TURNING POINT
Ewan Birney


EMBL–EBI

Ewan Birney helped to assemble the genetic database for the international Human Genome Project. In April, he will become an associate director at the European Molecular Biology Laboratory's European Bioinformatics Institute (EBI) in Hinxton, UK, where he has worked since 2000.

How did you launch your scientific career?
I was always drawn to biology. I went to Eton College, UK, a secondary school that has links with Cold Spring Harbor Laboratory (CSHL) in New York. Between school and university, it is traditional in England to take a 'gap year'. So I did an internship at the CSHL, which had a big effect on me. Working at an institution headed by James Watson, one of the key people involved in deciphering the structure of DNA, was probably one of the biggest reasons I went into science.

Describe the most significant turning point in your career.
I was a graduate student at the Wellcome Trust Sanger Institute in Hinxton, and was involved in the Human Genome Project from 1999 to 2000, when everything went crazy because of the competition between public and private efforts to sequence the genome. There was a constant push to release results. The Sanger was a major sequencing centre, and I had to grow up scientifically very quickly — learning to solve problems and get results — on account of the pace of discovery and the constant changes in technology. I effectively skipped the postdoc phase. I am sure I will never experience an atmosphere like that again. It was intensely demanding: every two weeks the team needed to create a new tool, or provide key information to show that we were on top of things.

What was your biggest accomplishment there?
In the final push of the Human Genome Project in 2000, we created Ensembl, a web browser for genetic information. We worked like idiots for two years to develop it. A huge amount of what we did fell on a few people who could understand databases and bioinformatics. Ensembl now holds genetic information from more than 60 species and a lot of tools for analysis — all freely available.

What will be your managerial focus at the EBI?
In 2006 I handed off Ensembl, because at some point, you have to trust people to improve what you've begun. It is wrenching to let go of something you've helped to create. But you have to if you want it to live. That requires a lot of coaching and mentoring of those taking over the project. Hiring excellent people, setting up situations for them to succeed in and coaching and mentoring them will be key parts of my new position.

How did you come to bioinformatics?
Bioinformatics is just a word to describe part of modern data-intensive molecular biology. Ever since a senior scientist advised me to learn the C programming language when I was at the CSHL, I've used whatever methods or tools I can find. Very early on, I adapted a programme to scan databases of expressed sequence tags, short bits of DNA that help to identify genes. I continue to teach myself programming and statistics. In general, I think about what problems I would like to address, what theories are out there and what computational or mathematical approaches might work. For instance, some colleagues mentioned that combinatorial mathematics might be a good way to understand genome assembly. At first I didn't understand how, but I finally got it, then went back to the maths textbooks and refined my approach.

What's the secret of your success?
I just really enjoy doing science. And that has helped me to get through some difficult times, when I've pushed myself and others perhaps too hard. The other thing that leads to success is trusting collaborators and the people you hire; I think that, often, we don't put enough trust in the scientists around us and it hinders progress. I am very lucky to be a part of the EBI and to be moving into such a central role. I enjoy nearly everything about it — although there are one or two meetings I could do without. ■

INTERVIEW BY PAUL SMAGLIK

CANADA
Pension values shrink
Some Canadian academics will have to increase contributions to their pension plans as a consequence of the recession, says the Canadian Association of University Teachers (CAUT) in Ottawa, which represents faculty members at about 70 public institutions. Neil Tudiver, CAUT's assistant executive director of collective bargaining, says that the economic downturn has decreased the value of faculty pension accounts. Provincial regulations call for reductions to public universities' costs, forcing institutions to consider plan adjustments to make up the shortfall. Tudiver says that pension contributions for affected plans will rise by 2% on average.

NON-PROFIT SECTOR
Uncertain prospects
Tightening of federal support for US science is creating a mixed employment outlook for academic researchers, says the author of *Holding the Fort: Nonprofit Employment during a Decade of Turmoil*. The report, released on 18 January, found that employment in the US non-profit sector grew by an average of 2.1% each year from 2000 to 2010, despite the recession; growth in education alone was 2.6%. Although universities and health care saw some of the biggest job increases, a slowdown in federal funding is placing a strain on academic research, suggests Lester Salamon, a policy expert at Johns Hopkins University in Baltimore, Maryland, and lead author of the report. Salamon predicts a shift to private sources of research funding, including industry.

UNITED STATES
Postdoc stipend grows
For the second year running, postdocs funded through US National Institutes of Health (NIH) traineeships will receive a 2% stipend increase. In 2011, 6,686 postdocs received the stipend. The NIH announced the increase on 20 January for trainees — including undergraduates, PhD students and postdocs — who receive the Ruth L. Kirschstein National Research Service Award (NRSA). Entry-level NRSA stipends still fall short of the US$45,000 advocated by the US National Postdoc Association (NPA) in Washington DC; last year, an informal NPA survey of 74 US institutions found that 35 of them base their postdoc salaries on the NRSA, which increased by 1% in 2010.