

Box 2 The smallest are weakest

Nature Biotechnology examined the financial reports of more than 400 public biotech firms (mid-year filings for the most part) to discern where the trouble lay, and data show the situation is particularly dire for the microcap firms (Figs. 1 and 2). More than 40% of the microcaps studied were operating with less than one year's cash in reserves, based on their most recent financial disclosures as *Nature Biotechnology* went to press. In comparison, fourth-quarter filings for 2005, 2006 and 2007 show that 31.7%, 34.6% and 27%, respectively, of microcaps were in that same precarious position.

With the equity markets dead, the mood for these small firms is "dark," says Ralph Villiger, a partner at service and solution provider Avance, in Basel. A survey from his firm shows that the majority of respondents feel the economy will not turn around for one to two years, and most expect to be affected. They anticipate more mergers, smaller total value for deals and an increase in deals that reward the back end. More than half feel raising capital would be "impossible."

Not only is the cash drought disproportionately hitting microcaps, but it is also likely to persist longer for those firms, says Stelios Papadopoulos, chairman and founder of Exelixis in S. San Francisco, California, and a long-time investment banker focused on biotech. "When the market does come back, it will look first at the robust, solid, dividend-paying major industrial concerns," Papadopoulos says. "It will be a long time before the \$100 million company with 20 employees gets its moment of happiness." He predicts that the crisis could wipe out as many as one in five biotech firms with market caps less than \$200 million. "They will either go bankrupt or they will be taken over for nominal amounts of money," says Papadopoulos, citing as an example London-based GlaxoSmithKline's \$57 million buyout of Redwood City, California-based Genelabs in November.

A sinking valuation and shrinking cash pile pushed Montvale, New Jersey-based Memory Pharmaceuticals to find a buyer. Roche, of Basel, is acquiring all outstanding shares of Memory for \$0.61 per share, or about \$50 million—a far cry from the valuation the company received when it went public in spring 2004, raising \$35 million by selling 5 million shares at \$7 a piece. But it's also a 319% premium to the share price before the Roche announcement. The companies were already partnered on two programs, but before Roche stepped in, Memory spent 2008 watching its cash position dwindle, its auditor label it a going concern and Nasdaq threaten delisting.

Pro-Pharmaceuticals of Newton, Massachusetts, has a similar problem but as of publication had not found a solution. The company had \$816,000 in cash at the end of the third quarter and had lost \$2.3 million over the first nine months of the year. It was looking to raise money in November through a rights offering to current shareholders but was also seeking a partner for its colorectal cancer drug, Davanat (carbohydrate polymer), which is close to regulatory submission.

The microcap layer is pocked with these stories, and it is from here that biotech will see most of its losses. Licensing deals might save some, and acquisitions rescue others, but those that are unable to find money or a lifeboat one way or the other will simply "vanish," says Villiger.

Brady Huggett

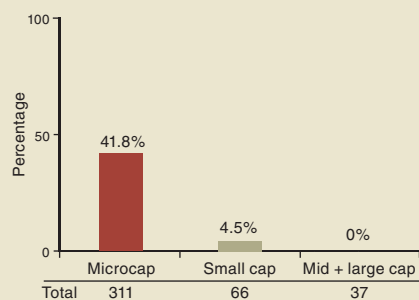


Figure 1 Percentage of biotech firms operating with less than one year's cash.

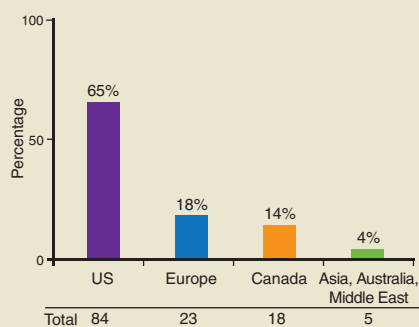


Figure 2 Percentage of cash-poor microcaps in various regions.

IN brief

Plant genomics land big prizes



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NSF funding supported the maize genome sequencing.

The winners of one of the US's largest annual competitive grant programs for plant genome research have been announced. The National Science Foundation (NSF) has awarded nearly \$60 million to 20 projects focused on gene function and the interactions between genomes and the environment

in economically important plants. Winning projects each receive up to \$6.8 million over the next two to five years, and many involve multi-institution collaborations with international partners. Since its inception 11 years ago, the NSF's grant program has infused nearly \$800 million into plant genomics. "I'm not sure if we would've ever been able to sequence the maize genome without this program," says plant genetics researcher and past recipient Clifford Weil, of Purdue University in West Lafayette, Indiana. In addition to the NSF awards, the Department of Agriculture doles out each year about \$13 million in competitive grants through its plant genome program, which began in 1991, and the Department of Energy in recent years has awarded more than \$7 million annually in such grants. Much of this national funding is coordinated by the National Plant Genome Initiative. The effort began in 1998 after "recognition in 1998 that there wasn't a large amount of public resources for plant genomics," so NSF's budget was increased, says Jane Silverthorne, a spokesperson deputy division director for the foundation. In a 2008 assessment of the National Plant Genome Initiative, the National Research Council described the program as "successful" overall. One example of a breakthrough from the initiative is the discovery of receptor molecules that bind to most major plant hormones. The NSF's program budget is comparable to that of the whole of Europe, says Willem Stiekema, who served on the NSF grant selection committee and is a genome informatics researcher at Wageningen University, in The Netherlands.

—Emily Waltz

New product approval

Mozobil (plerixafor injection)/Genzyme (Cambridge, Massachusetts)

The US Food and Drug Administration approved Mozobil for mobilizing hematopoietic stem cells to the bloodstream for collection and autologous transplantation in patients with non-Hodgkin's lymphoma and multiple myeloma. The drug is intended to be used in combination with granulocyte-colony stimulating factor. Mozobil is a small-molecule chemokine (C-X-C motif) receptor-4 antagonist.