

MOVERS

Matthias Kleiner, president, DFG, Bonn, Germany



2004-06: Head of the Institute of Forming Technology and Lightweight Construction, University of Dortmund, Germany.

1998-2006: Professor of forming technology, University of Dortmund, Germany.

1994-98: Professor, University of Cottbus, Germany.

When Matthias Kleiner leaves academia in January to become president of the DFG, Germany's main research funding agency, he will be the first engineer to take on the country's most influential research-management position. He will face challenges relating to financing research, expanding university research and dealing with Germany's restrictions on stem-cell science. "I am entering new territory," he says, "but this is what a scientist is used to."

Kleiner's research field — which focuses on engineering items such as light-weight metals for high-speed trains — rarely makes headline news. As DFG president, Kleiner will oversee the distribution of grants and awards worth €1.3 billion (US\$1.6 billion) per year, funding everything from quantum physics to the social sciences.

After college, Kleiner chose science over acting, and later rejected several industry job offers to stay in academia. In 1994, four years after German unification, he became full professor at the University of Cottbus in eastern Germany. For a young professor in difficult scientific environs, setting up a new department for engineering sciences was challenging. The lack of industry collaborations in the east was a factor in his later return to western Germany.

A big part of Kleiner's new job will be managing a €1.9-billion 'excellence initiative' aimed at creating top universities and establishing several new graduate schools. He is keen to improve career opportunities for scientists in Germany and to encourage talented young researchers. "Develop an appetite for science," he tells them. "Be curious and look to the right and left alongside the path you choose."

Politically, Kleiner's most delicate task will be addressing the topic of human embryonic stem-cell research. Restrictive laws have led some scientists to leave Germany. Before making any judgement, Kleiner says he needs a better understanding of the field and the ethics. The technology can be used responsibly, he says, but regulations will be required.

Noting that inadequate technology transfer has been identified as partially responsible for Germany's sluggish economy, Kleiner endorses more collaboration between industry and academia. Industry, he says, should more frequently be involved in DFG-funded research projects in order to facilitate downstream applications.

"It is about time for an engineer to head the DFG," says Hubert Markl, a zoologist and former president of the DFG. "I know they always wanted one, but apparently most of these guys are too busy with other things." ■
Friederike Siegel

RECRUITERS & ACADEMIA

Where are the physician-scientists?

Recently, a resident of mine was trying to decide whether to pursue a career in academic medicine. "Why would I want to be a physician-scientist?" he asked me. "Isn't it difficult to get funding and aren't the chances of success low?" These concerns are legitimate. I have seen many colleagues begin their careers as academic physicians only to move on to non-academic jobs.

To train a future generation of scientists that can bridge the gap between the laboratory and the patient, we need more programmes like the 'Physician-Scientist Early Career Award' run by the Howard Hughes Medical Institute (HHMI) and the KO8 'Mentored Clinical Scientist Award' from the National Institutes of Health (NIH). By providing extra funding, grants such as these free up time for laboratory research, seminars, courses, journal clubs, and national and international meetings.

Since first applying for an HHMI physician-scientist fellowship almost ten years ago, I've believed that the hybrid position offers unique and rewarding opportunities. As clinicians, we are able to provide compassionate care for patients. As scientists, we can investigate the pathological basis of disease and discover new treatments for devastating illnesses.

In my current job as director of a brain-tumour programme, I maintain a strong presence in both the laboratory and the clinic. The two responsibilities are truly complementary. The patients in my clinical programme motivate me to research the mechanisms of brain-tumour development, and my laboratory research addresses basic questions about the human brain and brain tumours. Eventually, I hope to help translate this knowledge into improved therapies for brain-tumour patients. And, with the support of the NIH and the HHMI, I hope to have the opportunities and resources to investigate and develop new ways to fight this disease.

So far, however, we have not made significant strides towards innovative treatment strategies. As my resident and I began another day studying the brain, I emphasized that it is up to us to change the harsh decree that 'nothing can be done' to help these patients. Despite having concerns about future funding for physician-scientists, he said he would think seriously about this path. I hope he decides to join me. ■

Alfredo Quiñones-Hinojosa is director of the brain-tumour surgery programme at Johns Hopkins Bayview Medical Center.

GRADUATE JOURNAL

Lab makeover

As a high-school student I had a vision of graduate school, probably fuelled by watching too many French art-house films. I imagined erudite academics sitting in coffee shops drinking espresso. Now, at the end of my graduate career, I'm finally living my dream. Except that, in reality, multiple cups of coffee make my hands shake and the questions I'm working on are so abstruse that most of my conversations are with myself.

Before my coffee-shop phase, I was in what I call my worker-bee period — spending most of my time collecting data in the lab. This reflects the intrinsic contradiction of becoming a successful lab scientist. On the one hand you need to doggedly repeat experiments with robotic precision, and on the other you need to think creatively and freely about your science.

Returning to the lab after another spell at the coffee shop, I had an idea for speeding up the development of future graduate students: combine the two phases of graduate school. To do so, I suggest changing the ambience of our sterile labs. Add some light jazz, a few paintings by local artists, and berets. This, as my dream demonstrates, will inspire graduate students to greater intellectual heights even while they're methodically collecting data. If only our safety office would let me install an espresso machine next to my lab bench... ■

Milan de Vries is a molecular-biology graduate student at the Massachusetts Institute of Technology.