some basic bioinformatics and genetics that I never would have tackled had my project been straightforward. Currently the biggest challenge I face is a lack of sleep. I've got 2 small children that don't sleep through the night, which really reduces my productivity! Balancing family and career means that I have to delegate as much as I'm able, I have learned to prioritize and to let go of the mundane things as well as realizing that I don't have to be perfect at everything. The flexibility and support of my chair and colleagues have been outstanding and vital to my success.*

**Do you feel that being a woman in science came with advantages or disadvantages? What were they?**

*It seems to me some of the issues that women in science have are actually "nice-person" issues. Nice people in general, and women in particular, seem to have a steeper learning curve with regard to career development for things that seem to come more naturally to some men such as self-promotion, saying no, speaking with authority are things that just don't come naturally to many people and must be learned and developed. Right now I think of myself as more of a "parent in science" than a "woman in science" as I feel that many of the challenges I face are common to anyone trying to start a new lab and balance a family. The advantage to being a parent-scientist is that I am a part of a wonderful community that is so supportive. Colleagues and senior scientists who remember how tough it was to have children and start a lab have really extended themselves by doing whatever they can to help me out such as reading grants, lending advice etc. and anyone, male or female, who has young kids is always ready to lend a sympathetic ear or help. In fact, I've gotten to know a lot of my colleagues because our kids go to the same play groups or activities. I feel a great sense of community and that has encouraged me in my goals as a scientist and a mentor.*

**What strategies do you use to maintain balance in your life?**

*Prioritize and delegate! I am very focused and militant about my schedule. My lab has core work hours from 8:30-5 where my students and post-docs must be there. I feel there is a trade off in that there is less time to socialize with my students; however I think being a good role model and finding ways to balance work and family life is important for trainees to see. In order to have time for my family I must prioritize and I am always asking myself "Do I really need to be doing this or putting this much time and effort into this?" Things do not always have to be perfect. It would be easy to get lost in a pile of administrative tasks but by turning email off and focusing only on what is actually required to forward my research; I find that I can actually get a lot done in a day.*

**What advice would you give to female graduate students that are interested in a career as an academic scientist?**

*I guess that I have three pieces of advice. The first is the most important. Don't give up! If your goal is to become a research scientist then know that it is achievable. I find many female trainees hear only how difficult it is for a woman in science and end up deciding they can't do it before even trying. If your dream is to do research – be assertive and*

*go for it. go for it! Although it's not always easy I can definitely say that it is possible. Take every opportunity you can to advance your science and your career and that momentum will carry you through times when family responsibilities or whatever slow you down. The second is to find a partner who is supportive of your career, willing to make sacrifices to further your career and if you plan on having a family, doing a real 50% (at least) of the work. And lastly I would say advocate for the changes you will need to be successful. It is important that we all fight against both the attitude and the roadblocks that make it seem impossible to have a family and a career and discourage women especially. We need to retain our best and brightest and I believe that at least 50% of those are women.*