says Ernst & Young's Crocker. "But that just isn't happening since September 11. Perhaps people don't want to have overseas subsidiaries to travel to at the moment."

Generally, however, European biotech is perceived as strong, with a majority of companies having taken advantage of the generous finance-raising opportunities of 2000. About 60 of Europe's 100 quoted biotech firms hold enough cash to last for another three years. And analysts agree that the UK industry is especially well placed because of its greater maturity and much stronger product pipeline. Thus, UK private companies have taken a large slice of the private equity pie, as they take full advantage of nervous investors who are moving away from the platform space in favor of companies with a pipeline of products, says Crocker.

More unexpectedly, adds Crocker, the UK has this year seen a resurgence of new startups that has apparently not been seen elsewhere in Europe. The number of active biotech companies in the country has increased from 285 at the end of 2000 to 310 near the end of November 2001—net of all those lost through merger or liquidations. In previous years, net increases in the United Kingdom have been only 10–15, says Crocker. The funding for these has largely come from a very active venture capital sector, particularly Technomark (UK), Gateway (UK), and Avlar (UK). In the first half of 2001 alone, the UK biotech sector raised £160 million in venture capital, compared with £170 million in the whole of 2000, he says.

Peter Mitchell, London

Shutters come off IPO window

Toward the end of 2001, the first new biotechnology filing on Nasdaq by NeoGenesis Pharmaceuticals (Cambridge, MA) and Biodelivery Science, and large secondary offerings from Biovail ($587.5 million; Toronto, ON, Canada) and ICOS ($313 million; Bothell, WA, USA) signaled the earliest crack in the shutters of the next window for initial public offerings (IPOs). Although most observers believe that the IPO window may not truly reopen until the middle of 2002 at the earliest, and possibly not for 18 months, companies, especially in Europe, are keen to ensure that they are prepared when the opportunity arises. Biotechnology IPOs had tailed off completely as the end of 2001 approached: all but $1 million of the paltry $313 million raised in IPOs globally came in the first half of the year.

In November, scheduled offerings by companies such as cancer drug developers, BioNumerik Pharmaceuticals (San Antonio, TX) and Xcyte Therapies (Seattle, WA), genomics discovery outfit Acadia Pharmaceuticals (San Diego, CA), and drug deliverer Acusphere (Cambridge, MA) were withdrawn or postponed, while Northwest Biotherapeutics (Bothell, WA), a cancer immunotherapy concern, added new underwriters and reduced the price of the offering it had filed originally back in August. Despite these indicators, however, mid-November also saw the first new biotech IPO filing since Zymogenetics (Seattle, WA) on September 10th, from proteomics-based discovery unit, NeoGenesis. Although the company had yet to set a price for the offering as *Nature Biotechnology* was going to press, many companies looking to float will be following Neogenesis' fate with great interest.

Tim Haines, CEO of structural biology specialists, Astex Technologies (Cambridge, UK), is one of those preparing for the next wave. "We are currently testing the market to assess precisely what we need to do pre-IPO and post-IPO to meet the expectations of the finance community." He believes that in Europe especially a number of companies failed to maximize the opportunity last time round. "The European companies that did go out went out late: the US companies were better prepared." He thinks that next time round investors will be looking not only for third party validation of a company's technology but also for indicators that the technology can actually derive developable lead compounds. Astex is not running short of cash, having raised around $43 million this year in private rounds, including £5.7 million ($8.2 million) from existing investors in December. However, Haines will be looking for an IPO that will take the company's valuation "north of £150 million" in order to stay on the institutional radar. Looking back to the disappointments that followed the public financing frenzy in 2000 (*Nat. Biotechnol.* **18**, 922; 2000), Haines also recognizes that investors are likely to be more demanding next time around. "Many people got burned, especially in the genomics platform area."

Zisi Fotev, vice president for business development at functional genomics and antisense specialist Atugen (Berlin, Germany), believes that the IPO market may open very soon. "The US market will open as early as summer 2002, with Europe following by the end of the year," he says. The company is first looking for a €30–40 million mezzanine round before floating on a revitalized Neuer Markt in order to raise money to develop molecules against some of its validated therapeutic targets and to take those molecules through the clinic.

John Hodgson, London

Roche leads molecular diagnostics charge

Last November, Swiss drugs giant Roche (Basel) and the Mayo Clinic (Rochester, MN) announced that they had developed a DNA-based test for anthrax that could detect the deadly bacillus in hours rather than days. The rapid development of the test, and recent federal emphasis on detecting infectious pathogens, highlights the potential clout of molecular diagnostics. Roche hopes that sales of molecular diagnostics for less sinister diseases will contribute to its future profits. Although Roche currently leads in the diagnostics space, others are keen to dabble in diagnostics as a means to leverage genomics' intellectual property. However, the current lack of clarity of the utility of molecular diagnostics, and lack of guaranteed reimbursement, may pose a barrier to smaller players entering the market.

In the past, pharmaceutical companies have shied away from the diagnostics business, which traditionally generated relatively low-margin, reagent-and-instrument type kits. However, Heino von Prondzynski, head of Roche Diagnostics, says that genomics has prompted a "paradigm shift" in the diagnostics industry "from analyzing biochemical parameters to providing accessible health care information." Part of the driving force, says von Prondzynski, comes from pharmaceutical marketing, which perceived that the "one-drug-fits-all" blockbuster must move over to "tailored" therapeutics now feasible, at least in theory, with pharmacogenomics.

Indeed, according to Frost & Sullivan (San Antonio, TX) analyst Eugenia Shen, the US market for molecular diagnostics generated revenues of $1.3 billion during 2000 and is predicted to generate around $4.2 billion by 2007. To date, the market for *in vitro* diagnostics has been limited to blood tests, for example for blood constituents (e.g.,