

German mentors steer a new course

Nurturing independence is appreciated, as **Alison Abbott** finds out.

The stereotypical German professor is an intimidating man. He is stern and will brook no disobedience. Young scientists call him Herr Professor and depend on him for publications, money, meeting invitations and ideas — everything except independence itself.

This stereotype is, fortunately, outdated. And although the German academic system remains very hierarchical, many established German scientists do go out of their way to consider the next generation, helping them in the lab and providing the skills they will need when they leave. Recognizing the importance of these changes, and wishing to encourage them, *Nature* decided to hold its travelling mentor competition in Germany this year.

Three winners of the *Nature* Awards for Mentoring in Science were selected from candidates proposed by appreciative protégés who have established accomplished careers of their own. Physicist Klaas Bergmann, senior research professor at the Technical University of Kaiserslautern, shared the lifetime achievement award with molecular neuroscientist Heinrich Betz, director of the Max Planck Institute of Brain Research in Frankfurt. Bioinformatician Peer Bork, of the European Molecular Biology Laboratory in Heidelberg — and the most cited European researcher in molecular biology and genetics — won the mid-term career award. The jury also made special mention of Ania Muntau, a researcher in molecular medicine at the University of Munich who has done much to promote the careers of other female clinicians in Germany.

“It was a hard choice,” says Ulrike Beisiegel, a molecular-cell biologist at the University of Hamburg and head of the awards jury. “But there was something extra special about the deep involvement of the winners

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with their mentees, going well beyond just scientific teaching and a communal ski trip.” Mentees report that the lab chiefs they nominated helped them learn how to navigate the world of science inside and outside their labs — dealing with scientist rivalries, handling university bureaucracy and steering through the complexities of government and ministry science policies. Their mentors helped them write their own grants, run their own projects and develop all the other practical skills needed for independence. And they provided the right balance of structure and independence, encouragement and instructive criticism.

Crucially, the winning mentors remained advisers long after their protégés left the lab, providing moral and practical support as new careers struggled for traction. “Good mentoring is an important but often overlooked skill, which seems to have a valuable component of heritability,” says *Nature*’s editor-in-chief,

Philip Campbell, who initiated the awards in 2005. “Over the years of the prize, I’ve noticed that many former mentees now with their own careers say that they try to provide the same style of mentoring as they received from the mentor they nominated.”

Bergmann says he is most proud of the fact that protégés of his who returned to their home institutes in eastern Europe have acted as role-model scientists and administrators there.

Nikolay Vitanov, now a professor at the University of Sofia in

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Bulgaria, credits Bergmann with helping him establish a scientific career in his native country. “I now have an active and growing young research group in Sofia, a model for others to follow,” says Vitanov. Aigars Eker, now a lab chief at the University of Latvia, was able to establish a lab and laser centre thanks to Bergmann’s gift of scientific equipment. Aram Papoyan, now a director at the Institute for Physical Research of the National Academy of Sciences of Armenia in Ashtarak, lauds Bergmann’s detail-oriented approach to science. “I have adopted his working methods and style,” he says.

Heinrich Betz believes his biggest contribution has been giving his students the leeway to achieve their own successes and suffer their own failures. He allows “any experiment they consider essential, providing that it is affordable”, although he debates every proposal. “Mostly I am correct, but sometimes they are right and this has not infrequently been rewarded by serendipitous findings,” says Betz. “My motto: let the young guys work freely — trust their imagination and creativity.” Former protégé Dieter Langosch, now a professor at Technical University Munich, adds: “He has a warm character and knows how to motivate people — but he does not hesitate to set appropriate limits.”

Scientists mentored by Bork likewise praised his convivial teaching style. “He conveys an atmosphere of trust and confidence and has a playful style of thinking and working,” says Christian von Mering, an associate professor at the University of Zurich and group leader at the Swiss Institute of Bioinformatics. Francesca Ciccarelli, now an assistant professor at the European Institute of Oncology, praised Bork’s ‘sixth sense’ for science discovery. “He can smell where the real biological signal is,” she says. “I learnt from him both scientifically and personally.”

Bork counsels his protégés to strive for challenging projects and resist settling on mediocre job offers. “I convinced them to reject them, to believe in themselves and go for better ones,” he says. “It always worked.” ■

Alison Abbott is *Nature*’s senior European correspondent.



This year’s winners of *Nature*’s Awards for Mentoring in Science (from top): Heinrich Betz, Peer Bork and Klaas Bergmann.