

Biotech soars to record high

Investment in biotechnology was the highest since the start of the MoneyTree data series in 1995. Biotech and medical devices industries both see year-over-year double-digit growth in investments.

August 2014



US venture capital funding for the life sciences sector¹, which includes biotechnology and medical devices, increased 25% by value, but declined 1% by volume, on a year-over-year basis during the second quarter of 2014. These stats are according to the MoneyTree™ report from PricewaterhouseCoopers LLP (PwC) and the National Venture Capital Association (NVCA), based on data provided by Thomson Reuters. During the quarter, venture capitalists invested \$2.5 billion in 195 life sciences deals.

Growth in overall venture funding increased year over year, with \$13 billion in 1,114 deals in the second quarter, an increase of 81% in value and 11% in the number of deals year over year. In addition, the quarter-over-quarter trend was positive, with dollar amount invested increasing by 34% and number of deals increasing by 13%.

Life sciences venture capital investment

Venture capitalists (VCs) invested \$2.5 billion in 195 life sciences deals during the second quarter of 2014, compared with \$2.0 billion in 197 deals during the same period in 2013. Life sciences investment during the quarter was the highest since the second quarter of 2007, and also the strongest second quarter for life sciences since 1995, when the data series started.

However, life sciences' share of total venture funding was 19% during the second quarter of 2014, compared with 28% in the second quarter of 2013.

The biotechnology industry raised \$1.84 billion in 122 deals during the second quarter, which was second (behind software) in terms of dollars raised, which drove \$6 billion in 454 deals.

VC investments in biotechnology benefited from a couple of large biotechnology deals—Intarcia Therapeutics' \$200 million and Proteus Digital Health's \$119.5 million. However, even after excluding those large deals, biotechnology still took a nearly 40% jump in investment dollars over the prior quarter.

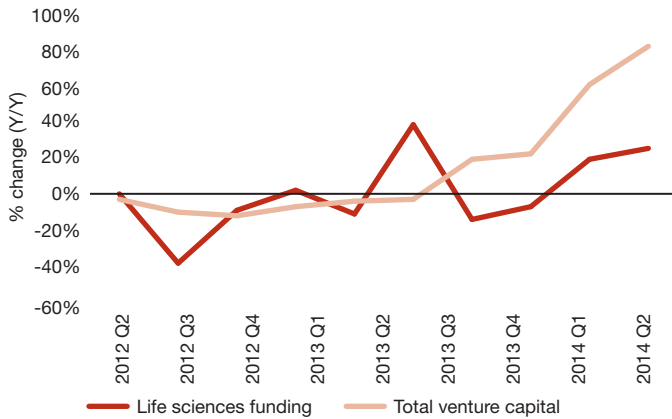
"The industry's stellar fundraising quarter is due to a virtuous cycle for biotechs," said Greg Vlahos, life sciences partner at PwC. "The IPO boom has provided VCs with some very real exit opportunities, and the public markets' warm reception to drug developers has pushed M&A valuations skyward. Combined, those factors have created significant liquidity for investors, allowing VCs to quickly gather new funds and back more companies."

The medical device industry received \$649 million in 73 deals in the second quarter of 2014. This was an increase of 23% in dollars, but a decrease of 5% in deal volume, compared with the same quarter last year.

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."

Figure 1: Life sciences funding compared with total venture funding 2012–Q2 2014



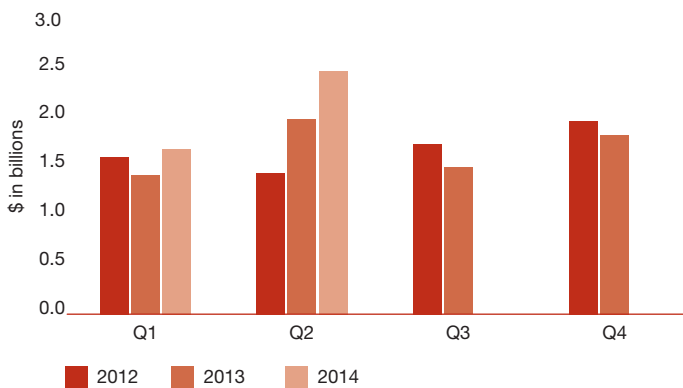
Life sciences funding by quarter

Life sciences investment jumped to \$2.5 billion in the second quarter of 2014, an increase of 47% compared with the first quarter of 2014, during which \$1.7 billion was invested.

On a year-over-year basis, biotechnology and medical device investments increased by 25% and 23%, respectively, in dollar terms.

On a quarter-over-quarter basis, funding jumped by 69% for biotechnology and 8% for medical devices.

Figure 2: Life sciences funding trends by quarter 2012–Q2 2014



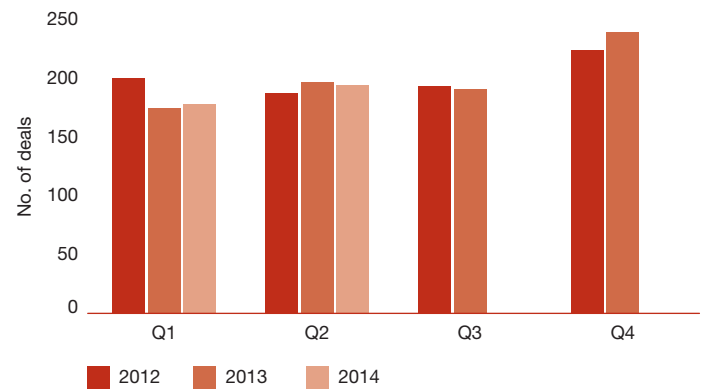
Life sciences deal volume by quarter

With 195 life sciences deals for the second quarter of 2014, deal volume declined by 1% year over year, but increased 9% quarter over quarter.

Biotechnology led with 122 deals in the second quarter of 2014, compared with 120 during the same period last year and 114 during the first quarter of 2014.

During the second quarter, the medical device industry completed 73 deals, down from 77 during the same period of 2013 but up from 65 during the first quarter of 2014.

Figure 3: Life sciences deal volume by quarter 2012–Q2 2014

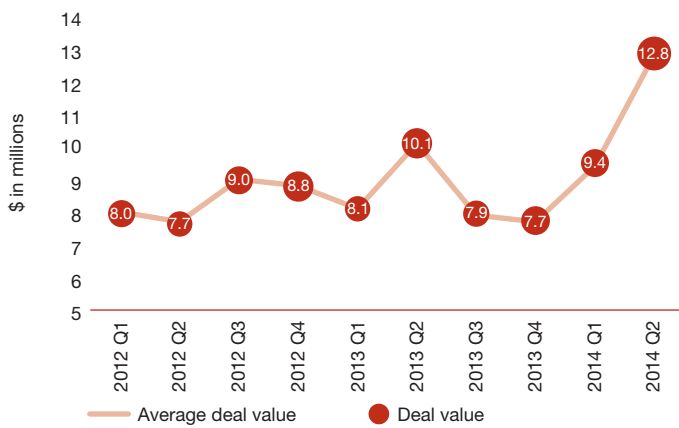


Life sciences average deal size by quarter

The average deal size for life sciences was \$12.8 million for the second quarter of 2014, an increase of 26% year over year and 35% quarter over quarter.

The biotech industry captured two of the top 10 deals of the second quarter of 2014. These two deals together accounted for \$320 million.

Figure 4: Life sciences average deal size by quarter 2012–Q2 2014



Funding for biotechnology and medical devices

Biotechnology captured 74% of total life sciences investment during the second quarter of 2014. This share ranks equal to the same period last year, but higher than 64% for the first quarter of 2014.

Figure 5: Life sciences investment split for the second quarter of 2014

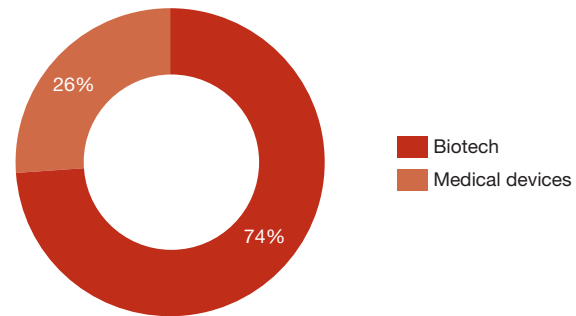
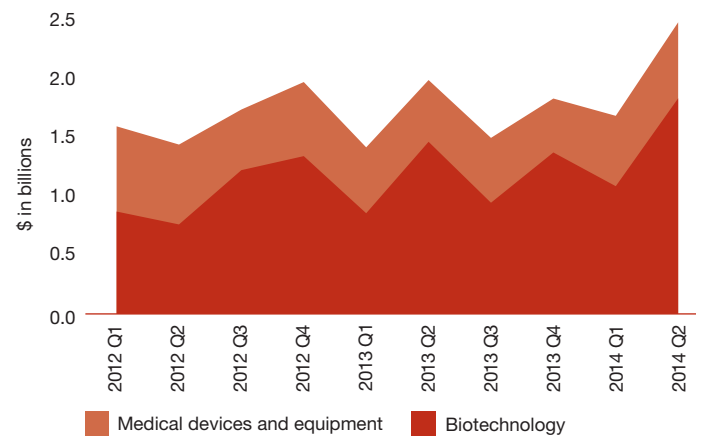


Figure 6: Biotechnology and medical devices funding trends 2012–Q2 2014



Biotechnology funding by subsegments

Of the \$1.84 billion investment in biotechnology during the second quarter of 2014, the biotech-human subsegment captured the largest share of funding at \$1.4 billion.

Biotech-human subsegment funding increased 36% compared with the same period last year and 54% compared with the first quarter of 2014.

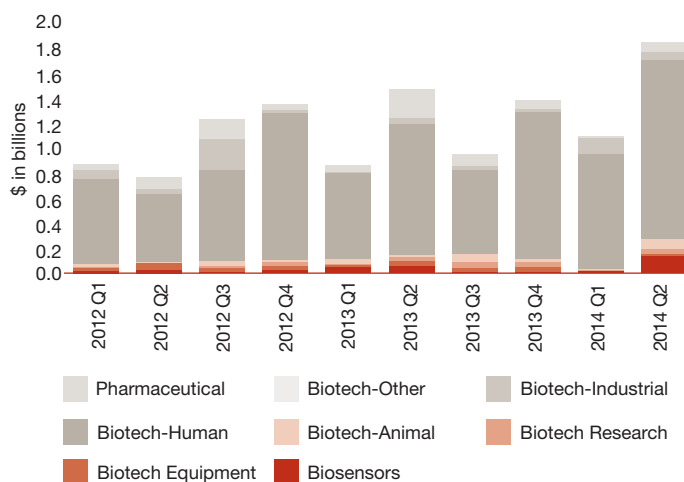
When compared with the second quarter of 2013, four subsegments increased during the second quarter of 2014:

- Biotech-animal, +810% to \$80 million
- Biosensors, +154% to \$132 million
- Biotech-industrial, +50% to \$68 million
- Biotech-human, +36% to \$1,426 million

Biotechnology subsegments, which received less funding in the second quarter of 2014 compared with the same period in 2013, were:

- Pharmaceutical, -67% to \$77 million
- Biotech equipment, -47% to \$21 million
- Biotech research, -9% to \$36 million

Figure 7: Biotechnology funding by subsegments 2012–Q2 2014



“Advanced biotechnology areas, like biosensors for diagnostics, and biotech human–therapeutic biotechnology/stem cells, attracted record high investments during the quarter,” said PwC’s Greg Vlahos. Innovations in these areas have reached a stage where the probability of market success is higher than ever. The biotechnology industry, with many novel technology areas like these, will continue to attract strong VC investments in the near future.”

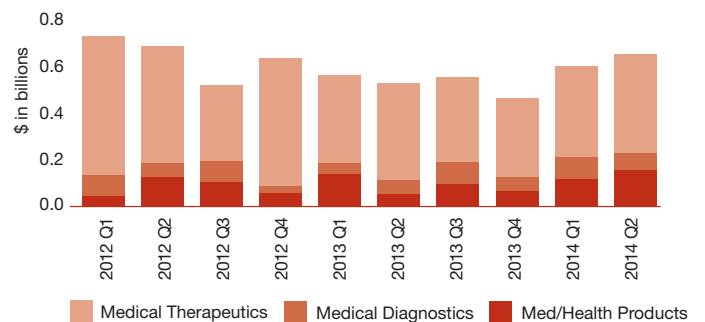
Medical device funding by subsegments

The medical therapeutics subsegment, with a funding of \$421 million, attracted the most funding in the medical device industry during the second quarter of 2014. The amount represented an increase of 2% from the same period last year and 8% from the first quarter of 2014.

Funding for all the medical device subsegments increased during the second quarter of 2014 when compared with the same period of 2013.

- Medical/health products, +199% to \$156 million
- Medical diagnostics, +15% to \$71 million
- Medical therapeutics, +2% to \$421 million

Figure 8: Medical devices and equipment funding by subsegments 2012–Q2 2014



Life sciences funding by stages

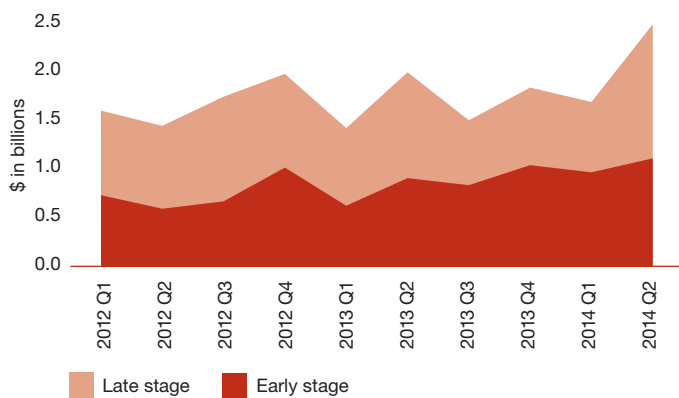
Early-stage funding was at \$1,110 million in 100 deals, accounting for 45% of total life sciences funding for the second quarter of 2014. Early-stage funding increased 22% year over year and 15% quarter over quarter.

Late-stage funding for the second quarter of 2014 was at \$1,378 million in 95 deals, accounting for 55% of life sciences investment during the quarter. Late-stage funding increased 27% year over year and 90% quarter over quarter.

The increase in dollars invested in the life sciences sector in the second quarter of 2014 can be attributed partially to two large late-stage deals totaling around \$320 million.

“Average deal size for life sciences was the largest in nearly two decades,” said PwC’s Greg Vlahos. “Moreover, average deal size for early-stage deals was at a record high for both life sciences and biotechnology. Strong long-term potential of biotech ventures has led VCs to make these large early-stage investments. Also, the increased competition for deals in recent quarters is driving larger early-stage deals.”

Figure 9: Life sciences funding by stages 2012–Q2 2014



Biotechnology funding by stages

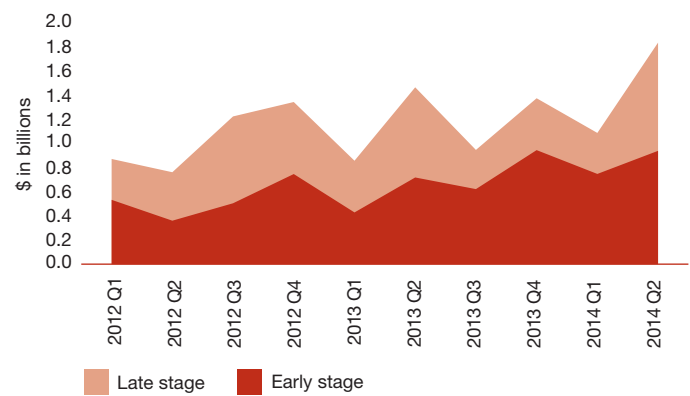
Early-stage biotechnology funding in the second quarter of 2014 rose 31% to \$941 million in 76 deals, compared with \$720 million in 74 deals for the same period last year.

Late-stage funding for biotechnology in the second quarter of 2014 rose by 20% to \$899 million in 46 deals, from \$749 million in 46 deals during the same period in 2013.

On a quarter-over-quarter basis, biotechnology funding increased significantly for both stages—early-stage funding rose by 26% and late-stage by a whopping 164%.

Average deal size for early-stage biotech transactions was at \$12.4 million, compared with \$19.5 million for late-stage deals.

Figure 10: Biotechnology funding by stages 2012–Q2 2014



Medical device funding by stages

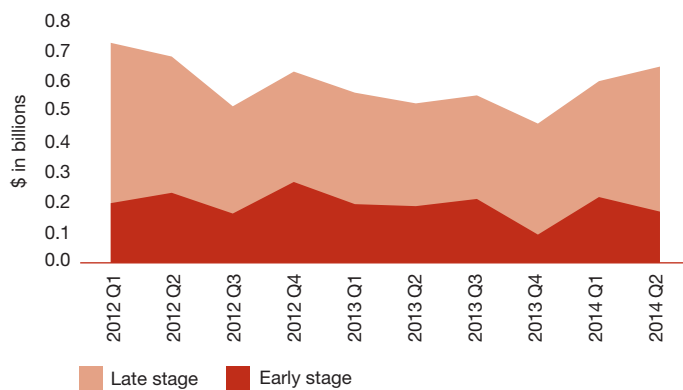
Early-stage medical device funding in the second quarter of 2014 decreased 10% to \$169 million in 24 deals, compared with \$187 million in 38 deals for the same period of 2013.

Late-stage funding for medical devices increased 41% to \$479 million in 49 deals during the second quarter of 2014, from \$340 million in 39 deals during the same period last year.

Medical device funding, on a quarter-over-quarter basis, decreased 22% for early-stage deals but increased 25% for late-stage deals.

Average deal size for early-stage medical device transactions was \$7.1 million, compared with \$9.8 million for late-stage medical device deals, in the second quarter of 2014.

Figure 11: Medical device funding by stages 2012–Q2 2014



First-time funding compared with follow-on funding

During the second quarter of 2014, first-time funding for the life sciences sector decreased 20% to \$267 million, and the number of deals decreased 18% to 32 deals, when compared with the same period last year.

On the other hand, follow-on funding for the life sciences sector increased 34% to \$2,221 million and the number of deals increased 3% to 163 deals, during the second quarter of 2014, when compared to the same period of last year.

Quarter over quarter, both first-time funding and follow-on funding registered an increase of 3% and 55%, respectively.

“Follow-on funding for biotechnology was the highest since 1995,” said PwC’s Greg Vlahos. High growth potential of the industry has increased the confidence of VCs in their current investments, resulting in the high level of follow-on investments and portends well for the industry.”

Figure 12: Life sciences follow-on compared with initial investments 2012–Q2 2014

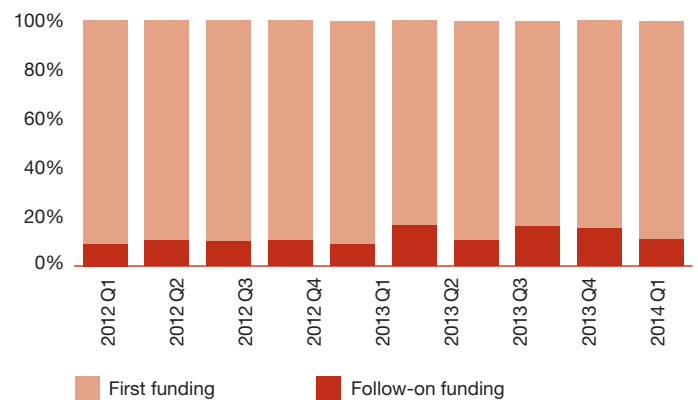


Table 1: Life sciences investments 2014 second-quarter growth factors (Y/Y growth)

	% change in deal volume	% change in avg deal size	% change in investments
First-time	-18%	-2%	-20%
Follow-on	+3%	+29%	+34%

Regional funding trends

San Francisco Bay Area², Boston, San Diego Metro, New York Metro, and Great Lakes received the most life sciences venture capital dollars during the second quarter of 2014.

The leader, San Francisco Bay Area, received \$866 million, with \$632 million allocated for biotechnology and the remaining \$234 million going to medical devices.

San Francisco Bay Area closed 54 deals during the second quarter of 2014, with an average deal size of \$16 million.

“The largest life sciences deal of the quarter—the \$200 million investment in Boston-based biotechnology Intarcia Therapeutics—is the single largest deal for Boston across all industries in almost 20 years,” said Vlahos. This is a reflection of Boston’s position as a center for biotechnology innovation. Boston-based companies will play an increasingly important role in the life sciences industry and will continue to attract top VC dollars.”

Figure 14: Life sciences funding trends in top five regions, 2012–Q2 2014

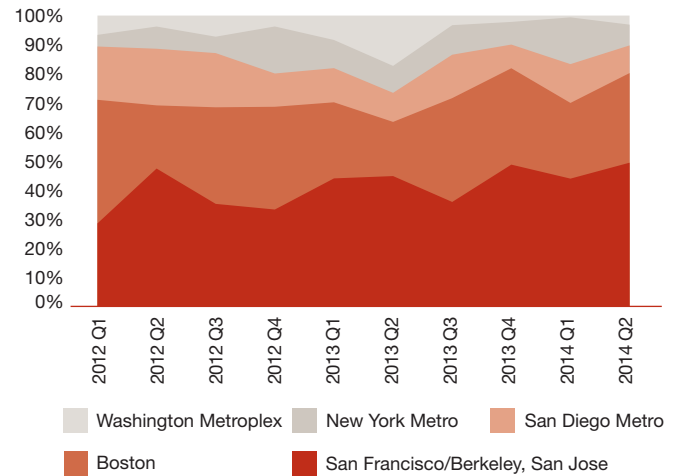
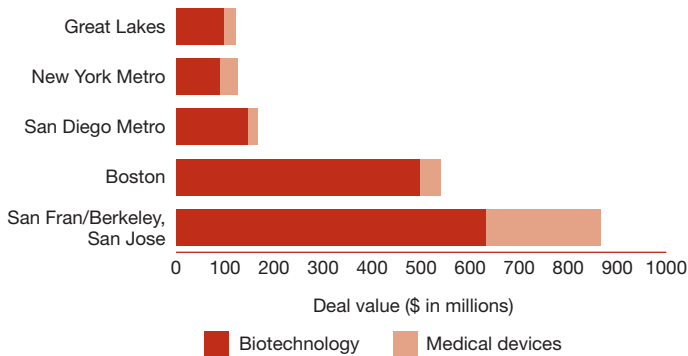


Figure 13: Top five metropolitan regions, Q2 2014



² San Francisco Bay Area includes SF/Berkeley and San Jose.

Venture capital outlook

In the second quarter of 2014, venture capitalists invested \$13 billion in 1,114 deals, the highest quarterly total since the first quarter of 2001.

“With almost \$3 billion already invested in biotechnology in the first half of the year—only the second time this has happened in the last 20 years—2014 is expected to be one of the strongest years for biotechnology investments,” said Vlahos. “Continued strength in the IPO market in the coming quarters will further strengthen this investment trend.”

However, the share of life sciences venture funding in the total venture funding decreased to 19% in the second quarter of 2014, from 28% in the second quarter of 2013. Greg Vlahos, Life Sciences partner at PwC, explained, “The VC dollars are flowing relatively more toward industries that require shorter investment duration and are capital-light.”

The technology sector accounted for more than half of the total investment during the quarter. The \$1.2 billion expansion stage investment in a transportation software company is the largest deal of the quarter as well as the single largest quarterly investment recorded since 1995.

“Investments going into companies with disruptive technologies remained strong in the second quarter, and VC investing is on pace to exceed the \$30 billion invested in 2013,” said Mark McCaffrey, global software leader and technology partner at PwC. “When we step back, we not only see technology as a megatrend impacting the way we live, but it’s also disrupting entire industries by bringing the suppliers even closer to consumers. And, as the value of this technology is undeniable, we see VCs as well as non-traditional investors pursuing these deals more aggressively, resulting in higher valuations and larger capital investments. We’re also seeing a shift in the risk profile, from the risk of adoption of the technology to the risk in investing in a segment where companies are fiercely battling for market share and the market leader is yet to be determined.”

“With the various stock indices continuing to reach new heights, the environment for IPOs remains quite favorable—welcome news for venture-backed companies that have been waiting for the opportunity to go public for several years now,” said Bobby Franklin, President and CEO of the National Venture Capital Association (NVCA). “Led by the biotechnology sector, life sciences companies appear to be the primary beneficiaries from the favorable IPO environment, with more than half of the offerings during the quarter coming from life sciences companies, marking the fifth consecutive quarter for double-digit listings. It’s good to see continued investor interest in venture-backed companies, especially with there being such a backlog of great companies wanting to go public.”

There were 28 venture-backed IPOs valued at \$4.9 billion during the second quarter of 2014, led by the biotechnology sector. Of those, 16 IPOs amounting to \$1.2 billion and representing over half of the total number of offerings were from life sciences. All of the 12 biotechnology IPOs from this quarter were listed on the NASDAQ stock exchange.

A total of 97 venture-backed M&A deals were reported for the second quarter of 2014, 33 of which had an aggregate deal value of \$3.3 billion. Life science sector venture-backed M&A closed 11 deals during the quarter.

“Not since the early 2000s have we witnessed this level of quarterly investment activity,” said the NVCA’s Bobby Franklin. “Despite being more than \$15 billion below the peak, you can’t ignore the historical significance of venture investment during the second quarter. Before alarmists declare a repeat of the dot-com bubble, it’s important to keep in mind that a lot of this activity was driven by a handful of eye-popping investment rounds, including a record-setting funding round of \$1.2 billion. Additionally, we hear anecdotally from members about the emergence of new investors in the innovation economy, including the rise of hedge funds, mutual funds, and other non-traditional investors making direct investments into presumably pre-IPO companies.”

About PwC's Pharmaceutical and Life Sciences Industry group

PwC's Pharmaceutical and Life Sciences Industry group (www.pwc.com/us/pharma and www.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. We provide industry-focused assurance, tax, and advisory services to build public trust and enhance value for our clients and their stakeholders. More than 184,000 people in 157 countries across our global network of firms share their thinking, experience, and solutions to develop fresh perspectives and practical advice.

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