

## New biotech hubs may emerge as industry matures

A feeble economic climate is prompting US biotechnology companies to trim operating costs by launching facilities in smaller cities rather than in traditional biotech hubs, according to a recent report. Industry experts, however, caution that a low operational budget is only one of the many factors that help a company decide where to locate. Proximity to high-level research institutions, other companies, financial investors and most importantly, skilled workers are all factors that influence companies'—especially startups'—choice of location.

'A comparative cost analysis for North American biomedical industry operations,' a report released on August 4 by consultancy firm The Boyd Company (Princeton, NJ, USA), surveyed the annual costs of running a 100-employee biotechnology research and development laboratory in 48 US and Canadian cities that possess a skilled workforce, academic institutions with strong life science research or a positive business climate. Measuring geographically varying factors such as electricity rates, lease rates and annual labor costs, the report found that San Jose, California (USA), is the most expensive surveyed city in which to do biotech research whereas Montreal, Quebec (Canada), is the least expensive (see Table 1).

The trend to relocate is not limited to research facilities, nor to the biotechnology industry, says John Boyd, Boyd Company founder and president, citing aircraft maker Boeing's shift from Seattle, Washington (USA), to Chicago, Illinois (USA), two years ago. "Corporate boardrooms are reevaluating cost structures at all levels of operation, from local sales offices, to research and development centers, right up to corporate headquarters."

Lulu Pickering, president of the biotechnology consultant firm Informagen (Newington, NH, USA), agrees. "As biotech has matured, and especially in this economic environment, it is less important to have an 'exclusive address,' such as Cambridge, Massachusetts, versus Woburn, Massachusetts, and [it is] more important to [possess high-quality] technology and business acumen," says Pickering.

Hematech (Westport, CT, USA) which makes human vaccines from genetically modified cows, recently opened a research laboratory in Sioux Falls, South Dakota (USA), becoming one of the largest biotech players in that state. "We can use funds more

efficiently by moving to these [small] places," says Poothapillai Kasinathan, the new laboratory's director. But Kasinathan points out that Hematech's entry into South Dakota also hinged on other factors, such as proximity to the University of South Dakota's medical school (Sioux Falls, SD, USA) and to Trans Ova Genetics (Hull, IA, USA), a bovine embryo transfer firm with which Hematech is collaborating.

Arthur Klausner, a general partner at venture capital firm Domain Associates (Princeton, NJ, USA), also argues that the need to be near superior research and business infrastructures is more important than the low operating costs of a particular region. "As you look to build companies with high aspirations you want to be penny wise but you don't want to be pound foolish," says Klausner, implying that companies would be unwise to give up access to biotech experts and investors just to pay lower rent and electricity bills. Ron Garren, chief biotechnology strategist at biotech investment firm InvestBio (New York, NY, USA), agrees. "Economic considerations [like lower operating costs] are secondary to attracting a talented pool of workers and having synergy with other companies in the same area."

Even if a biotech company spins out of a remote university, venture capitalists are likely to advise it to move its intellectual property to areas near investors and managerial and research talent, says Ralph Christoffersen, a partner at Morgenthaler Ventures (Boulder, CO, USA). A company

can save money by moving to the outskirts of biotech centers, rather than right into them; indeed, of 106 California-based public biotechnology firms with pharmaceutical focus, only Human Pheromone Sciences is in expensive San Jose, according to databases maintained by BioCentury Publications (San Carlos, CA, USA).

Companies hit hard by the US financing slump should implement "virtual business models" rather than go to the trouble of relocating, suggests Garren. Instead of building 'brick and mortar plants,' companies like Dov Pharmaceuticals (Hackensack, NJ, USA) are sponsoring research at universities or contract research organizations. With this type of arrangement, firms can avoid expensive considerations, such as employee payrolls, while retaining intellectual property rights to technologies, says Garren.

Meanwhile, Boyd predicts that small biotechnology hubs will rapidly emerge in coming years because America's growing biotech industry is inspiring states like Minnesota and Georgia to generate larger numbers of skilled workers. Next year, Boyd is planning a survey of operating costs in Canadian and European cities. But ultimately, he says there is no perfect location for a biotechnology company. "It's all about assessing trade-offs."

*Paroma Basu, New York*

*This story was reprinted with some modification from the News section of the Bioentrepreneur web portal (<http://www.nature.com/bioent>).*

**Table 1 Total annual operating cost rankings for biotech companies in 48 North American cities or counties.**

Biomedical facility location	Total annual operating costs*
San Jose, CA, USA	\$12,106,100
San Francisco, CA, USA	\$11,935,032
Fairfield County, CT, USA	\$10,748,891
Boston, MA, USA	\$10,632,657
Nassau/Suffolk Counties, NY, USA	\$10,290,838
Tulsa, OK, USA	\$ 8,237,917
Shreveport, LA, USA	\$ 8,202,453
Athens, GA, USA	\$ 8,121,568
Sioux Falls, SD, USA	\$ 7,963,262
Montreal, QC, Canada	\$ 7,955,000

Source: The Boyd Company.

\*Annual operating costs for a biomedical research and development facility that employs 100 workers and covers a space measuring 75,000 square feet of Class-A office and laboratory space. Costs include labor costs (including weighted average yearly earnings, annual base payroll costs and fringe benefits), electric power costs, facility lease costs, equipment amortization costs, heating and air conditioning costs and corporate travel costs.

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## Erratum: Why biotech don't pay dividends—yet

Tom Jacobs

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The title of this article contained a typographical error. The title should have read: “Why biotechs don't pay dividends—yet”. *Nature Biotechnology* regrets the error.

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## Erratum: New biotech hubs may emerge as industry matures

Paroma Basu

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The title of Table 1 incorrectly indicates the presence of data for 48 North American cities or counties. The original article, which appears in the News section of the *Bioentrepreneur* web portal (<http://www.nature.com/bioent>), does indeed contain these data. But the version reprinted here displays a truncated version of the table with ten data points: North American cities or counties that rank 1–5 and 43–48 in total annual operating costs for a biomedical research and development facility. *Nature Biotechnology* regrets the error.

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## Corrigendum: Invention and commercialization in optical bioimaging

Daniel L. Farkas

*Nat. Biotechnol.* 21, 1269–1271, 2003

The URL that appeared on p. 1271 was incorrect. The correct URL is [http://www.ptei.org/educational\\_programs/Planetarium/planetarium\\_project.html](http://www.ptei.org/educational_programs/Planetarium/planetarium_project.html).

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