

Catherine Dulac

# COLLECTIVE INSPIRATION

*A RELUCTANT DEPARTMENT  
CHAIR FINDS GREAT VALUE IN  
A DIVERSITY OF OPINIONS.*



Jason Crow

Catherine Dulac left her native France 15 years ago to pursue her commitment to scientific research. Since becoming a member of the Harvard University faculty in 1996, she has made illuminating discoveries about the pathways involved in odor and pheromone reception in mammals. A year ago, this HHMI investigator added department chair to her busy workload as a teacher, mentor, and laboratory head.

My dream is to spend my entire workday doing science, so it took quite a bit of arm-twisting from my colleagues to convince me to take on the responsibility of chairing Harvard's Department of Molecular and Cellular Biology.

In the end, the quality essential to my research—passion—also drove me to accept the job as chair. Harvard enabled me to flourish as a scientist and teacher, in large part because of the inspiring community of students and scientists, and I care very much about giving something back. It made sense that my turn would come one day, and that I would spend time and energy helping my colleagues and my department move forward.

And I knew I wouldn't be alone. The chair rotates on a three-year cycle. Any one of about 30 faculty members, in theory, might become chair at some point, and that realization fosters a collegial atmosphere. We know each other quite well and, together with the chair, many faculty and superb administrators are highly engaged in running the department.

I view the job as being a listener, a cheerleader, and someone who gets things done. If the members of the department are not enthusiastic about something, it won't happen. I have no decision-making power, which is perfectly fine. My role is to organize, entice people to come together, promote dialogue, listen to others' points of view, and take advantage of the collective desire and motivation of my colleagues and of all the members of our community: students, postdocs, staff.

That is very much the same approach I take in the lab, where I've always found it advantageous to promote collective brain power. Nobody can pretend to always have the best idea and I'm always interested to hear somebody improve on a suggestion, or even completely disagree with it. One of the challenges in becoming chair is to recognize that everyone won't necessarily agree with you: it is much more valuable to use this diversity as an advantage rather than an impediment.

The department's dynamic has some amusing similarities with temperature control in honey bee hives. Bees vigorously flutter their wings to cool their hive when the temperature rises, and they contract their muscles to warm the hive when the temperature falls. The fascinating aspect of this process is that it requires genetic diversity. If the entire colony is genetically identical, all the bees react simultaneously, and the hive's temperature is prone to brutal oscillations. Genetically diverse bees, in contrast, have different response thresholds to heat and cold. When one moves its wings, another feels nothing, and their actions balance to keep the hive's temperature stable. Similarly, members of an academic department are quite different from each other. If some members are more sensitive than others about a specific point, that is a useful warning signal and the community is much richer, and more fun, for its diversity.

I was acutely aware that taking the role of chair would carry a price. So, when I need to rely on people in my lab to point out key scientific papers, rather than discovering them myself, I can't complain. Or, when I wasn't able to run my fifth Boston Marathon, or even keep running regularly, I had to get over it. I need to fight hard to squeeze out quality time to think about science, my lab, and funding for research, but thankfully I'm still able to maintain some of my daily routine. I bike to work every day whether it's sunny or snowy. I cycle or walk to get groceries. I cook all meals—I never view it as a waste of time. For me, it's wonderfully relaxing, particularly if there is good wine to go with it!

I don't regret the decision to become chair. This year was really challenging, but it was productive. There is a real sense of collective achievement in the department that delights me. I am especially proud of the interdisciplinary graduate program that members of the molecular biology, chemistry, and evolutionary biology departments produced. I'm excited to see what we can accomplish in the year ahead, and I am already discussing several interesting ideas with my colleagues.

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INTERVIEW BY CAROL SLIWA. *Catherine Dulac received her Ph.D. from the University of Paris and did her postdoctoral work with Richard Axel at Columbia University. She was elected a fellow of the American Academy of Arts and Sciences in 2004 and a member of the French Academy of Science in 2007.*