

MOVERS

Ernst-Ludwig Winnacker, secretary-general, Human Frontier Science Program Organization, Strasbourg, France



2007-09: Secretary-general, European Research Council, Brussels, Belgium

1998-2006: President, DFG, Bonn, Germany

1984-97: Director, Laboratory of Molecular Biology, Gene Center, University of Munich, Munich, Germany

At the age of 14, Ernst-Ludwig Winnacker was an accomplished pianist and aspiring conductor. He was also a budding scientist who did experiments on fruitflies as a hobby. Pursuing wide-ranging interests, and building the research infrastructure to expand them continent-wide, has been the crux of his career. Next year, he will bring his boundless curiosity to the Human Frontier Science Program Organization (HFSP) as its secretary-general.

Pursuing a PhD in chemistry at the Swiss Federal Institute of Technology in Zurich, Winnacker took part in a sizable effort to chemically synthesize vitamin B₁₂. Following that, he took a postdoc at the University of California, Berkeley, to work with Horace Barker, who discovered the active form of vitamin B₁₂. Winnacker set out to isolate enzymes involved in B₁₂ synthesis, but instead he became intrigued by the use of recombinant DNA and associated techniques to synthesize and manipulate DNA. "Berkeley was my transition from a pure chemist to a biologist," says Winnacker.

While at the Karolinska Institute in Stockholm, Sweden, and then the Institute of Biochemistry at Ludwig Maximilian University of Munich, Germany, Winnacker studied the replication of DNA viruses, an esoteric topic at the time. He convinced the German government to fund the University of Munich's Gene Center, but then started receiving offers for high-powered science-policy positions.

Winnacker was vice-president of the DFG, Germany's main grant-funding agency, when the country was reunified in 1990 and he tried to smooth the process for former East German institutes. He later assumed the DFG presidency and focused on expanding research opportunities. As secretary-general of the new European Research Council, he has had the chance to do this throughout Europe. Investigator grants were recently awarded to several countries (see *Nature* 453, 975-976; 2008).

In all his policy-making positions, Winnacker has been an ardent defender of, and creative force behind, research programmes designed to support young people, women in science and international collaborations, says Dieter Imboden, president of the Research Council of the Swiss National Science Foundation. At the HFSP, Winnacker plans to strengthen its focus on interdisciplinary approaches to solving problems. But he believes in funding risky, novel collaborations. "We want to fund systemic approaches to science — this is the future," he says. ■
Virginia Gewin

SCIENTISTS & SOCIETIES

Recruiting by rail

As Andreas Klauke rolled through a 15,000-kilometre, 57-city tour of India on a train laden with scientific experiments and displays, he was greeted by cows on the platform, elephants in the street and a total of 2.2 million visitors.

For Klauke, project manager of the Max Planck Society's Science Express, the seven-month trip served as both educational outreach and a massive recruitment effort. The German society launched the project to foster collaborations and recruit students and researchers from India's billion-plus population — especially those who might do their PhD research with the Max Planck Society.

When the Indian government and the Munich-based society first discussed joint scientific outreach, they were unsure how to get to people in far-flung places. India has few museums, and moving exhibits from city to city would have been time-consuming and cumbersome. Then one Indian official recalled a travelling train exhibition that celebrated the country's independence in 1947. Someone jokingly suggested the same for the society's exhibition.

It proved a wise move. Once set up, the 400-metre-long train's 12 themed exhibitions — ranging from the origins of the Universe to three-dimensional

protein animations — could stay intact for the entire trip. It reached small villages as well as large cities. Besides the occasional large mammal blocking the rails, the Science Express was sometimes slowed by the unexpected turnouts. "When 10,000-20,000 people showed up at some stations, the platform wasn't always big enough to handle the crowds," Klauke says.

A science infrastructure gap presents the biggest obstacles to Indian and German scientists working more closely together, Klauke says. He visited some research institutions and universities that had state-of-the-art molecular-biology labs next to labs with outdated equipment. "On one side, they make experiments by hand," he says. "On the other side, they have instruments to go deep into molecular structure."

Hoping to expand the reach of the programme, the Indian government will support another leg of the Science Express's trip in about three months, after some exhibits have been changed or updated. This time, Indian scientists will run the experiments and conduct outreach. And the journey will reach about 50 cities, mostly in the interior, an area not widely covered during the first tour. ■
Paul Smaglik

POSTDOC JOURNAL

Taking steps

One step forward, one step back — let's do the random walk. I'm the DJ of my evolution computer simulations. I make the rules, I set the parameters, and the individuals in my simulated landscapes dance. The number of individuals of each species jumps up and down as time passes, performing a dance that's technically known as a random walk. Ultimately this mix of procreation and chance leads to the ascendance of one species, which I record before moving on to the next parameter set. And so it has been for the past month. Simulation, watch them dance, result. Adjust parameters, watch them dance...

The success of my simulated individuals is not completely random. Yes, chance is a large component, but individuals differ ever so slightly and, given time, these differences become apparent. They underlie Darwin's insights into the wonderful diversity of life and, I suspect, the long-term trend in my stochastic daily life. For every ascendant idea that I have there are countless flops, just as each working computer program hides a trail of error-strewn code. Academic jobs appear and I apply with no result. How many applications does it take to make a career step? A quick survey of my colleagues suggests more than five. I now have six under my belt. Last week I achieved the next step in my career path. Just one step and I'm becoming a lecturer. Now let me dance. ■

Jon Yearsley is a senior postdoc in evolutionary genetics at the University of Lausanne in Switzerland.