

# Taking a tumble

*Life sciences venture capital investment slides for quarter, one of only two sectors missing double-digit gains for 2010*

*February 2011*



**US venture capital funding for the life sciences sector,<sup>1</sup> which includes biotechnology and medical devices, fell steeply during the fourth quarter of 2010 and declined in terms of dollars for the full year, according to findings from the MoneyTree™ Report by PricewaterhouseCoopers and the National Venture Capital Association (NVCA), based on data from Thomson Reuters. Annual venture investment for the sector dropped by 2 percent in value from 2009 but increased 5 percent in volume, with \$6 billion going into 784 deals.**

**Life sciences, and networking and equipment, were the only two sectors seeing a decrease in annual investment levels during 2010. Venture funding for all industries, with 3,277 deals bringing in \$21.8 billion, rose 19 percent in dollars and 12 percent in number of deals over 2009, the first annual increase since 2007.**

The life sciences share of total venture capital dollars invested shrank to 28 percent during 2010 from 33 percent in 2009. Biotechnology investing grew by a modest 3 percent in dollars and 8 percent in deals, with \$3.7 billion going into 460 deals. The biotechnology industry, which led all industries in 2009 in share of total dollars invested, slipped into second place during 2010 behind software, which captured \$4 billion in 834 deals.

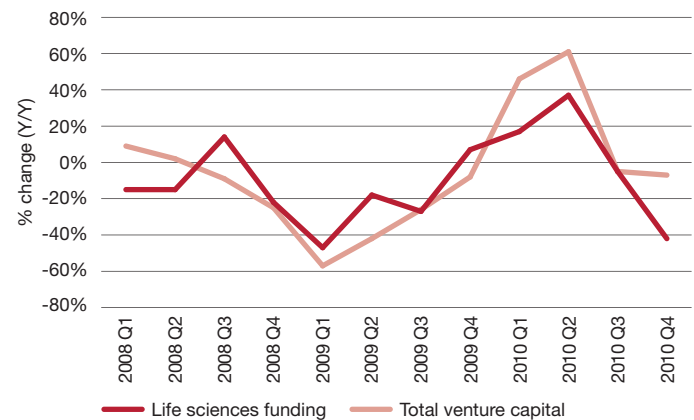
For the fourth quarter, biotechnology investing declined 24 percent in dollars and fell 15 percent in the number of deals from the third quarter, with \$685 million going into 94 deals.

Medical device investments fell 9 percent in dollars from 2009 to 2010 and finished flat in terms of deals. With \$2.3 billion going into 324 deals, the medical device industry ranked behind software, biotechnology, and industrial/energy in dollars invested.

For the fourth quarter, medical devices dropped 31 percent in dollars and 15 percent in deals from the previous quarter, with \$400 million going into 71 deals.<sup>2</sup>

One possible reason for the drop-off in funding for the life sciences sector during the last half of 2010 was an increasingly challenging regulatory environment. “During the fourth quarter, we saw tremendous uncertainty relating to FDA approvals, including the 510(k) process for medical devices, which is thought to have affected venture capitalists’ outlook,” said Tracy Lefteroff, global managing partner of the venture capital practice at PwC. “Until we get more clarity as to the regulatory pathway not only for medical devices, but also for drugs and other biotech products, venture capitalists are expected to be cautious with deals.”

**Figure 1: Life sciences funding compared with total venture funding**



1 The MoneyTree life sciences sector includes the biotechnology and medical device and equipment industries. *Biotechnology* is defined as “developers of technology promoting drug development, disease treatment, and a deeper understanding of living organisms; includes human, animal, and industrial biotechnology products and services. Also included are biosensors, biotechnology equipment, and pharmaceuticals.”

*Medical devices and equipment industries* are defined as those that “manufacture and/or sell medical instruments and devices including medical diagnostic equipment (X-ray, CAT scan, MRI), medical therapeutic devices (drug delivery, surgical instruments, pacemakers, artificial organs), and other health-related products such as medical monitoring equipment, handicap aids, reading glasses, and contact lenses.”

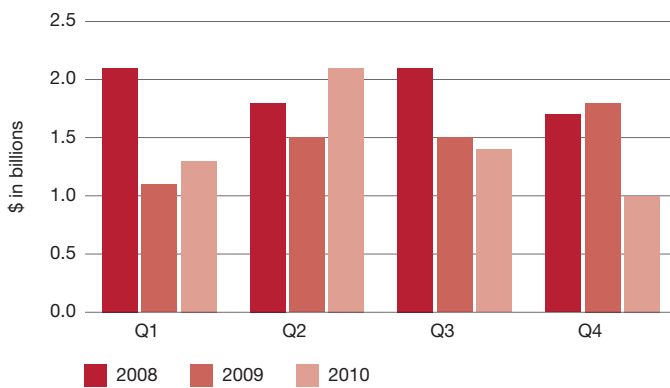
2 Thomson Reuters and NVCA news release, “Annual Venture Investment Increases for First Time Since 2007, According to the MoneyTree Report,” January 21, 2011.

### Life sciences funding by quarter

Compared with the fourth quarter of 2009, life sciences venture funding decreased 42 percent in the fourth quarter of 2010 to \$1.1 billion. This decline marked the largest year-over-year decrease since the first quarter of 2009 and the lowest level of funding for the sector since the first quarter of 2003.

The second quarter proved the strongest of 2010 for the life sciences sector. That upward movement didn't hold, as the third and fourth quarters dropped off steeply. Leteroff said that some of the fourth-quarter decline could be attributed to a seasonal slump during the holiday period. Addressing the second-quarter bump, he said, "Deals that had been on the table for some time during the economic recession came to fruition."

Figure 2: Life sciences funding trends by quarter 2008–2010

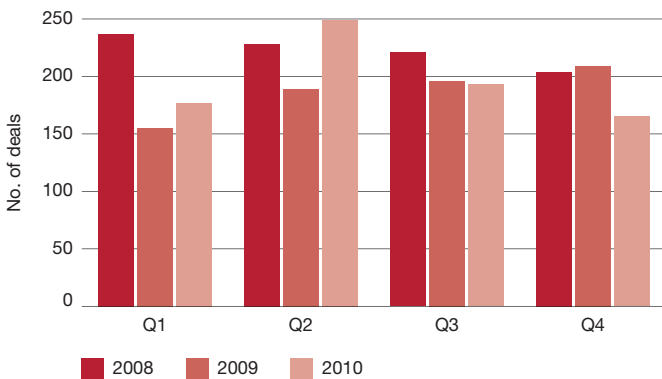


### Life sciences deal volume by quarter

Although deal volume was up 5 percent on an annual basis, for the fourth quarter, life sciences deal volume decreased by 21 percent to 165 when compared with the same quarter of 2009.

Compared with the third quarter of 2010, the number of early-stage deals fell 12 percent, and late-stage volume decreased 17 percent.

Figure 3: Life sciences deal volume by quarter 2008–2010



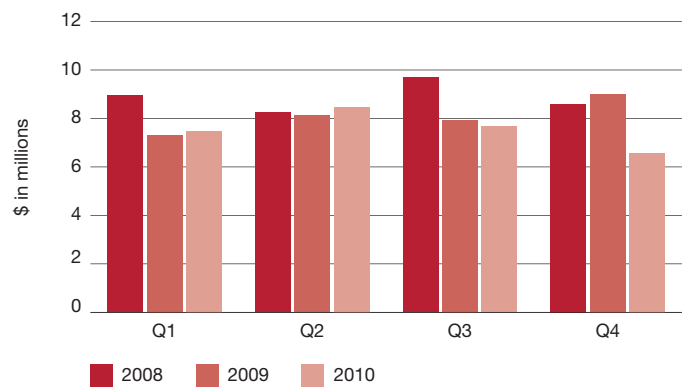
### Life sciences average deal size by quarter

Average deal size for the fourth quarter of 2010 decreased by 27 percent to \$6.58 million, compared with last year's fourth quarter. The biotechnology industry captured two of the top 10 venture capital deals for the fourth quarter of 2010. The larger of the two was a \$65 million later-stage deal for a nanometer-scale manufacturing company.

The largest deal of the quarter and the year went to the media and entertainment industry — a \$200 million investment in Twitter Inc.

Compared with the third quarter of 2010, the average early-stage life sciences deal size fell 3 percent; and late-stage declined 21 percent.

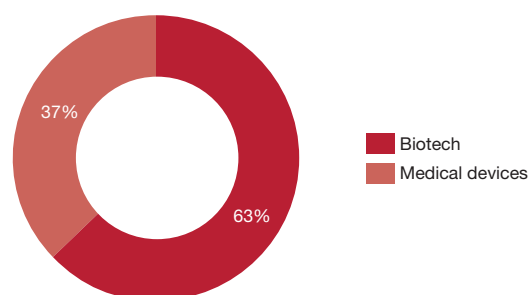
Figure 4: Life sciences average deal size by quarter 2008–2010



### Funding for biotechnology and medical devices

The life sciences sector's investment split has remained generally consistent over the past two years. During the fourth quarter of 2010, biotechnology accounted for 63 percent of funding, while medical devices claimed 37 percent. In comparison, during the fourth quarter of 2009, biotechnology captured 59 percent of investment in the sector; and medical devices, 41 percent.

Figure 5: Life sciences investment split for the fourth quarter of 2010

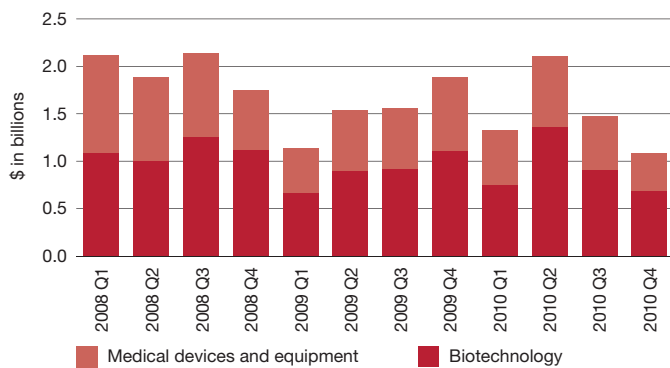


During the fourth quarter of 2010, biotechnology funding decreased 38 percent to \$685 million from the same quarter in 2009. The number of deals decreased 19 percent to 94 deals, compared with 116 deals during the fourth quarter of 2009.

Compared with 2009, biotechnology funding increased \$119 million in 2010, showing a 3 percent year-over-year rise.

The medical device industry witnessed a 48 percent reduction in funding in the fourth quarter of 2010 compared with the previous year. The number of deals declined 24 percent to 71 deals in the last quarter of 2010 compared with the same period in 2009. Overall in 2010, the medical device industry showed a decrease of 9 percent in dollars invested versus the previous year.

**Figure 6: Biotechnology and medical devices funding trends 2008–2010**



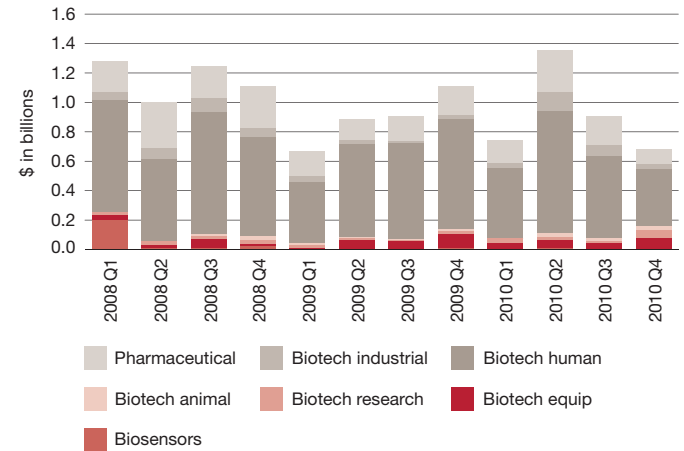
**Biotechnology funding by subsegment**

Compared with the same quarter of the previous year, biotech research, biotech industrial, and biotech animal funding increased by 177 percent, 35 percent, and 136 percent, respectively.

Four biotechnology subsegments decreased during the fourth quarter of 2010 compared with the previous year, as follows:

- Biotech human, 49 percent
- Biotech pharmaceutical, 45 percent
- Biotech equipment, 25 percent
- Biosensors, 46 percent

**Figure 7: Biotechnology funding by subsegment 2008–2010**

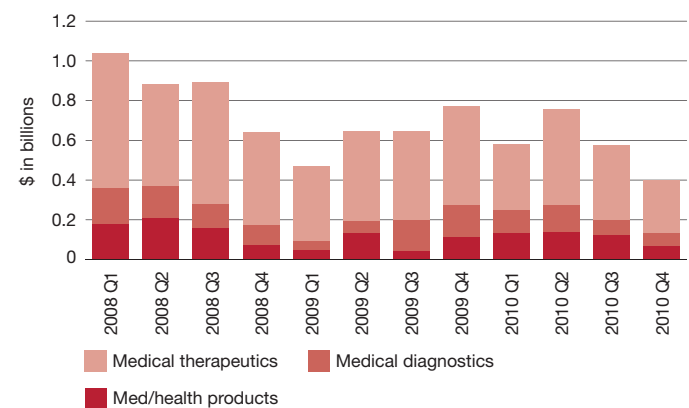


**Medical device funding by subsegment**

Funding for all medical device subsegments decreased during the fourth quarter of 2010 compared with the same quarter of 2009, as follows:

- Medical/health products, 37 percent
- Medical diagnostics, 63 percent
- Medical therapeutics, 46 percent

**Figure 8: Medical devices and equipment funding by subsegment 2008–2010**



### Life sciences funding by stage

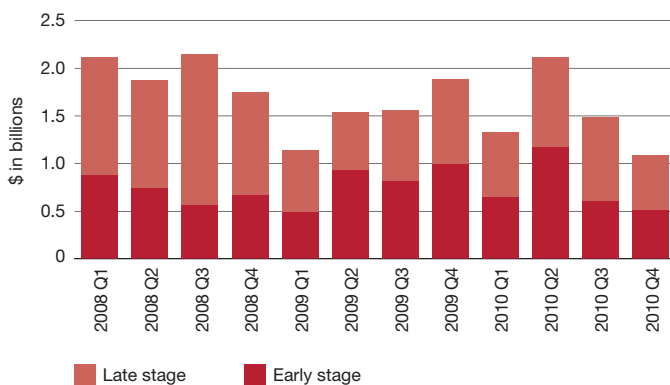
Compared with the same period a year ago, both early-stage and late-stage funding decreased for the fourth quarter of 2010. Early-stage funding decreased 49 percent to \$511 million, and late-stage funding decreased 35 percent to \$574 million.

Looking at quarterly funding sequentially shows that early-stage investment decreased 15 percent from the third quarter, and late stage funding declined 35 percent. On an annual basis, early-stage funding declined 9 percent, while late-stage funding increased 7 percent.

This decrease in year-over-year and quarter-over-quarter early-stage funding for the life sciences sector went against the overall venture funding trend, which showed an increase in earlier-stage investments.

Compared with the previous year, early-stage deal volume decreased 23 percent to 89 deals during the fourth quarter of 2010, with a smaller average deal size of \$5.7 million. Late-stage funding decreased as well by 18 percent to 76 deals, with a smaller average deal size of \$7.5 million.

Figure 9: Life sciences funding by stage 2008–2010



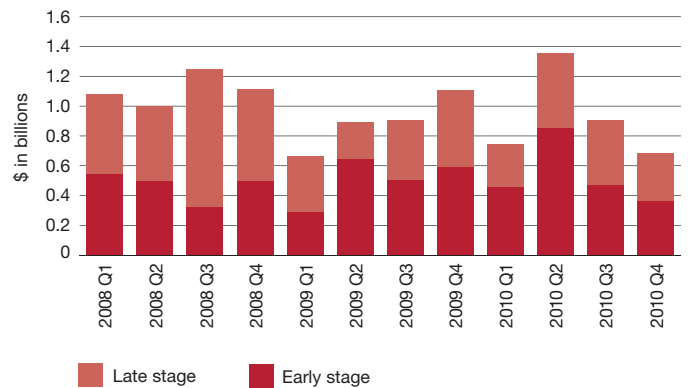
### Biotechnology funding by stage

For the biotechnology share of sector investment, early-stage funding declined by 38 percent from the fourth quarter of 2009 to \$364 million, while late-stage funding contracted by an equal percentage over the same period to \$321 million.

Compared to the third quarter of 2010, early-stage funding decreased by 22 percent, while late-stage funding declined by 26 percent.

On an annual basis, early-stage deals for the biotechnology industry rose 6 percent, while late-stage deals remained flat compared to 2009.

Figure 10: Biotechnology funding by stage 2008–2010



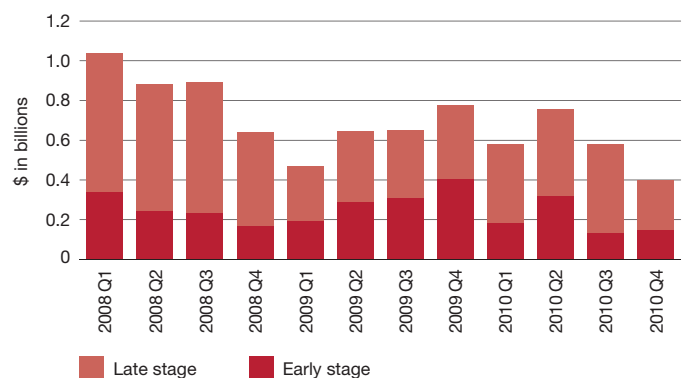
### Medical device funding by stage

For the medical device industry, early-stage funding dropped 63 percent to \$147 million in the fourth quarter of 2010 compared with the previous year, while late-stage funding decreased 32 percent to \$253 million over the same period.

Compared with the third quarter of 2010, early-stage funding increased by 10 percent, while late-stage funding declined by 43 percent.

On an annual basis, early-stage funding for the medical device industry declined 34 percent, but late-stage funding increased 14 percent.

Figure 11: Medical device funding by stage 2008–2010



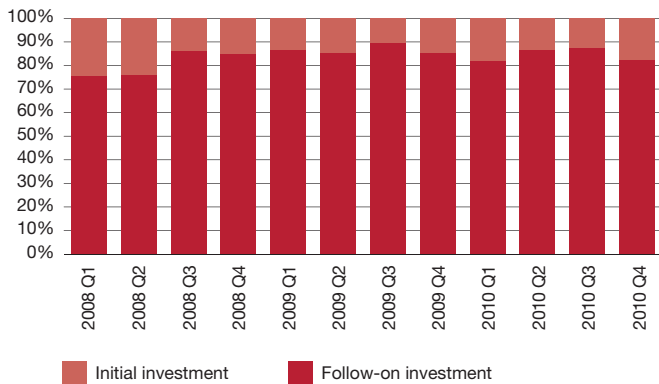
### First-time funding compared with follow-on funding

During the fourth quarter of 2010 in the life sciences sector, \$194 million went to initial investments, a decrease of 30 percent year over year. Follow-on funding decreased 44 percent to \$891 million during the same period.

First-time deals in the life sciences sector averaged \$5.1 million (an increase of 23 percent quarter over quarter) in 38 deals during the fourth quarter of 2010. This compared with an average deal size of \$7 million in 127 deals for follow-on funding.

Industries receiving the most dollars in first-time financings in 2010 were software, biotechnology, and industrial/energy. Industries with the most first-time deals in 2010 were software, biotechnology, and media/entertainment.

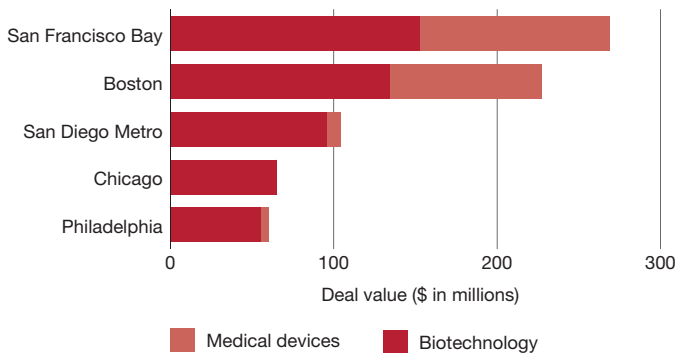
**Figure 12: Life sciences follow-on compared with initial investments 2008–2010**



**Regional funding trends**

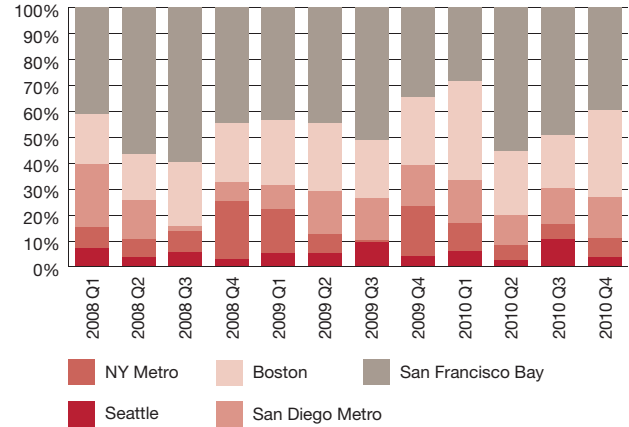
San Francisco Bay<sup>3</sup>, Boston, San Diego Metro, Chicago, and Philadelphia received the most life sciences venture capital dollars during the fourth quarter of 2010. San Francisco Bay received \$269 million, with \$153 million going into biotechnology.

**Figure 13: Top five metropolitan regions fourth quarter 2010**



Except for Chicago, funding for the top regions decreased on a year-over-year basis during the fourth quarter of 2010. San Francisco Bay received \$151 million less in venture capital funding than the same period of the previous year; but the region continued to outpace all others in funding dollars.

**Figure 14: Life sciences funding trends in top five regions 2008–2010**



**Exit activity**

“We’ve seen good liquidity for the life sciences sector during 2010, with some IPOs in the fall and a fair amount of M&A activity during the last six months,” Lefteroff said. “That uptick in exit activity could lead to an increase in earlier-stage investments going forward. As venture capitalists get liquid on some of their later-stage investments, they can recycle that money back into new investments. And an increase in exits also gives them additional time to take on new investments.”

Life sciences captured six of 32 US venture-backed IPOs for the fourth quarter of 2010. Three of those were biotechnology companies, and three were medical/health. The 32 IPOs for the quarter represented almost three times the number seen during the full year of 2009. Seventeen of the offerings were Chinese-based venture-backed companies.<sup>4</sup>

Two IPOs generating excitement for the life sciences sector during the fourth quarter were Pacific Biosciences at \$200 million and Complete Genomics at \$54 million. “These companies are working to reduce the cost of genomic sequencing, and are expected to help make it easier to move this pioneering field forward.”

A total of 88 M&A deals for the fourth quarter of 2010 represented a decrease from the third quarter but brought the number for the year to 420. This annual number was the largest for M&A exits since records began in 1985, outpacing the previous record of 380 in 2007.<sup>5</sup>

3 San Francisco Bay area includes SF/Berkeley and San Jose.

4 Thomson Reuters and NVCA news release, “Venture-backed Acquisitions Break All-time Annual Record; Driven by Chinese Companies, Number of IPOs at Highest Quarterly Level since 2000,” January 3, 2011.

5 Ibid.

Of the 88 M&A exits for the quarter, 10 were life sciences deals. Three of those were biotechnology deals, and seven were medical/health.<sup>6</sup>

### **Venture capital outlook**

Despite the tumble taken by the life sciences sector during the latter half of 2010, the outlook for overall venture capital investment during 2011 already is trending toward the upside.

“As expected, we saw the total venture capital investment level in 2010 surpass that of 2009,” Lefteroff said. Looking across all industries, nearly 30 percent more new companies received venture capital for the first time in 2010 than in 2009. “This bodes well for 2011 as venture capitalists continue to support these new investments as they grow and expand their businesses.”<sup>7</sup>

### **Fundraising**

The backbone of venture capital investment, fundraising, trended downward last year. With 157 venture capital funds raising \$12.3 billion, 2010 marked the fourth consecutive year of declines and the slowest annual period for venture capital fundraising since 2003.<sup>8</sup>

NVCA President Mark Heeson pointed out, however, that the most innovative and efficient companies will continue to receive funding from the venture community. “When it comes to venture capital returns, history has shown that often, ‘less is more,’” he said. Heeson added that better performance from established and recently raised funds can be expected this year if the exit market continues to improve, creating opportunity “at a time when valuations are more reasonable.”<sup>9</sup>

Venture capitalists appear to be optimistic about opportunities within life sciences. “With Big Pharma expected to turn more often to venture-backed biotech companies for products to add to their shrinking R&D pipelines, exit opportunities should continue to increase,” Lefteroff said. “Stepped-up interest in electronic medical records, mobile health, and personalized medicine also could drive investment in life sciences.”

### **About PwCs’ Pharmaceutical and Life Sciences Industry Group**

PwC’s Pharmaceutical and Life Sciences Industry Group ([pwc.com/us/pharma](http://pwc.com/us/pharma) and [pwc.com/us/medtech](http://pwc.com/us/medtech)) is dedicated to delivering effective solutions to the complex strategic, operational, and financial challenges facing pharmaceutical, biotechnology, and medical device companies. The firm provides industry-focused assurance, tax, and advisory services to build public trust and enhance value for its clients and their stakeholders. More than 161,000 people in 154 countries in firms across the PwC network share their thinking, experience and solutions to develop fresh perspectives and practical advice.

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6 Ibid.

7 Ibid.

8 Thomson Reuters and NVCA news release, “Venture Capital Fundraising Declines Further in 2010,” January 17, 2011.

9 Ibid.

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