

'Holding on by its fingernails: The biotech industry in Massachusetts braces for another tough year.'

Acquisitions, funding, public offerings, and stock prices fell in 2022, sending small firms into survival mode - and hoping for a speedy economic turnaround.

By [Ryan Cross](#) Globe Staff, Updated January 21, 2023, 1:57 p.m.



Kendall Square in Cambridge is the epicenter of the region's biotech industry. JONATHAN WIGGS/GLOBE STAFF

It's hard to overstate the Boston biotechnology industry's astronomical growth, which has overflowed from its longtime stronghold of Kendall Square in Cambridge into the Fenway, Seaport, and surrounding suburbs. But by most financial

measures, 2022 was a terrible, horrible, no-good year for biotech - here and everywhere else.

Compared with a record-busting 2021, private funds to finance growth were harder to come by across the industry last year. The size and scope of acquisitions were modest. And a new federal law to combat high drug prices sent a chill down the industry's spine. Biotech stocks fell 26 percent during 2022 according to one benchmark of the industry - the exchange traded fund XBI - and are down 48 percent since their all-time high in February 2021, significantly worse than the broader market.

Because of all that, startups hoping to go public didn't dare step foot into a tumultuous and deflated stock market. Many firms are just trying to survive until there's an economic turnaround. Some have recently gone under, including the once-promising Colorado cancer firm Clovis Oncology and Cambridge neurological disease startup [Faze Medicines](#).

"There were a lot of really good companies poised to go public early last year that had the rug pulled out from under them, and they went into survival mode," said Jeffrey Quillen, a partner at the Boston law firm Foley Hoag who works with biotech startups from formation to stock market debut. By the end of 2022, the biotech industry was "holding on by its fingernails," he said.

Many of those hangers-on were represented at the J.P. Morgan Healthcare Conference in San Francisco last week, the largest biotech business meeting of the year. Hotel rooms and restaurant booths became board rooms for companies pitching investors or banking on a big breakthrough deal with - or acquisition by - a larger drug maker. But money that flowed freely a couple years ago will clearly be harder to come by. An air of foreboding loomed in the halls, with many predicting the dour outlook could extend well into 2023.

"Because we had several years of 'free money,' a lot of companies were funded that should not have been funded," Jean-Jacques Bienaime, chief executive of the California drug company BioMarin, said during an interview at an upscale hotel during the conference. "You're going to see companies disappearing, merging, and acquired."

Biotech leaders have been warning about this washout, and small companies across the country, including in Boston, have already resorted to layoffs or dropped experimental drug programs to buy another year or two of time. The industry's fundamental problem - growing too big, too fast - isn't unique to Massachusetts, but because the Boston region is widely considered biotech's epicenter, the pain could be especially pronounced here. But some in the industry say the purge may be healthy in the long run.

"If our sector is going to take a hit, Boston is squarely in its sights," said Hussain Mooraj, a consultant and the New England life sciences lead at Deloitte. "There will be a culling, and, unfortunately, some good science will go down,

along with the not good science, but the industry is going to come out stronger."

And despite the downturn, it's not like the funding spigot has been turned off. A recent [report](#) from the Massachusetts Biotechnology Council found that firms headquartered in the state raised \$8.72 billion in venture capital funding in 2022, a 36 percent decrease from the year prior, but still the second highest year on record.

A lot of these companies are based on [emerging ideas](#) for [treating cancer](#) or [immune diseases](#). Others are creating or [improved](#) forms of genetic therapies, or using [artificial intelligence](#) to [design drugs](#).

The landscape for initial public offerings, however, was dismal, with only eight biotech companies in the state going public last year compared with 25 the year before. Larger life science firms were reluctant to make big purchases last year, too, with the acquisition of 26 Massachusetts-based biotech companies amounting to about \$5.9 billion, compared with 34 for nearly \$64 billion in 2021.

Many industry leaders are hopeful that funding and acquisitions could snap back as soon as this summer, but expect an appetite for IPOs to take longer to develop. Executives point to a number of national and global concerns that could change that forecast, including inflation, rising interest rates, the specter of recession, war in Ukraine, tensions in Congress, and drug pricing legislation.

"These are the issues weighing on the sector," said Barry Greene, chief executive of Cambridge-based Sage Therapeutics. "And it's very challenging for Wall Street to embrace a sector with all that uncertainty."

Many companies are trading at a small fraction of their peaks, dragging their total stock values below the amount of cash they have on hand and setting the timers ticking toward bankruptcy. Lexington-based Concert Pharmaceuticals, which only had enough money to survive through June, was [just bought by Indian drug maker Sun Pharma](#).

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"There's been a massive overcorrection," said Andrew Hedin, an investor at Bessemer Venture Partners in Cambridge.

"The overall state of the industry is still very strong. When I think about the scientific advancements made over the last decade, there's a lot to be excited about."

"These are the issues weighing on the sector," said Barry Greene, chief executive of Cambridge-based Sage Therapeutics, referring to the biotech industry. "And it's very challenging for Wall Street to embrace a sector with all that uncertainty." ANGELA WEISS/AFP VIA GETTY IMAGES

With the valuation of smaller biotechs down considerably, and larger drug makers flush with cash, investors wonder if big pharma will go on a shopping spree. "There's a great opportunity for those sitting on cash to get a deal," said Chris Caruso, a partner at Deloitte focused on life sciences mergers and acquisitions. "Some companies that have been beat up are likely going to be targets."

Although it feels like a buyers' market, a wave of acquisitions has yet to materialize. Two small Massachusetts biotech firms, [Albireo and CinCor, were acquired by larger European drug makers last week](#), marking a slow start to a normally busy season for biotech business deals. As Cincor chief executive Marc de Garidel put it to the Globe, pharma firms "seem to be pretty picky on what they want." Cincor, which is developing a hypertension pill, was purchased for \$1.3 billion by AstraZeneca.

Experts said that partnerships and collaborations between large and small firms are starting to become more common as large firms look to invest in new science without the financial risk of outright buying a company whose experimental therapies may ultimately fail. Biotech firms that may have wanted to go it alone a couple years ago are also viewing such partnerships as a lifeline for their dwindling coffers.

"We look for partners where it makes sense," said Chris Round, president of EMD Serono, the Rockland-based US health care business of the German life sciences giant Merck KGaA. "And as we enter into what looks like more challenging economic times for the next couple of years, I think we'll probably end up doing more of that, as will others."

Many leaders from medium- and large-size biotech firms, which are comparatively shielded from the downturn in funding, view the coming washout as a natural and necessary part of a boom and bust cycle. These executives say that companies founded on a single hypothesis or a handful of experiments that haven't panned out don't need to continue.

"It's a good thing to prune them away," said Richard Pops, chief executive of Alkermes, an Irish drug company whose US headquarters is in Waltham. "Companies with good science can raise capital, but the cost of capital will be infuriating," since they may need to sell their stock at vastly deflated values, he added.

Layoffs that began to pick up last year in the biotech industry will likely continue for cash-strapped companies. But Massachusetts executives say they have such a hard time filling open positions that they are not worried about unemployment in the sector. "There's so much demand, it's insane. It's a war for talent in biopharmaceuticals," Greene said.

Seth Ettenberg, chief executive of Bluerock Therapeutics, the Cambridge-based stem cell subsidiary of Bayer, said that a couple years ago he would extend job offers and have candidates return with three to five other offers. That might not happen anymore, and job seekers may have to be less picky about whom they're working for, as well as less demanding about benefits such as working from home, he added.

Venture capitalists focused on biotech say they will continue to invest in new startups, but caution that money won't flow as freely, especially into the third, fourth, or fifth startup trying to tackle the same problem or working on a similar technology as its competitors.

"Fewer companies will get funded as the bar for investment goes up. But by definition, the quality of what gets funded goes up as well," said Jorge Conde, a general partner at the California venture capital firm Andreessen Horowitz. "And, hopefully, they will be more concentrated and much more powerful."

Rupert Vessey, president of research and early development at Bristol Myers Squibb, which is opening a new research site in Cambridge this year, doesn't expect scientific progress at local startups to slow. "The Boston-Cambridge ecosystem is so incredibly strong and innovative, and there's such a critical mass of company formation skill, that I'm sure that ecosystem will get through this period and still be industry-leading."

That view - that the region's biotech industry will weather the storm - was echoed by many investors.

"Boston continues to be the biotech capital of the world," Hedin said. "That's not changing anytime soon."

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