

NUTS & BOLTS

YOUNG SCIENTIST

Italian biotechnologists organize

Francesco Lescai and Marco Quarta

Current poor prospects for young Italian life scientists are highlighted by a survey by the Association of Italian Biotechnologists (ANBI), released in July 2003. Although Italy has invested in growing its scientific and technical community, jobs have not followed. Young biotechnologists' salaries are low and they are eager to leave Italy.

A sample of 120 young biotechnologists, most of whom have the *laurea* degree — in between a master's degree and a PhD degree elsewhere — reported average wages of less than €1,500 a month. This is well below what a postdoc in the United States or United Kingdom would expect to earn. It is no surprise that 86% of the respondents want to go outside Italy to acquire new expertise, and that 50% of them think they will have to move abroad to realize their career expectations.

But the young biotechnology community in Italy is getting organized. The ANBI was set up in 2001 to represent young biotech professionals, and has since joined forces with the Young European Biotech Network, which is looking at similar concerns across Europe.

Francesco Lescai is president of the Association of Italian Biotechnologists and Marco Quarta is a board member of Young European Biotech Network. Both are at the University of Bologna.

A shaken economy and shrinking organizations have created a chilly climate for job seekers. Whether you're a recent graduate, postdoc or career changer, capitalize on your strengths and expedite your search by adopting a system that rewards **knowledge, networks and know-how**. In the inaugural edition of this column devoted to 'nuts and bolts' career strategies for the scientific community, the focus is on **knowledge** and how a combination of self-assessment and trend tracking can help your career.

Self-knowledge is the place to start. Are you best at pure research, or would you rather apply science to practical problem-solving? Would you prefer to focus intensively on one scientific problem or are your interests broader? Do you like working alone or do you value a team environment?

Your answers provide clues to where you're most



With Deb Koen
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likely to thrive. A focus on pure research in a more solitary setting might lead you to academia, whereas solving practical applications in a team is more characteristic of industry. If you're looking for a combination, consider an academic research institute that emphasizes multidisciplinary research or an industry-sponsored institute that focuses on discoveries that could some day be applied. There are no right or wrong answers — simply a case of generating the options that fit your profile.

Once you've identified

the kinds of positions and types of organizations/institutions you're looking for, go beyond advertised openings to scout out opportunities. Every field has its print and online resources. Also use scientific journals, medical directories and business publications to track trends.

Move on to the people. Pick up the phone or arrange a meeting to learn more about a career or an organization of interest. Once you've generated a list of potential employers, start contacting them with the good news of your expertise, enthusiasm and availability. View it as planting the seeds for future opportunities. Even if no opening exists currently, you'll be well positioned when conditions improve.

Deb Koen is vice-president of Career Development Services, a national career management firm, and a columnist for the *Wall Street Journal's CareerJournal.com*.

MOVERS This Week: Mark Boguski, Director, Allen Institute for Brain Science, Seattle, Washington, USA



Some might say that Mark Boguski has a knack for being in the right place at the right time. He landed at the NCBI before the Human Genome Project starting gearing up, and in Seattle just when Microsoft billionaire Paul Allen was planning a new scientific institute. With hindsight those moves seem savvy. But both were risky at the time. No one now doubts the importance of

bioinformatics — whose basic tools Boguski helped to build while at the NCBI. But when he followed his mentor David Lipman to form the NCBI eight months into his postdoc, the term bioinformatics didn't exist, and what little genomic data NCBI generated were distributed quarterly on magnetic tape. Having then moved to Rosetta during the height of human genome fever, Merck's acquisition of the company left him wondering what to do next.

He found it during "what amounted to a sabbatical" at the Fred Hutchinson Cancer Research Center in Seattle, to help them develop a bioinformatics and proteomics strategy. At the NCBI, Boguski realized that bioinformatics by itself was not enough to understand the human genome. At Rosetta, he learned how high-throughput wet biology could combine with bioinformatics to aid drug discovery. And he started wondering how such

industrial technology could serve basic biology. After being introduced to Paul Allen by James Watson, Boguski started consulting on Allen's projected brain-science centre, and last month took the helm when the plans for the \$100-million centre were unveiled (see *Nature* 425, 226; 2003).

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He imagines some scientists asking: "Why is someone who is not a card-carrying neuroscientist running this project?" He would answer that all the different skills he picked up along the way — including a genomics mindset and biotechnology management experience from his time at Rosetta — along with a willingness to turn to the institute's scientific advisory board, will help him kick-start the new project. "My story shows that going into industry is not the one-way street it used to be," Boguski says. "You have to be willing to take some risks."

CV **2001–2003:** Senior director, Vulcan, Seattle, Washington
2000–2001: Senior vice-president, research and development, Rosetta Inpharmatics, Kirkland, Washington
1995–2001: Adjunct professor of molecular biology and genetics at Johns Hopkins University School of Medicine, Baltimore, Maryland
1989–2000: Senior investigator, National Center for Biotechnology Information (NCBI), Bethesda, Maryland
1988–1989: Medical staff fellow, NIDDK, NIH, Bethesda, Maryland