

Success in an uneven market

Medicinal chemists are in demand more than ever before — but the vagaries of the drug-discovery market and a sluggish economy have dampened prospects temporarily, says Eugene Russo.

The tables have turned for jobs in medicinal chemistry. Traditionally, such skills were in demand at pharmaceutical companies, where medicinal chemists would be expected to come up with new molecules. Biotechnology companies, by contrast, preferred molecular biologists who could search for protein-based therapeutics. But, helped by several economic factors, these distinctions are now becoming blurred.

Demand for medicinal chemists in the drug industry has slowed somewhat, and signals are mixed in the biotech sector. Mergers in both sectors, as well as a shaky stock market, have dampened opportunities all round.

Although medicinal chemists are still in demand at big drug companies, the job market has become less buoyant compared with a year or two ago. "It's still a pretty good market," says Philip Portoghese, editor-in-chief of the *Journal of Medicinal Chemistry* and a medicinal chemist at the University of Minnesota. "But it's not what it was."

Joel Huff, a vice-president of medicinal chemistry based at Merck's facility in West Point, Pennsylvania, agrees. Merck has done minimal hiring worldwide in the past year, he says, partly as a result of the sagging economy, but mostly because of an increasing focus on the preclinical stages of drug development, which does not typically involve medicinal chemists.

But it is not all doom and gloom. John Primeau, a vice-president at AstraZeneca R&D in Boston, says that his company is expecting "steady growth" worldwide in terms of new jobs.

And over the past few years, chemistry has moved to the heart of many companies in the biotech sector. "There definitely has been a shift," says Richard Scheller, senior vice-president of research at Genentech in South San Francisco, California. The early biotech firms focused on developing protein therapeutics using recombinant DNA and gene-expression technologies. Now, companies are more likely to be founded on

small-molecule drug development than protein therapeutics — which has meant an increased demand for medicinal chemists who can design small molecules.

"These days more than 90% of biotech companies are orienting themselves towards the drug arena," says Povl Krosggaard-Larsen, a medicinal chemist at the Danish University of Pharmaceutical Sciences in Copenhagen. "This makes medicinal chemistry a key discipline."



Povl Krosggaard-Larsen



Christopher Price



Richard Scheller

FREEDOM

Drug-seeking biotech firms offer more flexible, less bureaucratic environments that can foster the sort of risk-taking that is unlikely to be found at large pharmaceutical companies. "In the past few years, drug discovery has been too dominated by screening technologies and robotic technologies," says Krosggaard-Larsen.

Safi Bahcall, chief executive of Synta Pharmaceuticals in Lexington, Massachusetts, sees a major advantage in doing medicinal chemistry at a smaller company. "It's exciting seeing a drug get to patients," he says. "Do you want to be employee 99,950, or do you want to see a drug go into the clinic from start to finish?"

But few biotech companies have yet to attain profitability. "It's a game of high risk, high return," says Per Lindell, the vice-president of business development at Avalon Pharmaceuticals, a biotech firm based in Germantown, Maryland.

Many chemistry-based companies are currently in a holding pattern. Biovitrum, for instance, a 580-employee firm in Stockholm, hopes eventually to have the capacity to do its own clinical trials and marketing. But it is not expecting to hire any new staff in the near future. "It's a survival atmosphere," says

Christopher Price, chief executive of Nobex, a small biotech in Research Triangle Park, North Carolina.

"Demand will ebb and flow a little bit," says Primeau. "But there's still a strong demand for medicinal chemists."

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