Keeping in touch with research

Moving into a position of leadership or administration does not necessarily mean moving away from research. More scientific leaders are following the precedent set by Harold Varmus, David Baltimore and Daniel Koshland, and maintaining active roles in their research while heading scientific organizations.

This is the case for Nobel laureate Thomas Cech, due to take over as president of the Howard Hughes Medical Institute (HHMI) from Purnell Chopin at the end of the year, as well as continuing to lead his research group at the University of Colorado at Boulder. HHMI initially approached Cech to solicit his help in its search for a new president and subsequently asked whether he would consider the position himself.

Whether by design or not, this turned out to be a good approach to recruiting Cech, who in his 25 years on the faculty at Colorado declined to consider offers of university presidencies and other leading roles at research

Cech: will commute between two jobs.

institutions, turning away the many head-hunters who came knocking at his door. Cech's intention was to wait until his children finished high school. Other factors, such as the political nature of the work and the large amount of fundraising expected of a president, made such jobs seem less than attractive. But the HHMI presidency is a unique opportunity, says Cech. "The current president attends all the scientific meetings, as well as the renewal reviews of the investigators, and there is no fundraising involved — Howard Hughes did that for us."

During his interviews with HHMI, Cech told the search committee that his interest in the job would only hold if he could maintain a research programme. So, like other organizations that recruit top scientists from their research labs, HHMI has written into Cech's employment agreement that he is expected to maintain his Boulder laboratory. "I thank my friends Harold Varmus, David Baltimore, Dan Koshland and others for having blazed this trail," says Cech, who will be commuting each month between Colorado and HHMI's headquarters in Chevy Chase, Maryland.

No stranger to wearing a variety of hats, Rita Colwell is used to balancing research with other roles, first as an administrator at the University of Maryland, then as chief academic officer there, and now in her second year as the head of the US National Science Foundation (NSF). "It's not like you simply

leave academia," she says. If anything, she believes her post at the NSF has broadened her contacts with academic research. She now works with astronomers, geoscientists and engineers, but in continuing her research on cholera in her own time she can

Colwell: 'research helps in leadership'.

stay in contact with her students and with scientists in her own field. "It's always difficult when you have something you love so much that you want to put 100 per cent of your time into it, and 200 per cent of your time is a bit difficult," she says wryly. However, she contends that this approach adds authenticity to her leadership: "There is a great deal of credibility that goes with your decisions, especially when you are still in a day-to-day [research] operation."

Cech sees it from a slightly different angle: "In a leadership position, one has to find some way to keep in touch with what is happening at the base of the pyramid. Remaining active in research is not the only way to do this, but it seems like it could be a very successful way." His decision seems to have been well received by his peers. He says there has been wide support for his decision to maintain a research programme. "There may be some people who think it's a conflict of interest or an unrealistic goal, or are upset about it. If so, they have been politely silent," he says.

According to Mary Clutter, an assistant director at the NSF, there are other advantages to taking on a leadership role in science, especially earlier on in one's career. Clutter directs a group of programme officers in the directorate of biological sciences and says that "people don't realize why these jobs might be helpful to their own careers". Even mid-career researchers who have established themselves in a discipline do not know how useful it is to go to Washington DC, to be in charge of a whole area and to see every proposal that comes in for review, she says. "Your whole outlook on life broadens. You understand from the larger perspective your own research area. You learn about techniques that you might use in your own research that you had never thought of because they come from another discipline. It's unbelievably valuable."

For the aspiring leader, becoming involved with foundations, societies and other organizations can increase one's exposure and result in mentoring opportunities, which can contribute significantly to a person's upward mobility. According to Clutter, mentoring did not develop as a formal con-

cept until about 20 years ago, and it may have arisen because women complained about unequal opportunities. "Twenty years ago, mentoring was spontaneous — people didn't even know they were doing it, and it was much more common among men than among women," she says. Today, if there are only a few women in an organization then there is less mentoring among women, says Clutter. "Women may feel they are competing for 'the one' position that may be available for women." The same principle may hold for minority groups, she adds. It is Clutter's policy to assign mentors to all those in her directorate, from support staff to the most senior people. She is convinced that it is an effective strategy, providing support and professional friendship for those in training.

Mentors open doors

"The two best mentors that I've had since I came to the federal government were men," says Clutter. The first, who was from another agency, introduced himself to Clutter when she was a programme officer at NSF. Later, when she was in a more senior position, it was a director of NSF who acted as a mentor, although he wouldn't have thought of it that way, she says. "He introduced me to everybody — it was amazing how much I learned." Clutter credits that relationship with opening the doors that led to the assistant directorship of NSF. As she puts it, she already had the necessary qualities and qualifications, but the mentor provided the introduction to the people who needed to know what she could do.

The idea that we stay in one career or one job for our whole working life has given way

Clutter: 'effective mentoring pays off'.

to the idea that we can change careers several times before we retire, says Colwell. "I think that's the most dramatic challenge." Mentoring is an important part of this process. For Colwell's students, particularly the women, she is living proof that there are no limits to what someone can achieve.

And even though the exceptionally busy life she leads may make her less accessible than many advisers, Colwell believes that the time she spends with her students is quality time. "I am able to draw on a lot of experience and expertise to ensure that the path that they take in their research is productive and will pay off in findings that are of interest and timely."

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