



## Leadership Training for Early Career Researchers

A decade ago, the “sink or swim” culture was widespread in research. But academic institutions across the United States and Europe are now investing resources in helping young researchers gain the skills they need for climbing the career ladder. Top on the list are leadership skills, whether for conflict management, handling finances, or negotiating intellectual property rights in an international consortium, these are highly rated assets that can help researchers advance to senior roles. Here’s a look at some of the most established leadership programs that hold alumni who are leaping ahead as a result of the training. **By Julie Clayton**

It was a daunting prospect for **Katie Garman** when she joined Duke University’s Department of Medicine as a faculty member in 2011 and found herself in charge of a research group for the first time. She took on a technician, a graduate student, and “several clinical fellows and residents” for short-term gastroenterology projects.

With a clinical background focused on diagnosis and treating patients, Garman had little experience of managing budgets or people. Her position was similar to that of a postdoc facing their first tenure-track appointment.

“Although I had some exposure to research it was always with someone else as the principle investigator and without the responsibilities of being the person in charge,” she recalls. “I really needed to learn more about how to manage a lab and manage a group and obtain a very different skillset than the one that I had acquired during medical school, residency, and fellowship.”

Fortunately, the School of Medicine at Duke has a training program to help new faculty members develop leadership

skills. Garman was nominated by her departmental chair to undertake the training in 2012, together with around 40 others from different departments.

Over three days, Garman joined seminars, discussion groups, and role-play exercises. These were aimed at understanding different personality types, creating strategies for dealing with challenging situations such as conflict, and forming a support network to help follow up with a personal action plan.

### Personality differences

Garman found it especially useful to think about how personalities shape people’s preferred way of communicating. “Even though I had developed a skillset in managing a difficult patient I really hadn’t delved more deeply into that knowledge base of how people can have such different styles of communicating,” she explains. “In order to really be a good listener and be innovative you have to be open to people who communicate in a very different way.”

The role-play sessions are among the most popular at Duke, enabling faculty to practice their coaching skills on volunteer postdocs and students. “It lets them fumble around with their words in a safe environment so that when they’re facing similar scenarios in their real lives they can draw from that memory,” says **Jessica Womack**, who coordinates the Leader Program.

The lessons can help outside the lab too. “Happily, I have not encountered the role-play situations in real life but dealing with conflict and working through difficult situations is a life skill that comes in handy at work and in one’s personal life,” says Garman.

Duke University is one of many institutions in the United States and other countries that are investing in leadership training for early career researchers, often at the postdoc stage or earlier. The goal is to minimize the time and energy spent dealing with the difficulties of team leadership, and maximize the chance of a productive and successful career.

Many institutions use the classic Myers Briggs Type Indicator (MBTI) for understanding personality type. Individuals gain awareness of their own and others’ personality preferences, for example, whether they tend towards being extrovert or introvert, and how this influences communication.

Duke’s program was the initiative of **Ann Brown**, vice dean for faculty at Duke University School of Medicine. She adapted the idea from a program at the University of Pittsburgh, which in turn was based on the Making the Right Moves initiative of Howard Hughes Medical Institute. Brown knew that researchers needed to be better prepared for leadership, especially because the increasingly competitive nature of funding meant that there was more pressure to deliver results. “You wanted people to be able to hit the ground running and have a sense that managing people is now a part of their job. You want them to feel comfortable managing conflict, understanding [their] own communication style, understanding how other people receive information, and how to build [their] own team,” says Brown. **continued>**

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Similarly, when **Lori Conlan** joined the National Institutes of Health's Office for Intramural Training and Education in 2009, she set up a Leadership and Management program that went beyond just lab management to consider leadership in other spheres. Statistically, many early career researchers are likely to move away from lab-based research, says Conlan.

So far, the NIH program has trained over 700 graduate students, postdocs, and early PIs. It involves 32 hours of training over one semester, addressing topics such as understanding personality types and conflict management focused specifically on the research environment. A more generic business-style model of training simply does not work for a scientific audience, even if the underlying ideas are common to both communities. "Every time we get a business school to come and do this, they do a great job and the material is didactically the same, but [it doesn't] resonate with scientists because they don't understand the culture," says Conlan.

Participants also learn about the influence of cultural background according to the Hofstede Model. "Science is the most international workforce, and we throw people in from different cultures and we ask them to work together," exclaims Conlan. The Hofstede model proposes that a person's perspective can vary depending on their background, such as how South versus North Americans view time. Likewise, attitudes toward hierarchy may vary—scientists from Asian cultures, where respect for authority is paramount, may wait for guidance rather than taking the initiative expected in the more individualist cultures of the United States or United Kingdom.

**Leading peers**

Besides leading their own team, academics increasingly need leadership skills for handling multidisciplinary collaborations. **Richard Trask**, a materials scientist at the University of Bristol in the United Kingdom, participated in the university's Preparing for Research Leadership training program while a postdoc in 2009. He knows the difficulties that arise during the coordination of grant proposals, writing papers and assigning intellectual property rights. These require cooperation among academics of equal status, and sometimes with collaborators of higher status than the initiator.

"It can lead to interesting technical and management challenges," says Trask, whose collaborations involve chemists, physicists, biologists, and medical colleagues. Typically, one discipline might prompt the collaboration, followed by the creation of shared documents, and a flurry of emails without the luxury of face-to-face meetings in order to reach agreement. "It's the academic space we'll find ourselves in more often in future." Adding to the challenge is the need for collaboration with industry, with its own sometimes conflicting timescales and priorities. Trask still harks back to leadership training regarding self-awareness and understanding of personality differences for managing increasingly dynamic and complex situations.

The training also helped Trask develop his individual lead-

ership style, with a fairly flexible approach to supervision of 12 Ph.D. students and one postdoc. He avoids rigid micro-management, for example, by allowing students to specify how often they want progress meetings to take place. By applying leading skills, Trask finds that the complex task of managing and supervising becomes less of a challenge, and more a collaborative culture.

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**— Katie Garman**



The self-awareness training is invaluable, according to **Alison Leggett**, head of academic staff development at the University of Bristol. "That kind of people element is not something you really talk about in research—especially in the sciences. It's all about your technical skills and knowledge rather than these softer skills."

Bristol's program is aimed at those on the cusp of becoming leaders: postdocs and recently appointed lecturers. It involves attending eight training sessions over a period of three months, on topics such as personality awareness, people management, setting up a team, and structuring meetings. Activities include rehearsing scenarios and small-group peer coaching (also called action learning) over real-life problems. More recently, Leggett has organized similar training for more senior academics who "already had teams but were having to just muddle through."

Beyond the initiative of individual institutions, a U.K.-wide sharing of best practices is being encouraged by Vitae, a membership program which was initially funded by the U.K. Research Councils to promote professional development of doctoral researchers and research staff throughout the United Kingdom's higher education sector. To enhance provision of training across the country, Vitae created a suite of workshops and resources and established regional networks for university support staff to exchange ideas and materials. Over the past five years Vitae's Leadership in Action training program has helped researchers at all levels explore and develop their leadership potential while the more recent Preparing for Leadership program focuses on junior research staff and the transition to independence.

**Alison Mitchell**, director of development at Vitae, likens the effect to the rising tide that allows all the boats to float in a harbor. "We raise the tide by making resources available. The universities review the material and embed it within their provision so that it becomes **continued**>

PHOTO: DUKE, DEPARTMENT OF MEDICINE

**Featured Participants**

Duke University School of Medicine  
www.medicine.duke.edu

GEOMAR Helmholtz Centre for Ocean Research Kiel  
www.geomar.de/en

NIH Office of Intramural Training and Education  
www.training.nih.gov/home

University of Bristol  
www.bristol.ac.uk

Vitae  
www.vitae.ac.uk



Lori Conlan

Matthes likes to tackle a conflict situation immediately by calling a meeting with those involved, listening to their viewpoint, and discussing possible solutions. “Sometimes [the conflict] is just a miscommunication or misunderstanding. I prefer to talk immediately and not let bad feelings develop.”

part of the system.” Vitae also provides training programs on a national or regional basis directly for researchers.

Most importantly, the training helps researchers to develop leadership skills in advance of that coveted promotion. “The idea that you will suddenly develop these by experience isn’t really the case and to be most effective in this fast changing world you have to be ready to lead,” says Mitchell.

It’s an increasingly shared view that academic institutions need to invest in staff development at the earliest possible opportunity rather than expecting staff to learn on the job. “Researchers who did it their own way maybe could have done better if they’d had more development,” says Mitchell. “Putting in leadership training when [they are already] there is too late.”

**Leadership for women**

In Germany, at least two leadership training programs focus specifically on women scientists as part of a broader political agenda of increasing the numbers of female university professors. One is Fast Track, offered by the Robert Bosch Foundation to outstanding female postdocs from within and outside Germany to speed their promotion to senior research roles. The second is ProFiL, a training program set up jointly in 2004 by the three closely linked universities of Berlin— Technical University (TU) Berlin, the Free University of Berlin, and Humbolt University—in a bid to improve gender equality.

One participant is **Katja Matthes**, now a full professor at the GEOMAR Helmholtz Centre for Ocean Research Kiel, who had come back to Germany after three years in the United States for the one-year return phase of her European Marie Curie fellowship at the Free University of Berlin. She was unsure about her future direction, but an advert for the ProFiL program piqued her interest. After a rigorous selection process, Matthes was picked to become one of 36 participants in the year-long program, including six sets of two- or three-day long seminars and discussion panels.

Matthes credits ProFiL with having motivated and supported her to stay in science. The program offered mentoring and guidance on career planning, and coaching on interviewing skills and leadership, including conflict resolution, negotiation, team building, project and time management, and governance in higher education. “Without ProFiL I would not hold the position I have now,” she says.

She also uses meetings more effectively to promote team building, by acknowledging people’s strengths and encouraging each person to state their intended contribution towards a team goal. “This works well—people like to know what their contribution is.”

ProFiL goes further than many programs in establishing a formal peer-support network, with an annual conference and other events. “Internationally, I was well connected, but my network in Germany was very weak,” says Matthes. With other ProFiL alumni Matthes has shared valuable experiences and gained advice, for example on developing a publication strategy and judging when to delegate administrative tasks.

While it would be difficult to obtain a truly objective measure of impact, up to mid-January 2015, out of 425 former and current ProFiL participants, 148 have achieved formal eligibility for professorial positions, and 176 have attained professorships, including two vice-chancellors, according to Dorothea Jansen, who established and leads the ProFiL programme and has advised other institutions in Germany and Poland on similar programs.

**Admitting when help is needed**

It’s a common mistake for researchers to assume that team leadership will come naturally. As the University of Bristol’s Alison Leggett points out, “A lot of researchers have come up to these positions because they’re really good at doing the research; they’re academically very able. But this doesn’t necessarily mean that they’re good at setting up a team and leading people.”

Garman agrees. “We’re not always encouraged to be introspective enough to say these are the skills that are required, these are my strengths, my weaknesses, and these are the strategies that I need in order to account for those weaknesses.” Training programs can provide a more objective way of identifying weaknesses. “You have to pause and give yourself the grace to say, ‘no one is good at everything all the time.’ If you had three things to work on, what would they be?” Garman asks.

*Julie Clayton is a U.K.-based journalist and editor, and has worked briefly at the University of Bristol.*

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