

Amyloid Out or Combo?

Tau Gains Popularity as Alzheimer's Drug Target

By Brian Orelli

BioWorld Insight Contributing Writer

Just as multiple drugs targeting amyloid-beta are set to read out Phase III results, a new Alzheimer's disease target, tau, is gaining popularity.

Last month, Genentech Inc., a member of the Roche group, took a bite of the tau apple, licensing AC Immune SA's program of preclinical antibodies targeting tau, highlighting the growing interest in using tau as a target for treating Alzheimer's disease. (See *BioWorld Today*, June 19, 2012.)

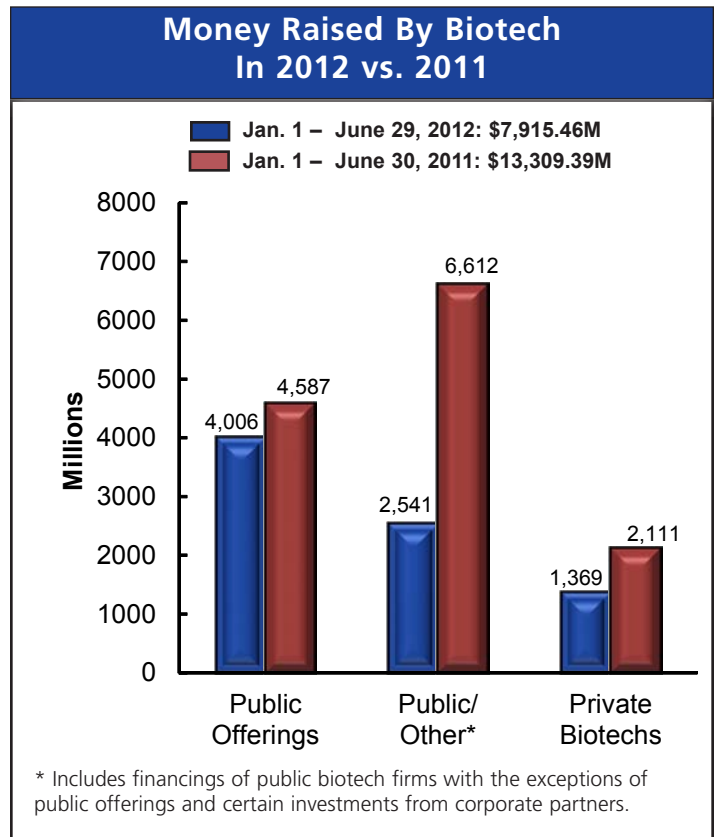
James Sabry, vice president of partnering at Genentech, said that the company had been watching the tau program for "many years," having worked with AC Immune on its beta-amyloid-targeting antibody crenezumab. The deal was struck now because the program had progressed scientifically and because "key data from the academic world outlined a potential mechanism for how an antibody against tau could work in the treatment of Alzheimer's," Sabry said.

There's actually more scientific reason to go after tau as a target than amyloid-beta. "There's poor correlation between amyloid plaques and cognitive function. Tau tangles and cognitive function are more correlated," Howard Fillit, founding executive director of the Alzheimer's Drug Discovery Foundation (ADDF), told *BioWorld Insight*.

Falling Tau and Tangles

"Calling them anti-tau drugs is a bit of a misnomer because there's a spectrum of agents that are really neuro-protective," Fillit said.

Tau binds to the microtubules that extend from the nucleus to the synapse in neurons and stabilizes them. When tau becomes hyperphosphorylated it falls off the



microtubules, a normal regulatory process that provides plasticity for the neuron. But if too much phosphorylation occurs, the whole microtubule cable starts falling apart. When tau falls off of the microtubules, it's prone to misfolding that can cause tangles, which might then promote the death of nearby neurons.

Companies have tried developing kinase inhibitors to stop cyclin-dependent kinase 5 (CDK5) from phosphorylating

See Tau, page 4

| | | |
|--|---|--------|
| <p>THIS WEEK IN BIO WORLD INSIGHT</p> | OTHER CLOUDS FORMING BEHIND SUPREME COURT RULING..... | 2 |
| | KEY INGREDIENTS COUNTRIES NEED TO BECOME A BIOTECH POWERHOUSE ... | 3 |
| | MONEY RAISED BY BIOTECH IN 2012 | 4 |
| | WEEK IN REVIEW | 5 |
| | WORD ON THE STREET, WEEK IN WASHINGTON..... | 6 |
| | PUBLIC OFFERINGS OF BIOTECH COMPANIES: JUNE 2012 | 7 |
| | OTHER FINANCINGS OF PUBLIC BIOTECH COMPANIES..... | 10 |
| | VENTURE CAPITAL FINANCINGS, MILESTONE PAYMENTS | 12, 14 |

Other Clouds Forming Behind Supreme Court Ruling

By **Mari Serebrov**
Washington Editor

In determining that the Affordable Care Act (ACA) was constitutional, the Supreme Court last week blew away a cloud of uncertainty that has been hanging over the biopharma industry for the past two years. But other clouds are gathering.

The decision brought blue skies to the health care industry, maintained Jerry Isaacson, head of GlobalData's Healthcare Industry Dynamics analyst team. "A huge influx of people who did not previously have access to health care . . . are sure to require doctor visits and will take more drugs than they otherwise would have," he said.

But Paul Keckley, executive director of the Deloitte Center for Health Solutions, said the influx of new patients won't begin to cover the costs industry will incur as a result of the ACA. When industry was negotiating health reform with the administration, it knew it was giving up more than it would get in return, he told *BioWorld Insight*.

The idea behind the ACA's individual mandate that requires individuals to purchase health insurance, beginning in 2014, or pay a penalty was to increase revenue and decrease bad debt for all sectors of the health care system.

Will the law do that? "No one knows," Keckley said. "That's the intellectually honest answer." And it's based on Deloitte running various scenario-based models every six months since the passage of the bill.

The foginess stems from the fact that health care costs have grown slower than anyone had expected. Subsequently, no one knows any more today about the outcomes than they did when the ACA was signed into law March 23, 2010, Keckley said.

As it stands, biopharma's share of the costs of the ACA will far outweigh the expected increase in brand drug sales. Under the health care law, makers of brand drugs could lose \$155 billion over the next decade due to higher

Part D discounts, increased Medicaid rebates, taxes and competition from biosimilars, according to a report from the PwC Health Research Institute.

Meanwhile, the increased demand from having another 16 million people with medical coverage is expected to be pretty modest—about \$15 billion in new revenue over the next 10 years. But there's no guarantee all those people will seek coverage or that every state will opt in to the expanded Medicaid program that extends government health benefits to people at 133 percent of the federal poverty level.

"Drugmakers with biologics-heavy portfolios may experience disproportionately negative impacts because of the introduction of biosimilars."

— PwC Health Research Institute report

The expected impact of the ACA will depend on a drug company's portfolio and customer base. "Drugmakers with biologics-heavy portfolios may experience disproportionately negative impacts because of the introduction of biosimilars" allowed under the ACA, the report said.

It noted that 126 biosimilars already were in development in 2011, even though the FDA had yet to pave the new regulatory path. (See *BioWorld Today*, Feb. 6, 2012, and Feb. 10, 2012.)

Large pharma companies with diverse portfolios stand to lose the equivalent of about 5 percent of their U.S. sales, according to the report, and medium-sized companies with low sales to government health care programs would lose about 1 percent. The winners are large generics companies,

See Ruling, page 5

BioWorld is now on Twitter!

Stay Connected, Follow Us on Twitter!

www.twitter.com/bioworld

BioWORLD® INSIGHT (ISSN 1541-0579) is published every Monday by AHC Media, 3525 Piedmont Road, Building Six, Suite 400, Atlanta, GA 30305. Opinions expressed are not necessarily those of this publication. Mention of products or services does not constitute endorsement. BioWORLD® and BioWORLD® INSIGHT are trademarks of AHC Media, a division of Thompson Media Group LLC. Copyright © 2012 AHC Media. All Rights Reserved. No part of this publication may be reproduced without the written consent of AHC Media. (GST Registration Number R128870672)

ATLANTA NEWSROOM: Executive Editor: **Lynn Yoffee**.
Managing Editor: **Jennifer Boggs**.
Editor: **Peter Winter**.
Database Editor: **Karen Pihl-Carey**.

BUSINESS OFFICE: Senior Vice President/Group Publisher: **Donald R. Johnston**.
Senior Editor: **Michael Harris**.
Managing Editor: **Amanda Lanier**.
Director of Product Management: **Jane Cazzorla**.
Product Marketing Manager: **Sarah Cross**.
Account Representatives: **Matt Hartzog, Chris Wiley**.

DISPLAY ADVERTISING: For ad rates and information, please call **Stephen Vance** at (404) 262-5511, or e-mail him at stephen.vance@ahcmedia.com.

REPRINTS: For photocopy rights or reprints, call our reprints department at (404) 262-5547.

PRESS MATERIALS: Send all press releases and related information to newsdesk@bioworld.com.

SUBSCRIBER INFORMATION

Please call **(800) 888-3912** to subscribe or if you have fax transmission problems. Outside U.S. and Canada, call **(404) 262-5476**. Our customer service hours are 8:30 a.m. to 6:00 p.m. EST.

EDITORIAL

Lynn Yoffee: **(404) 262-5408**
Peter Winter: **204-269-0660**
Donald R. Johnston: **(404) 262-5439**
Internet: <http://www.bioworld.com>



Key Ingredients Countries Need To Become a Biotech Powerhouse

By Peter Winter
Editor

There is no doubt that the biotechnology industry is now truly global. Approximately one-third of the delegates at the recent BIO 2012 International Convention in Boston came from countries outside of the U.S. A stroll through the convention's exhibition floor provided further evidence to the fact that emerging countries are placing their strategic bets on biotechnology to boost their economies.

At the head of the pack have been the BRIC countries – Brazil, Russia, India and China – and the pharmaceutical industry has certainly been increasing its presence in these markets for several years now.

For example, in its 2012-2014 mid-range plan, Takeda Pharmaceutical Co. Ltd. revealed its goal of expanding into emerging markets. As part of that strategy it made a move in Brazil with the acquisition of Multilab Industria e Comercio de Produtos Farmaceuticos Ltda. for BRL500 million (US\$249.9 million) up front and up to BRL40 million in future milestones. (See *BioWorld Today*, May 29, 2012.)

Latin America also is developing into an important geographic focus for drug companies. Through acquisitions and strategic partnerships, companies are positioning themselves to grab a slice of this expanding market.

By 2015, Deutsche Bank estimates Latin America will have four of the top 20 pharmaceutical markets. Most countries in the region are expected to grow their pharmaceutical markets by more than 10 percent annually from 2011 to 2015 compared to less than 3 percent for the U.S. and 1 percent to 4 percent for Western Europe. (See *BioWorld Insight*, June 4, 2012.)

According to Robert Bradway, Amgen's president and chief operating officer, one of his biggest priorities for the company going forward is to expand internationally, particularly into countries where it does not currently have a presence. Amgen's acquisition of Istanbul, Turkey-based Mustafa Nevzat Pharmaceuticals (MN), reflects this ambition. On his "to do" list is to establish a company presence in Brazil, Russia, China, South Korea, Mexico and Japan. (See *BioWorld Today*, April 26, 2012.)

With nations throughout the world setting and executing policies for biotechnology development, and taking advantage of this inward investment by pharmaceutical and biotechnology companies, is this the best formula for success?

To make it on the international stage and lever national biotech innovation for significant economic development it will take far more than offering favorable tax breaks to attract inward investment, and building science parks close to universities and hospitals.

It will take a wide range of parameters all working synergistically to impact a country's overall success in biotechnology, Yali Friedman told *BioWorld Insight*.

For the past four years Friedman has been the lead editorial consultant for the Worldview Bio-Innovation Scorecard survey conducted by the *Scientific American* magazine. The Scorecard has been tracking a number of metrics including work force, education, R&D base and intellectual property protection that play a pivotal role in providing the kind of supportive environment in order for biotech to thrive and become self-sustaining in a country.

The list of countries included in the Scorecard is getting longer every year reflecting just how quickly the biotech industry is growing throughout the world, Friedman said.

In addition to five fundamental categories: IP, enterprise support, intensity, education/workforce and foundations that the Scorecard uses to rank countries, the 2012 survey added a sixth category, policy and stability that explored a government's power to implement laws that impact on the development of their biotech industry. Each of these categories, apart from IP, consists of several sub-categories. For example, foundations, the scorecard describes, arises from five sub-categories, which measure the overall money spent on biotechnology R&D, the biotechnology industry's spending on R&D, the government's financial contribution to supporting R&D, the quality of a country's infrastructure, and a country's environment for entrepreneurship.

Friedman said that contrary to conventional wisdom that the BRIC regions will continue to grow, each of these countries finished in the bottom half of the rankings because they scored poorly in such categories Enterprise Support and Policy and Stability.

See Countries, page 6

BioWorld Today Webinar

Patenting Personalized Medicine After Prometheus

**Presented By Courtenay Brinckerhoff,
Partner, Foley & Lardner LLP**

ATLANTA – The Supreme Court recently held that the personalized medicine methods claimed in the Prometheus patent were not eligible for patenting and asked the Federal Circuit to reconsider whether Myriad's isolated DNA claims violate the same statute of the U.S. Patent Act (35 USC § 101).

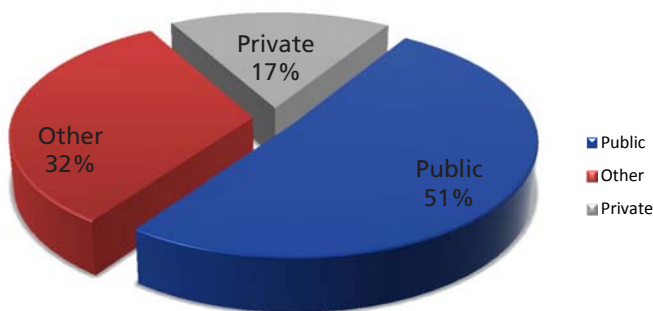
How can personalized medicine and biotechnology companies protect their inventions?

Join us July 17 at 2 p.m. for a 90-minute interactive webinar to gain a deeper understanding of the recent developments in the patent-eligibility of personalized medicine and biotechnology inventions.

For more information or to register, go to:

www.bioworld.com/content/patenting-personalized-medicine-after-prometheus
or call 1-800-477-6307.

Money Raised By Biotech: Jan. 1 - June 29, 2012



| | |
|------------------|----------------|
| Public Offerings | 51% (\$4,006M) |
| Public/Other | 32% (\$2,541M) |
| Private Biotechs | 17% (\$1,369M) |

Tau

Continued from page 1

tau, but kinase inhibitors can be promiscuous, causing side effects when they inhibit other kinases.

Noscira SA, of Madrid, Spain, hopes another tau kinase, glycogen synthase kinase 3 (GSK-3), might be a good target. The company is currently conducting a Phase IIb trial of its GSK-3 inhibitor Nypta (tideglusib).

Signum Biosciences Inc., of Monmouth Junction, NJ, has taken the opposite approach, promoting the activity of the principle protein responsible for removing phosphate from tau, phosphoprotein phosphatase 2A (PP2A). Last November, Signum signed an agreement with GlaxoSmithKline (China) R&D Co. Ltd. to develop activators of PP2A by either directly activating the protein or by indirectly interfering with the binding of PP2A inhibitors. (See *BioWorld Today*, Nov. 11, 2011.)

Allon Therapeutics Inc., of Vancouver, British Columbia, is developing davunetide, a peptide believed to act as a neuro-protective agent by performing a similar role as tau, stabilizing the microtubule network. The drug is in a Phase II/III trial for progressive supranuclear palsy, a tauopathy that also causes dementia. (See *BioWorld Today*, Jan. 5, 2011.)

Oligomerix Inc., of New York, is focused on the intrinsic proteolytic activity of tau. "The activity may be important for symptoms or for spread from a diseased neuron to a healthy neuron," James Moe, Oligomerix's president and CEO told *BioWorld Insight*. The company is developing small-molecule drugs to inhibit tau's protease function and also said it believes the tau fragments could be used as biomarkers for Alzheimer's disease. (See *BioWorld Today*, Feb. 8, 2012.)

Like AC Immune, multiple companies are working further downstream, once tau falls off the microtubules to sequester the protein and prevent the formation of tangles.

TauRx Pharmaceuticals Group's (Singapore) candidate Rember (methylthionium chloride) prevents tau pathology by inhibiting the aggregation of tau. The biotech has plans to move a second generation tau aggregation inhibitor called LMTX into pivotal Phase III trials.

Using its induced pluripotent stem cells, iPierian Inc., of South San Francisco, discovered a novel form of extracellular tau that's overexpressed in cortical neurons made from Alzheimer's disease patients. "The tau field is really hot," Nancy Stagliano, CEO of iPierian, said. "We were very careful and methodical about how we might be differentiated and have a unique angle into a therapeutic for this protein."

Partner Early

The Genentech-AC Immune deal is for a preclinical program, for which AC Immune could collect upward of CHF400 million (US\$421 million) in up-front plus research, development and sales-associated milestone payments. AC Immune is also due royalties on future sales of products that might emerge from the collaboration.

Genentech's Sabry said the company has seen an increase in biotechs interested in looking for partners for preclinical programs in multiple indications, but companies developing Alzheimer's disease drugs might be more inclined to partner early because the drugs tend to be more costly to develop. "That kind of a financial liability is almost impossible for a small company to bear these days," he said.

iPierian is looking for a partner to license its tau antibody sooner rather than later, but has a backup plan to test the drug in a tauopathy such as progressive supranuclear palsy, which is similar to Alzheimer's disease without the amyloid plaques. "The [smaller] trial would be more achievable for us, in terms of the economics, but that would give a potential partner or acquirer the signal that they need to help us take the molecule into the bigger indications like Alzheimer's disease," Stagliano said.

Similarly Oligomerix is in dialogue with potential partners for its program with the hopes of having a partner for its preclinical program in place before the end of the year. "We need a partner to help accelerate the program to keep our advantage," Moe said.

ADDf's Fillit cautions that finding a deep-pocketed partner might be hard, "Some pharma companies have been somewhat risk adverse, probably because of their past experiences in developing neuro-protective drugs for the prevention of stroke."

Amyloid Out?

Two amyloid-beta-targeting antibodies – bapineuzumab,

See Tau, page 6

WEEK IN REVIEW

Financings

Tesaro Inc. priced its initial public offering within the expected range.

Omeros Corp.'s public offering priced 2.9 million shares of common stock at \$10.25 per share.

Biodel Inc. initiated a private placement of 7.9 million shares resulting in proceeds of \$18.5 million.

Pivotal Therapeutics Inc. undertook a private placement for C\$5 million (US\$4.86 million).

Coronado Biosciences Inc. closed its public offering of 5.8 million shares at \$5 each raising \$28.8 million.

Deals

Inhibrx LLC inked potential \$500 million antibody license with **Celgene Corp.**

Medivir AB is collaborating with Swedish researchers to develop drugs against antibiotic-resistant bacteria.

... And More

Ventrus Biosciences Inc.'s shares lost half their value after lead product failed in Phase III.

Biotie Therapies OYJ shares dropped after **Roche AG** passed on its serotonin receptor antagonist SYN-120.

Teva Pharmaceutical Industries Ltd. wins multiple sclerosis drug Copaxone patent infringement lawsuit.

Ablynx NV puts TNF-alpha inhibitor ozoralizumab back in play and seeks partner.

Protalix BioTherapeutics Inc. saw its Elelyso (taliglucerase alfa) stumble over Vpriv's exclusivity in European Union.

The biotech industry added U.S. jobs over last decade, despite recession report finds.

Ruling

Continued from page 2

which could see a 2 percent increase in sales.

Besides the direct costs incurred under the ACA, drugmakers also face future bottom-line impacts from policies the Independent Payment Advisory Board (IPAB) may make to keep Medicare solvent, as well as comparative-effectiveness research sponsored by the Patient-Centered Outcomes Research Institute (PCORI), Keckley said.

Both independent groups were created under the ACA, and IPAB is perhaps the most controversial provision in the law. As soon as the Supreme Court handed down its decision last week, the Biotechnology Industry Organization and the

Pharmaceutical Research and Manufacturers of America pledged their support to efforts to repeal IPAB. (See *BioWorld Today*, June 29, 2012.)

Earlier this year, the House voted 223-181 to repeal the nonelected board, but the Senate has so far refused to follow suit. (See *BioWorld Today*, March 26, 2012.)

The impact of the health care law is coming as drugmakers face huge patent cliffs and increased pricing pressures, which Keckley thinks could affect their bottom lines more than the ACA itself. "There's a huge amount of headwinds in the sector," he said.

As a result, he expects biopharma companies will look very different by the end of the decade. ■

BIO WORLD PERSPECTIVES

A free, weekly e-zine offering unique viewpoints on developments within the biotechnology industry. Sign-up today and get a fresh outlook on topics that you can't find elsewhere!

Go to BioWorld.com and click on "Perspectives"!

WORD ON THE STREET

“FDA regulations and guidance must help today’s patients while enabling the biotech community to move into tomorrow with cures and continued breakthroughs so our children and grandchildren won’t have to live with the same diseases we have faced and, perhaps, one day, any diseases at all.”

– *Jim Greenwood, president and CEO, Biotechnology Industry Organization*

“Taking a product to proof of concept is a 11b, not a 1b.”

– *Barbara Dalton, vice president of venture capital at Pfizer Inc.*

“I think eventually cancer’s going to be full of orphan indications.”

– *Chuck Finn, president and CEO of RRD International LLC*

WEEK IN WASHINGTON

Affordable Care Act upheld: drugmakers must now implement provisions.

The Senate passed the FDA Safety and Innovation Act ahead of schedule, reauthorizing PDUFA for another five years. The package heads for the president’s signature so it can go into effect Oct. 1.

Belviq gets an FDA green light; the first approval of a new drug to help treat obesity in 13 years.

Tau

Continued from page 4

which Pfizer Inc., Johnson & Johnson and Elan Corp. plc all have a material interest in, and solanezumab from Eli Lilly and Co. Inc. – are both due to read out Phase III trial results shortly. After multiple failures of drugs designed to inhibit the formation of amyloid plaques, many experts have given other drugs targeting the protein a slim chance of working even if they’re hopeful for a pleasant surprise.

But amyloid might not be completely useless. “Even if the amyloid plaque is a secondary cause, it can still be a readout,” Fillit pointed out.

Eli Lilly recently gained approval of its beta-amyloid plaque marker, Amyvid (florbetapir). (See *BioWorld Today*, April 10, 2012.)

Amyvid could be helpful for enrolling the right patients into the clinical trials. Fillit estimates that 10 to 20 percent of patients diagnosed with Alzheimer’s disease don’t have the disease.

It’s also possible that tau drugs and amyloid drugs might be used in combination to combat Alzheimer’s. “Most of us think that we’re going to need multiple drugs to treat the disease,” Fillit said.

Genentech’s other AC Immune-developed Alzheimer’s drug crenezumab that targets amyloid might be used in combination with its new addition, but Genentech doesn’t have a full development plan for the tau program in place yet. “As it moves into the clinic that will be a question we will address formally. I think there’s good biological rationale for why you’d want to combine them,” Sabry said. ■

Countries

Continued from page 3

When the final scores were tallied, the U.S. finished in the top position, a ranking that it has held in all previous Scorecard surveys. Close behind were Denmark, Singapore, Finland and Sweden. Still with some work to do to improve their “innovation scores” are the BRIC countries, all finishing low down in the rankings of the 50 countries included in the survey. Brazil ranked the highest of this group at position number 39, China came in in 43rd position (dropping from

30th spot in the 2011 survey), Russia was the 44th-ranked country and India placed in the 47th position. ■

Is Your Company Featured in This Issue?

Promote it on your website or in your investor kit!

For high-quality reprints of articles about your company, please contact Stephen Vance at (404) 262-5511, or stephen.vance@ahcmedia.com

Public Financing Of Biotechnology: June 2012

I. COMMENCED TRADING IN JUNE

| Company (Symbol)# | Date Filed | Date Comm. | Shares/ Units (M) | Price | Shares Out (M)@ | Lead, Other Underwriters | Gross (US\$M) | Post-Offering Market Cap (M)% |
|---|------------|------------|-------------------|---------|-----------------|--|---------------|-------------------------------|
| Tesaro Inc. (Waltham, Mass.; TSRO) ¹ | 3/23/12 | 6/28/12 | 6S | \$13.50 | 26.67 | Citigroup Morgan Stanley (co-lead) Leerink Swann (co-lead) BMO Capital Markets Baird | \$81 | \$360 |

TOTAL: \$81M

NUMBER OF IPOs IN JUNE: 1

AVERAGE VALUE OF JUNE IPOs: \$81M

NUMBER OF IPOs IN 2012: 7

TOTAL RAISED IN IPOs IN 2012: \$457.86M

AVERAGE VALUE OF IPOs IN 2012: \$65.4M

| Company (Symbol)# | Date Filed | Date Comm. | Shares/ Units (M) | Price | Shares Out (M)@ | Lead, Other Underwriters | Gross (US\$M) | Post-Offering Market Cap (M)% |
|-------------------|------------|------------|-------------------|-------|-----------------|--------------------------|---------------|-------------------------------|
|-------------------|------------|------------|-------------------|-------|-----------------|--------------------------|---------------|-------------------------------|

FOLLOW-ON OFFERINGS

| | | | | | | | | |
|--|----------|---------|---------------------------|---------|-------|---|----------|----------|
| Aegerion Pharmaceuticals Inc. (Cambridge, Mass.; AEGR) ² | 12/19/11 | 6/13/12 | 3.4S | \$14.75 | 24.97 | Jeffereis & Co. J.P. Morgan (co-lead) Leerink Swann Canaccord Genuity Needham & Co. | \$50.15 | \$368.3 |
| BioMarin Pharmaceutical Inc. (Novato, Calif.; BMRN) ³ | 5/30/12 | 6/1/12 | 6.5S | \$36.28 | 122.2 | BofA Merrill Lynch Barclays Capital (co-lead) | \$235.82 | \$4.43B |
| Coronado Biosciences Inc. (Burlington, Mass.; CNDO) ⁴ | 6/22/12 | 6/22/12 | 5.75S | \$5 | 24.38 | Oppenheimer & Co. Inc. Roth Capital (co-lead) National Securities Corp. | \$28.75 | \$121.9 |
| Cytokinetics Inc. (South San Francisco; CYTK) ⁵ | 12/8/11 | 6/19/12 | 55.9U and Series B shares | \$0.76 | 133.4 | Cowen and Co. LLC JMP Securities (co-lead) Canaccord Genuity Needham & Co. | \$60 | \$101.4 |
| Omeros Corp. (Seattle; OMER) ⁶ | 10/18/10 | 6/28/12 | 2.93S | \$10.25 | 25.38 | Cowen and Co. LLC Deutsche Bank (co-lead) Canaccord Genuity Wedbush PacGrow Life | \$30 | \$260.15 |
| Trovagene Inc. (San Diego; OTCQB:TROV) ⁷ | 5/30/12 | 6/14/12 | 0.1725U | \$8 | N/A | Aegis Capital Corp. | \$1.38 | N/A |

TOTAL: \$406.1M

NUMBER OF FOLLOW-ON OFFERINGS IN JUNE: 6

AVERAGE VALUE OF JUNE FOLLOW-ONS: \$67.68M

NUMBER OF FOLLOW-ON OFFERINGS IN 2012: 53

TOTAL RAISED IN FOLLOW-ONS IN 2012: \$3,548.04M

AVERAGE VALUE OF FOLLOW-ONS IN 2012: \$66.94M

Notes:

Unless otherwise indicated, shares are traded on the Nasdaq exchange.

@ This column reflects the shares outstanding following the offering, when disclosed.

% Market capitalization is calculated based on the offering price.

Currency conversions are based on exchange rates at the time of the deal.

¹ Tesaro's overallotment option: 900,000 shares.² Aegerion's overallotment option: 510,000 shares.³ BioMarin's overallotment option: 650,000 shares.⁴ Includes Coronado's overallotment option: 750,000 shares.⁵ Cytokinetics priced a public offering of 55.9M units, consisting of shares of common stock and warrants to purchase 0.6 shares of common stock, raising \$42.5M; it also offered 23,026 shares of Series B convertible preferred stock and warrants to purchase 600 shares of common stock, raising about \$17.5M.⁶ Omeros' overallotment option: 439,024 shares.⁷ Trovagene raised an additional \$1.38M through an overallotment option exercised from its public offering conducted in May, bringing the total units offered to 1.32 million units and the total amount raised to \$10.58M.

BioWORLD®

**BIOTECHNOLOGY
STATE OF THE INDUSTRY REPORT**NOW
AVAILABLE IN
eBOOK!

Only BioWorld Today, the most respected news source to the industry's executive suite for more than 20 years, can bring your future into view with the **brand new *State of the Industry Report 2012***.

- The deals, mergers & acquisitions, the financial forecasts ...
- From the European market ... to the "Hill" ... to Wall Street
- In-depth analysis into emerging markets; drug rankings, and the latest trends in financing

- The innovations, the R&D, the cutting edge discoveries that are leading the pack
- And more....

**The State of the Industry Report—
defining the year—mapping your future!**

**Order Today!**

ONLINE:
www.bioworld.com/biotechindustry



CALL:
1-800-888-3912 or 1-404-262-5547



EMAIL:
orders@bioworld.com

*Mention priority code **S12406/02961**

II. FILED AND PENDING

| Company (Symbol)#* | Date Filed | Shares/ Units (M) | Price | Shares Out | Lead, Other Underwriters | Gross (US\$M) |
|---|-------------------|--------------------------|--------------|-------------------|---|----------------------|
| INITIAL OFFERINGS | | | | | | |
| Durata Therapeutics Inc. (Morristown, N.J.; DRTX) | 3/22/12 | N/A | N/A | N/A | BofA Merrill Lynch Credit Suisse (co-lead) RBC Capital Markets Wedbush PacGrow Life Sciences | \$86.25 |
| Hyperion Therapeutics Inc. (South San Francisco; HPTX) | 4/13/12 | N/A | N/A | N/A | Leerink Swann Cowen & Co. (co-lead) Needham & Co. | \$57.5 |
| Insys Therapeutics Inc. (Phoenix; INRX) | 3/30/11 | N/A | N/A | N/A | Wells Fargo Securities JMP Securities (co-lead) Oppenheimer & Co. | \$55 |
| Kythera Biopharmaceuticals Inc. (Calabasas, Calif.; KYTH) | 5/17/12 | N/A | N/A | N/A | J.P. Morgan Securities LLC Goldman, Sachs (co-lead) Leerink Swann LLC Lazard Capital Markets LLC | \$86.25 |
| Oncomed Pharmaceuticals Inc. (Redwood City, Calif.; OMED) | 5/11/12 | N/A | N/A | N/A | Jefferies Leerink Swann (co-lead) Piper Jaffray BMO Capital Markets | \$115 |
| Radius Health Inc. (Cambridge, Mass.; RDUS) | 2/8/12 | N/A | N/A | N/A | UBS Investment Bank Leerink Swann (co-lead) Cowen & Co. Rodman & Renshaw | \$86.25 |
| Rib-X Pharmaceuticals Inc. (New Haven, Conn.; RIBX) | 11/28/11 | 10S | \$6-\$7 | 19.9 | Deutsche Bank Securities William Blair & Co. Lazard Capital Markets Needham & Co. LLC | \$65 |
| Stemline Therapeutics Inc. (New York; STML) | 4/2/12 | N/A | N/A | N/A | Oppenheimer & Co. RBC Capital Markets (co-lead) JMP Securities | \$50 |

Notes: # Unless otherwise indicated, shares are traded on the Nasdaq exchange.

General shelf registration statements are not included until action is taken on the filing.

* Stock symbols for companies seeking to complete IPOs are proposed.

@ This column reflects the shares outstanding following the offering, when disclosed.

N/A = Not available, applicable or reported.

The value of all offerings is based on either the midpoint of the price range listed in the company's SEC filing or the most recent closing stock price before the offering was announced. In some cases, the company has not disclosed the number of shares to be offered or a price range. Then, the value is the maximum aggregate offering price listed in the SEC filing.

Biotech Money Raised By Month In 2012

| Type of financing | Jan | Feb | Mar | Apr | May | June | Total (\$M) |
|-------------------|-------|---------|---------|-------|---------|-------|-------------|
| Public offerings | 475.6 | 974.2 | 1,053.2 | 257.4 | 758.5 | 487.1 | 4,005.9 |
| Public/other | 245.3 | 207.6 | 1,424.2 | 350.6 | 206.4 | 106.8 | 2,540.8 |
| Private biotechs | 250.5 | 222.7 | 301.4 | 200.1 | 201.6 | 192.5 | 1,368.8 |
| Total (\$M) | 971.4 | 1,404.4 | 2,778.7 | 808.1 | 1,166.5 | 786.4 | 7,915.5 |

Notes:

Public offerings = Initial, follow-on.

Private biotechs = Financings of private firms.

Public/other = Other financings of public companies, including loans, bridge financings, exercises of warrants, debt offerings, rights offerings, standard private placements, PIPE financings and institutional offerings of registered stock.

Other Financings Of Public Biotechnology Companies: June 2012

TOTAL: \$106.76M

| Company (Location) | Type Of Financing | Number Of Shares, Units Or Warrants (M) | Amount Raised (M) | Investors; Placement Agents; Details | Date |
|---|--|---|-------------------|--|---------|
| Avanir Pharmaceuticals Inc. (Aliso Viejo, Calif.) | Debt facility | N/A | \$30 | Avanir secured a \$30M debt facility led by Oxford Finance LLC, which included Silicon Valley Bank | 6/22/12 |
| Biodel Inc. (Danbury, Conn.) | Private placement of shares and warrants | 7.9S and W for 2.7S | \$18.5 | Biodel raised \$18.5M in its placement with institutional investors of 7.9M shares and warrants for 2.7M shares; each unit was \$2.355; William Blair & Co. LLC was sole lead placement agent, with JMP Securities LLC as co-agent | 6/25/12 |
| Cel-Sci Corp. (Vienna, Va.) | Registered direct offering | 16S | \$5.6 | Cell-Sci placed 16M shares with an institutional investor, raising \$5.6M | 6/20/12 |
| Cortex Pharmaceuticals Inc. (Irvine, Calif.) | Private placement of a non-convertible secured promissory note | N/A | \$0.4 | Cortex completed the placement of a \$400,000 note with Samyang Optics Co. Ltd., of Korea; Cortex also issued Samyang warrants to purchase up to 4M shares of common stock | 6/27/12 |
| Elite Pharmaceuticals Inc. (Northvale, N.J.) | Bridge loan | N/A | \$0.5 | Elite entered a bridge loan agreement with Jerry Treppel, its chairman and CEO, who will provide the firm a line of credit not to exceed \$500,000 | 6/14/12 |
| Lorus Therapeutics Inc. (Toronto) | Private placement of units | 20.6U | C\$6.6 (\$6.43) | Lorus raised \$6.43M by placing 20.6M units, priced at C\$0.32 each; each unit consisted of one common share and one common share purchase warrant with an exercise price of C\$0.45 | 6/12/12 |
| MediGene AG (Martinsried, Germany) | Royalty sale | N/A | \$17.7 | MediGene raised \$17.7M in cash by transferring its 2% royalty share of European net sales in prostate cancer drug Eligard to Cowen Healthcare Royalty Partners II LP | 6/8/12 |

Top Private Financings Of Public Companies: 2012

| Company | Amount Raised |
|------------------------------------|---------------|
| Salix Pharmaceuticals (March) | \$690M |
| Elan Corp. plc (March) | \$381M |
| Theravance Inc. (April) | \$212.9M |
| Amarin Corp. plc (January) | \$150M |
| Vernalis plc (February) | \$103.8M |
| ThromboGenics NV (March) | \$103.2M |
| Horizon Pharma (March) | \$50.8M |
| Algeta ASA (February) | \$45.4M |
| Intercell AG (May) | \$44.7M |
| Savient Pharmaceuticals Inc. (May) | \$44M |

| Company (Location) | Type Of Financing | Number Of Shares, Units Or Warrants (M) | Amount Raised (M) | Investors; Placement Agents; Details | Date |
|--|---|---|-------------------|---|---------|
| Novelos Therapeutics Inc. (Madison, Wis.) | Private placement of units | 5.4U | \$5.42 | Novelos placed 5.4M units at \$1 each, with each unit consisting of one share of common stock, a Class A warrant with a five-year term to purchase a half-share of stock at \$1.25 each and a Class B warrant with a 90-day term to purchase one share of stock at \$1 per share; Rodman & Renshaw LLC is acting as exclusive placement agent | 6/11/12 |
| Oxygen Biotherapeutics Inc. (Morrisville, N.C.) | Registered direct offering of Series A convertible preferred stock and warrants | N/A | \$6 | Oxygen raised \$6M through an agreement with institutional investors, bringing in \$3.5M last December and another \$2.5M in mid-June; it could receive another \$1.5M by mid-September, for a total of \$7.5M | 6/18/12 |
| Pharming Group NV (Leiden, the Netherlands) | Convertible bond redemption | 45.6S | €8.4 (\$10.6) | Redeemed the final tranche of its \$10.6M convertible bond; a total of 45.6M shares were issued to the bondholders | 6/14/12 |
| Pivotal Therapeutics Inc. (Woodbridge, Ontario) | Private placement of units | 22.7U | C\$5 (\$4.86) | Pivotal is closing a nonbrokered private placement for \$4.86M, issuing 22.7M units to Crossover Healthcare Fund LLC, an affiliate of Summer Street Research Partners | 6/26/12 |
| Sernova Corp. (London, Ontario) | Exercise of common share purchase warrants | 3.9W | C\$0.772 (\$0.75) | Sernova received gross proceeds of \$750,508 by exercising 3.9M common share purchase warrants, which were issued in connection with private placements that closed between 2009 and 2011 | 6/7/12 |

Notes:

This chart does not include real estate or manufacturing plant financings, or debt deals done to replace existing debt. Loan money is included in the total only when it is drawn down, if disclosed.

Currency conversions are based on exchange rates at the time of the deal.

The date indicated refers to the *BioWorld Today* issue in which the news item can be found.

N/A = Not applicable; ND = Not disclosed.

Venture Capital And Other Investments In Private Biotechnology Companies: June 2012

TOTAL: \$192.51M

| Company | Location | Amt. (M) | Details | Date |
|---------------------------------------|---------------------|---------------|---|---------|
| Alize Pharma SAS | Lyon, France | €3.3 (\$3.7) | Alize closed a funding round of \$3.7M; investors were SHAM, Octalfa SAS, CEMA Inc. and Thierry Abribat | 6/5/12 |
| Arbovax Inc. | Raleigh, N.C. | ND | Arbovax obtained a new undisclosed round of funding from the North Carolina Biotechnology Center | 6/6/12 |
| Blaze Bioscience Inc. | Seattle | \$5 | Blaze raised \$5M in a Series A round; investors included a pool of local and regional organizations and individuals | 6/11/12 |
| Ceptaris Therapeutics Inc. | Malvern, Pa. | \$10 | Ceptaris raised \$10M through a Series D round; investors were Vivo Ventures, Palo Alto Investors, Burrill & Co., Aperture Venture Partners, Osage and BioAdvance, plus Third Point LLC | 6/6/12 |
| Concitol Pharma ApS | Jyderup, Denmark | €1.3 (\$1.63) | Concitol raised \$1.63M through an investment by SEED Capital and Novo Seeds | 6/13/12 |
| Gemmus Pharma Inc. | San Francisco | ND | Gemmus closed a Series A round led by the Life Science Angels and including BlueTree Allied Angels, Tech Coast Angels, Wilmington Investor Network and The Angels Forum | 6/29/12 |
| Global Blood Therapeutics Inc. | South San Francisco | \$40.7 | Global Blood Therapeutics raised \$40.7M in a Series A round; the company was formed and launched by Third Rock Ventures LLC | 6/14/12 |
| Glythera Ltd. | Newcastle, UK | \$3.1 | Glythera secured a fundraising round with IP Group totaling \$3.1M, which will be tranching over three years | 6/22/12 |
| Igenica Inc. | Burlingame, Calif. | \$33 | Igenica raised \$33M in a Series C financing; investors were Third Rock, The Column Group, Orbimed Advisors and 5AM Ventures | 6/13/12 |
| Innopharma Inc. | Piscataway, NJ. | \$8 | InnoPharma raised \$8M in a financing from Comerica Bank and NXT Capital Venture Finance | 6/8/12 |
| Neviah Genomics | Tel Aviv, Israel | €10 (\$12.48) | Neviah received \$12.48M in committed funding from Merck Serono Ventures, which created the company along with Compugen, of Tel Aviv, Israel | 6/26/12 |

Top Financings Of Private Companies: 2012

| Company | Amount Raised |
|---|---------------|
| ADC Therapeutics Sarl (March) | \$50M |
| Sangart Inc. (May) | \$50M |
| Celladon Corp. (February) | \$43M |
| Aragon Pharmaceuticals (March) | \$42M |
| Supernus Pharmaceuticals Inc. (January) | \$42M |
| Global Blood Therapeutics (June) | \$40.7M |
| Blueprint Medicines (May) | \$40M |
| Alder BioPharmaceuticals Inc. (April) | \$38M |
| OvaScience (April) | \$37M |
| Igenica Inc. (June) | \$33M |

| Company | Location | Amt. (M) | Details | Date |
|--------------------------------------|---------------------------|----------|--|---------|
| Nuevolution A/S | Copenhagen, Denmark | \$13.7 | Nuevolution raised \$13.7M in a new round led by Industrifonden, with strong support by existing investors Sunstone Capital, SEB Venture Capital and SEB Utvecklingsstiftelse | 6/20/12 |
| PhaseBio Pharmaceuticals Inc. | Malvern, Pa. | \$23 | PhaseBio raised \$23M in a third tranche of its Series B round, bringing the total to \$48.4M; investors were New Enterprise Associates, with Astellas Venture Management, Johnson & Johnson Development Corp., Hatteras Venture Partners and Fletcher Spaght Ventures | 6/6/12 |
| Rhythm Pharmaceuticals Inc. | Boston | \$25 | Rhythm raised \$25M in a Series B round; investors were MPM Capital, New Enterprise Associates and Third Rock Ventures and Ipsen SA | 6/13/12 |
| Savara Pharmaceuticals Inc. | Austin, Texas | \$8.6 | Savara raised \$8.6M in the first closing of its Series B round led by The Keiretsu Forum, with participation from Savara's existing investors | 6/13/12 |
| Xenikos BV | Nijmegen, the Netherlands | \$4.6 | Xenikos raised \$4.6M in a Series A round with Sanquin Blood Supply Foundation, Participatiemaatschappij Oost Nederland NV and Innovation & Investment Fund Gelderland BV | 6/20/12 |

Notes:

Currency conversions are based on exchange rates at the time of the deal.

** Denotes the date the item ran in *BioWorld International*.

The date indicated refers to the *BioWorld Today* issue in which the news item can be found.

ND = Not disclosed.

THE 2012 FIGURES ARE IN!

The ALL NEW BioWorld *Executive Compensation Report 2012* has the figures you've been waiting for...

The salary, bonus, stock options, market capitalization & total compensation packages for 673 key biotech executives in more than 190 companies!



Available in print and PDF with our interactive point & click table of contents.

Order today! Visit us at bioworld.com to purchase your copy today!

Milestone Payments From Corporate Partners: June 2012

TOTAL: \$75.3M

YEAR TO DATE: \$376.33M

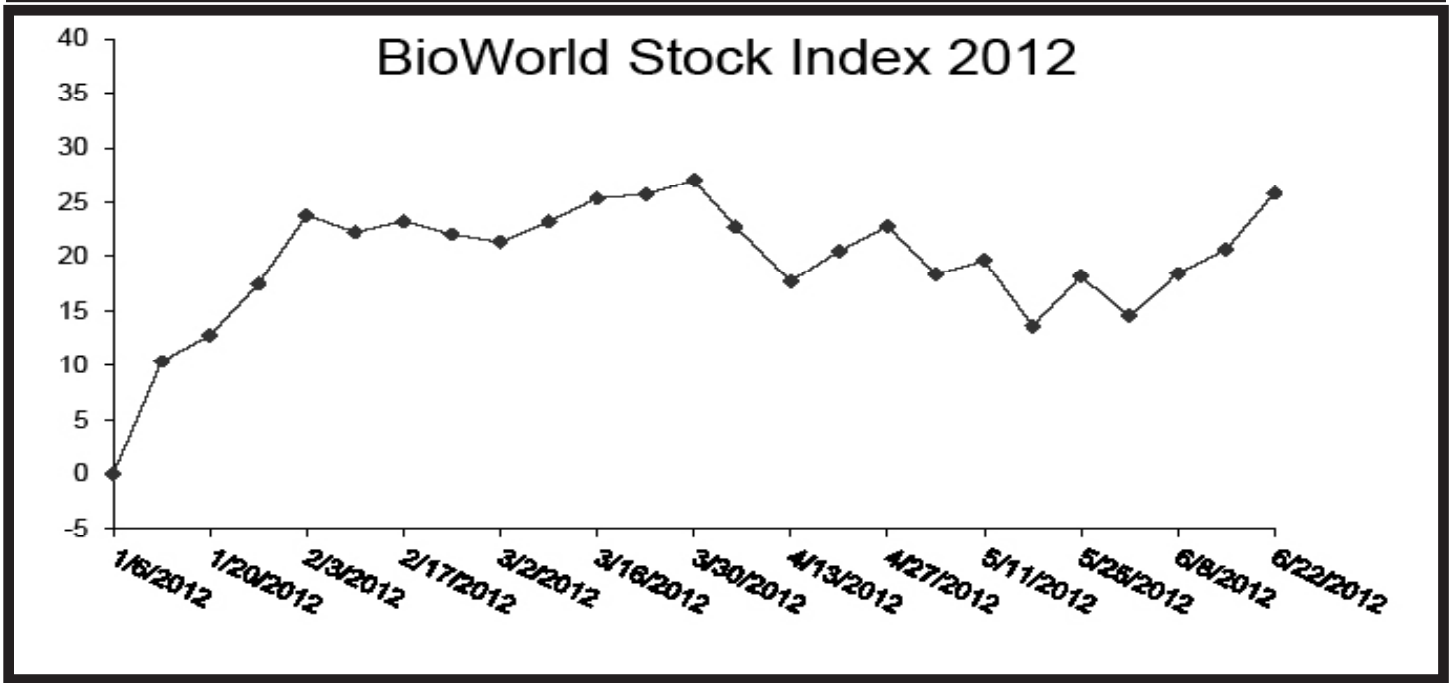
| Company (Location) | Partner (Location) | Amt. (M) | Details | Date |
|---|---|-----------------|--|---------|
| Astex Pharmaceuticals Inc. (Dublin, Calif.) | Janssen Pharmaceutica NV (unit of Johnson & Johnson; New Brunswick, N.J.) | £3.5 (\$5.4) | For receiving clearance to start a Phase I trial of a fibroblast growth factor receptor kinase inhibitor from the companies' 2008 FGFR collaboration | 6/14/12 |
| Evotec AG (Hamburg, Germany) | Boehringer Ingelheim GmbH (Ingelheim, Germany) | \$5 | For the transition of a respiratory program into pre-clinical development under their 2004 multitarget drug discovery alliance | 6/6/12 |
| Kythera Biopharmaceuticals Inc. (Los Angeles) | Bayer AG (Leverkusen, Germany) | \$15.8 | For Bayer's decision to pursue continued development and regulatory approvals following positive European Phase III data | 6/6/12 |
| Optimer Pharmaceuticals Inc. (San Diego) | Astellas Pharma Europe (unit of Astellas Pharma Inc.; Tokyo) | €10 (\$12.6) | For achieving the first sales of Dificlir tablets | 6/8/12 |
| Protalix BioTherapeutics Inc. (Carmiel, Israel) | Pfizer Inc. (New York) | \$25 | For the FDA's approval of Elelyso to treat Type I Gaucher disease | 6/12/12 |
| Summit plc (Oxford, UK) | Muscular Dystrophy Association, Charley's Fund, Cure Duchenne, the Foundation to Eradicate Duchenne, Nash Avery Foundation and Parent Project Muscular Dystrophy | ND | For achieving a dosing milestone in its Phase I trial of SMT C1100 in the genetic disease Duchenne's muscular dystrophy | 6/13/12 |
| Sunesis Pharmaceuticals Inc. (South San Francisco) | Biogen Idec Inc. (Weston, Mass.) | \$1.5 | For advancing preclinical work related to its multikinase inhibitor program in immunology | 6/28/12 |
| XenoPort Inc. (Santa Clara, Calif.) | GlaxoSmithKline plc (London) | \$10 | For the FDA approval of Horixant to treat postherpetic neuralgia | 6/8/12 |

Notes:

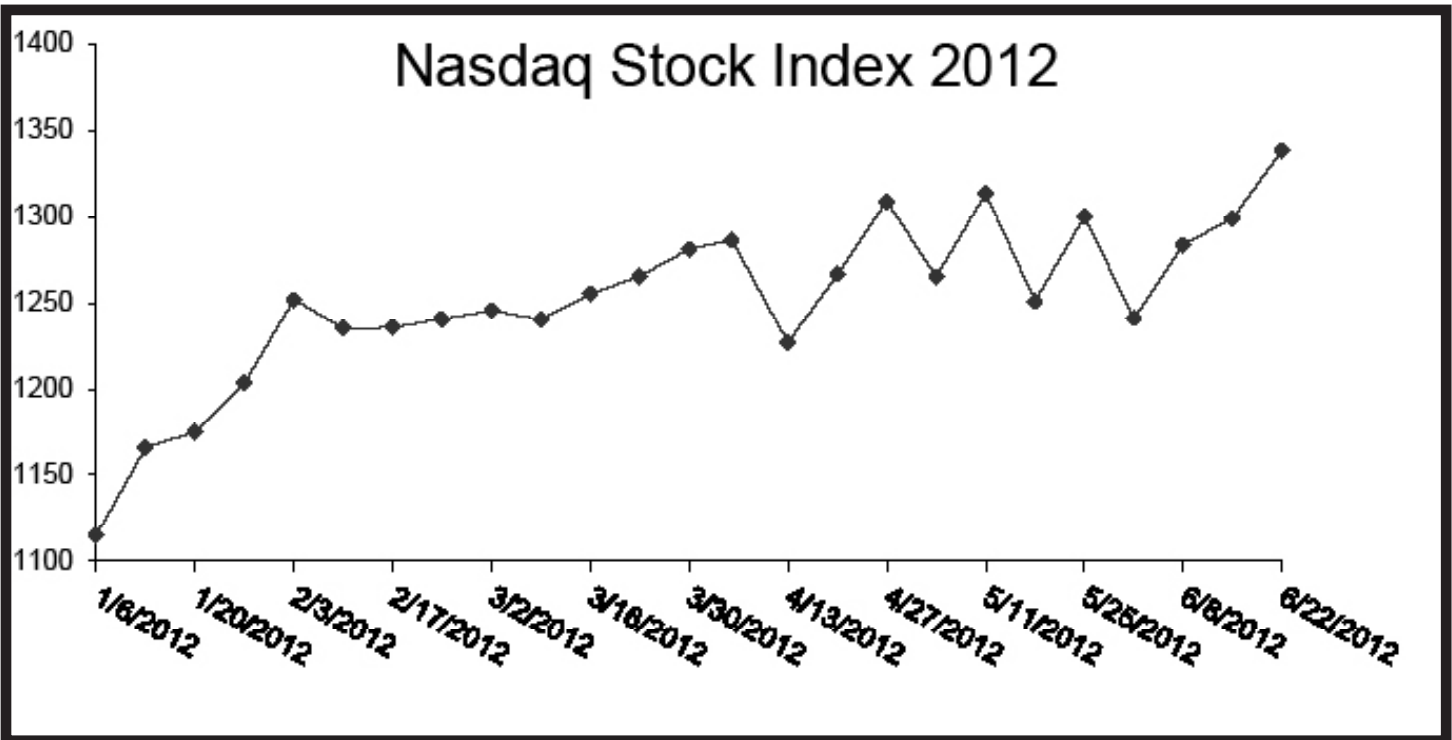
Currency conversions are based on exchange rates at the time of the deal.

The date indicated refers to the *BioWorld Today* issue in which the news item can be found.

ND = Not disclosed.



These graphs compare the performance of the biotech stocks for all of 2012 using two different measures. The BioWorld Stock Indicator measures the average percent change year to date in the approximately 211 U.S. biotech and biotech-related stocks that are covered weekly in *BioWorld Insight*. The Friday closing price of each stock on the list is compared either to its 2011 closing price (12/31/11) or its IPO price (if the stock started trading in 2012), and expressed as a percent change. Then the percent changes for all stocks on the list are added and subsequently divided by the total number of stocks listed. The Nasdaq Biotech Index comprises 118 biotech securities that are listed on Nasdaq. The companies must have a minimum market cap of \$200M to be included on the list. The index is market-value weighted, with the representation of each stock in the index being proportional to its closing price times the total number of shares outstanding, relative to the total market value of the index.



The Week's Biggest Gainers and Losers

10 BIGGEST U.S. WINNERS FOR THE WEEK

| (By Percent) | | (By Dollars) | |
|-----------------|-------|-----------------|------|
| Supernus Pharma | 81.75 | Pharmacyclics | 6.81 |
| Orexigen | 36.12 | Supernus Pharma | 4.21 |
| Ampio Pharma | 31.95 | Biogen Idec | 2.64 |
| Talon Thera | 27.78 | Celgene | 2.53 |
| Anacor Pharma | 24.57 | BioMarin Pharma | 2.27 |
| DiaDexus | 17.95 | Vivus | 2.03 |
| Idera Pharma | 17.78 | Horzon Pharma | 1.86 |
| GTx | 17.73 | Spectrum Pharma | 1.67 |
| Acadia Pharma | 17.33 | Auxilium Pharma | 1.65 |
| Lexicon | 17.28 | Amarin | 1.49 |

10 BIGGEST U.S. LOSERS FOR THE WEEK

| (By Percent) | | (By Dollars) | |
|---------------------|--------|------------------|-------|
| Anthera Pharma | -76.71 | Ventrus Biosci | -7.99 |
| Ventrus Biosciences | -65.17 | Vertex Pharma | -4.69 |
| Omeros | -24.53 | Momenta Pharma | -3.54 |
| Synta Pharma | -24.45 | Omeros | -3.25 |
| Savient Pharma | -21.74 | Anthera Pharma | -2.24 |
| Momenta Pharma | -20.81 | NewLink Genetics | -1.80 |
| Telik | -20.53 | Cubist Pharma | -1.79 |
| Alseres | -20.00 | Synta Pharma | -1.77 |
| Marina Biotech | -15.15 | Regeneron Pharma | -1.68 |
| Epicept | -12.50 | Osiris Thera | -1.53 |

BioWorld Stock Report For Public Biotechnology Companies

| Company | Symbol | Close 6/22 | Close 6/29 | %Change | | Vol (000) |
|--------------------|--------|---------------|---------------|---------|--------|--------------|
| | | | | WK | YTD | |
| 3S Bio | SSRX | 13.12 | 13.65 | 4.04 | 36.09 | 115 |
| Aastrom Biosci | ASTM | 2.2 | 2.15 | -2.27 | 18.13 | 720 |
| Acadia Pharma | ACAD | 1.5 | 1.76 | 17.33 | 57.14 | 3257 |
| Accentia Biopharma | ABPI | 0.22 | 0.2 | -9.09 | -33.33 | 1073 |
| Access Pharma | ACCP | 0.67 | 0.65 | -2.99 | -51.85 | 424 |
| AcelRx Pharma | ACRX | 3.05 | 3.25 | 6.56 | 51.87 | 54 |
| Achillion | ACHN | 6.6 | 6.2 | -6.06 | -19.79 | 3492 |
| Acorda Therap | ACOR | 23.62 | 23.56 | -0.25 | -0.04 | 1421 |
| Adamis | ADMP | 0.74 | 0.73 | -1.35 | 329.41 | 499 |
| Adventrx Pharma | ANX | 0.45 | 0.51 | 13.33 | -10.53 | 979 |
| Aegerion Pharma | AEGR | 14.5 | 14.84 | 2.34 | -8.45 | 799 |
| AEterna Zentaris | AEZS | 0.47 | 0.51 | 8.51 | -66.45 | 13415 |
| Affymax | AFFY | 13.1 | 12.88 | -1.68 | 94.56 | 2912 |
| Agenus | AGEN | 5 | 5.24 | 4.80 | 156.86 | 952 |
| Albany Molecular | AMRI | 2.66 | 2.55 | -4.14 | -12.97 | 835 |
| Alexion Pharma | ALXN | 95.95 | 99.3 | 3.49 | 39.90 | 5586 |
| Alexza Pharma | ALXA | 3.97 | 4.24 | 6.80 | -48.92 | 6003 |
| Alimera Sciences | ALIM | 2.77 | 2.99 | 7.94 | 130.00 | 728 |
| Alkermes | ALKS | 16.15 | 16.97 | 5.08 | -2.69 | 4567 |
| Allos Therapeutics | ALTH | 1.8 | 1.79 | -0.56 | 28.78 | 4262 |
| Alnylam Pharma | ALNY | 11.76 | 11.65 | -0.94 | 41.73 | 877 |
| Alseres | ALSE | 0.15 | 0.12 | -20.00 | -40.00 | 43 |
| AMAG Pharma | AMAG | 15.05 | 15.4 | 2.33 | -18.65 | 399 |
| Amarin | AMRN | 12.97 | 14.46 | 11.49 | 100.00 | 40639 |
| Amgen | AMGN | 72.46 | 72.91 | 0.62 | 12.62 | 20157 |
| Amicus | FOLD | 5.18 | 5.5 | 6.18 | 63.20 | 757 |
| Ampio Pharma | AMPE | 3.85 | 5.08 | 31.95 | 18.97 | 4981 |
| Ampliphi Biosci | APHB | 0.19 | 0.19 | 0.00 | 46.15 | 6 |
| Amylin Pharma | AMLN | 27.92 | 28.2 | 1.00 | 143.73 | 10410 |
| Anacor Pharma | ANAC | 5.21 | 6.49 | 24.57 | 4.85 | 265 |
| Anthera Pharma | ANTH | 2.92 | 0.68 | -76.71 | -88.40 | 30445 |
| Ardea Biosciences | RDEA | 31.96 | 31.96 | 0.00 | 87.45 | 0 |
| Arena Pharma | ARNA | 9.88 | 9.98 | 1.01 | 422.51 | 238420 |
| Ariad Pharma | ARIA | 17.44 | 17.21 | -1.32 | 40.38 | 12733 |
| ArQule | ARQL | 5.78 | 5.93 | 2.60 | 3.31 | 1910 |
| Array BioPharma | ARRY | 3.51 | 3.47 | -1.14 | 66.83 | 3137 |
| Aryx | ARYX | 0.01 | 0.01 | 0.00 | 0.00 | 379 |
| Astex Pharma | ASTX | 2.1 | 2.09 | -0.48 | 18.75 | 1639 |
| Auxilium Pharma | AUXL | 25.24 | 26.89 | 6.54 | 37.69 | 2937 |
| Avanir | AVNR | 3.47 | 3.92 | 12.97 | 100.00 | 10774 |
| Avax Tech | AVXT | 0.02 | 0.02 | 0.00 | -33.33 | 742 |
| AVEO Pharma | AVEO | 12.73 | 12.16 | -4.48 | -29.87 | 1052 |
| AVI BioPharma | AVII | 0.64 | 0.63 | -1.56 | -17.11 | 3401 |
| Bellus Health | BLUSF | 0.6 | 0.7 | 16.67 | -23.08 | 11 |
| BG Medicine | BGMD | 6.92 | 6.98 | 0.87 | 39.88 | 107 |
| BioCryst Pharma | BCRX | 3.84 | 3.97 | 3.39 | 67.51 | 1308 |
| Biodel | BIOD | 2.32 | 2.58 | 11.21 | 5.74 | 181 |
| Biodelivery Sci | BDSI | 4.04 | 4.48 | 10.89 | 446.34 | 1773 |
| Biogen Idec | BIIB | 141.74 | 144.38 | 1.86 | 30.50 | 4978 |
| BioMarin Pharma | BMRN | 37.31 | 39.58 | 6.08 | 16.21 | 6277 |
| Bio-path Holdings | BPTH | 0.39 | 0.37 | -5.13 | 8.82 | 70 |
| BioSante Pharma | BPAX | 2.64 | 2.55 | -3.41 | -15.28 | 1302 |
| Cadence Pharma | CADX | 2.98 | 3.57 | 19.80 | -5.56 | 1530 |
| Cardiome | CRME | 0.43 | 0.45 | 4.65 | -82.76 | 1226 |
| Catalyst Pharma | CPRX | 0.55 | 0.53 | -3.64 | -55.83 | 255 |

| Company | Symbol | Close 6/22 | Close 6/29 | %Change | | Vol (000) |
|--------------------|--------|---------------|---------------|---------|--------|--------------|
| | | | | WK | YTD | |
| Celgene | CELG | 61.63 | 64.16 | 4.11 | -5.02 | 24062 |
| Cell Therapeutics | CTIC | 0.62 | 0.58 | -6.45 | -48.21 | 12339 |
| Celldex Therap | CLDX | 4.86 | 5.18 | 6.58 | 96.96 | 4387 |
| CEL-SCI | CVM | 0.34 | 0.38 | 11.76 | 35.71 | 8448 |
| Cempra | CEMP | 8.97 | 9.36 | 4.35 | 54.46 | 74 |
| Cerus | CERS | 3.35 | 3.32 | -0.90 | 17.73 | 1608 |
| Chelsea Therap | CHTP | 1.47 | 1.48 | 0.68 | -71.21 | 4237 |
| ChemoCentryx | CCXI | 14.42 | 15 | 4.02 | 36.36 | 73 |
| Cleveland Biolabs | CBLI | 1.74 | 1.57 | -9.77 | -43.93 | 964 |
| Clovis Oncology | CLVS | 21.4 | 21.68 | 1.31 | 53.87 | 215 |
| Codexis | CDXS | 3.7 | 3.71 | 0.27 | -29.73 | 482 |
| Columbia Labs | CBRX | 0.65 | 0.68 | 4.62 | -72.91 | 1591 |
| CombiMatrix | CBMX | 0.95 | 0.85 | -10.53 | -45.51 | 14 |
| Complete Genomics | GNOM | 1.91 | 1.87 | -2.09 | -35.07 | 2202 |
| Compugen | CGEN | 3.53 | 3.86 | 9.35 | -22.80 | 478 |
| Concept | CORT | 4.42 | 4.49 | 1.58 | 30.52 | 1029 |
| CorMedix | CRMD | 0.23 | 0.21 | -8.70 | -30.00 | 11 |
| Cornerstone Therap | CRTX | 6.03 | 6.33 | 4.98 | 7.84 | 212 |
| Cubist Pharma | CBST | 39.7 | 37.91 | -4.51 | -4.68 | 4572 |
| Curis | CRIS | 5.13 | 5.4 | 5.26 | 15.63 | 3291 |
| Cyclacel Pharma | CYCC | 0.43 | 0.46 | 6.98 | -22.03 | 346 |
| Cytokinetics | CYTK | 0.6 | 0.64 | 6.67 | -34.02 | 1180 |
| CytRx | CYTR | 4.89 | 4.58 | -6.34 | 133.67 | 2181 |
| Dara Biosciences | DARA | 0.68 | 0.73 | 7.35 | -43.41 | 519 |
| Dendreon | DNDN | 7.59 | 7.4 | -2.50 | -2.37 | 13708 |
| DepoMed | DEPO | 5.71 | 5.69 | -0.35 | 6.36 | 1499 |
| DiaDexus | DDXS | 0.39 | 0.46 | 17.95 | 187.50 | 1579 |
| Discovery Labs | DSCO | 2.27 | 2.32 | 2.20 | 38.92 | 2543 |
| DURECT | DRRX | 0.79 | 0.91 | 15.19 | -24.17 | 1541 |
| Dusa Pharma | DUSA | 5.24 | 5.22 | -0.38 | 16.52 | 169 |
| Dyax | DYAX | 2.19 | 2.13 | -2.74 | 60.15 | 1460 |
| Dynavax | DVAX | 4.25 | 4.32 | 1.65 | 30.91 | 8890 |
| Emergent BioSol | EBS | 15.3 | 15.15 | -0.98 | -12.02 | 683 |
| Emisphere Tech | EMIS | 0.17 | 0.16 | -5.88 | -27.27 | 133 |
| Endocyte | ECYT | 7.65 | 8.22 | 7.45 | 135.53 | 2427 |
| Entremed | ENMD | 1.93 | 1.84 | -4.66 | 85.86 | 43 |
| Enzo Biochem | ENZ | 1.83 | 1.67 | -8.74 | -26.11 | 1148 |
| Enzon Pharma | ENZN | 6.96 | 6.87 | -1.29 | 3.00 | 1279 |
| Epicept | EPCT | 0.16 | 0.14 | -12.50 | -48.15 | 52 |
| Exelixis | EXEL | 5.3 | 5.53 | 4.34 | 16.42 | 7529 |
| Flamel Tech | FLML | 4.09 | 4.4 | 7.58 | -11.29 | 230 |
| Fluidigm | FLDM | 14.96 | 15.04 | 0.53 | 14.29 | 701 |
| Forest Labs | FRX | 34.09 | 34.99 | 2.64 | 15.55 | 7245 |
| Furix Pharma | FURX | 21.31 | 20.95 | -1.69 | 28.92 | 272 |
| Galena Biopharma | GALE | 1.56 | 1.65 | 5.77 | 251.06 | 16292 |
| Generex Biotech | GNBT | 0.09 | 0.09 | 0.00 | -40.00 | 3895 |
| Genomic Health | GHDX | 33.88 | 33.4 | -1.42 | 31.34 | 626 |
| GenVec | GNVC | 2.37 | 2.38 | 0.42 | 0.42 | 52 |
| Geron | GERN | 1.71 | 1.71 | 0.00 | 22.14 | 3973 |
| Gilead Sciences | GILD | 50.52 | 51.28 | 1.50 | 26.43 | 21682 |
| GTx | GTXI | 2.99 | 3.52 | 17.73 | 15.03 | 1141 |
| Harvard Bio | HBIO | 3.58 | 3.77 | 5.31 | -2.84 | 276 |
| Horzon Pharma | HZNP | 5.27 | 7.13 | 35.29 | 100.85 | 10553 |
| Human Genome | HGSI | 13.35 | 13.13 | -1.65 | 80.61 | 11925 |
| Idenix Pharma | IDIX | 10.82 | 10.28 | -4.99 | 35.09 | 4446 |

To subscribe, please call BioWORLD® Customer Service at (800) 477-6307; outside the U.S. and Canada, call (404) 262-5476.

Copyright © 2012 AHC Media. Reproduction is strictly prohibited.

| Company | Symbol | Close 6/22 | Close 6/29 | %Change | | Vol (000) |
|---------------------|--------|---------------|---------------|---------|--------|--------------|
| | | | | WK | YTD | |
| Idera Pharma | IDRA | 0.9 | 1.06 | 17.78 | -6.19 | 116 |
| ImmunoCellular | IMUC | 3.73 | 3.75 | 0.54 | 179.85 | 2490 |
| ImmunoGen | IMGN | 15.85 | 16.74 | 5.62 | 45.31 | 3550 |
| Immunomedics | IMMU | 3.75 | 3.56 | -5.07 | 6.59 | 1344 |
| Incyte | INCY | 23.34 | 22.7 | -2.74 | 51.43 | 5308 |
| Infinity Pharma | INFI | 13.22 | 13.56 | 2.57 | 53.39 | 929 |
| InterMune | ITMN | 11.96 | 11.95 | -0.08 | -1.48 | 3877 |
| Ironwood Pharma | IRWD | 14.5 | 13.78 | -4.97 | 15.22 | 1903 |
| ISIS Pharma | ISIS | 11.89 | 12 | 0.93 | 68.30 | 4375 |
| Keryx Biopharma | KERX | 1.78 | 1.8 | 1.12 | -24.37 | 4440 |
| Lexicon | LXRX | 1.91 | 2.24 | 17.28 | 94.78 | 18065 |
| Ligand Pharma | LGND | 16.07 | 16.94 | 5.41 | 42.47 | 850 |
| MannKind | MNKD | 2.12 | 2.29 | 8.02 | -11.92 | 15361 |
| Map Pharma | MAPP | 13.76 | 14.95 | 8.65 | 11.40 | 1625 |
| Marina Biotech | MRNA | 0.33 | 0.28 | -15.15 | -71.72 | 279 |
| Maxygen | MAXY | 5.9 | 5.96 | 1.02 | 5.86 | 434 |
| Medgenics | MDGN | 10.6 | 10.8 | 1.89 | 333.73 | 1206 |
| MediciNova | MNOV | 1.57 | 1.63 | 3.82 | -4.12 | 57 |
| Merrimack Pharma | MACK | 7 | 7.28 | 4.00 | 20.53 | 496 |
| Momenta Pharma | MNTA | 17.01 | 13.47 | -20.81 | -22.90 | 4796 |
| Myrexis | MYRX | 2.43 | 2.61 | 7.41 | -2.61 | 212 |
| Myriad Genetics | MYGN | 22.63 | 23.77 | 5.04 | 13.73 | 3615 |
| Nabi Biopharma | NABI | 1.56 | 1.58 | 1.28 | -15.96 | 1566 |
| Nektar Therap | NKTR | 8.09 | 8.07 | -0.25 | 45.14 | 3516 |
| Neurocrine Biosci | NBIX | 7.75 | 7.89 | 1.81 | -8.04 | 2320 |
| NeurogesX | NGSX | 0.32 | 0.28 | -12.50 | -67.44 | 283 |
| NewLink Genetics | NLNK | 16.78 | 14.98 | -10.73 | 112.78 | 1027 |
| NovaBay | NBY | 1.25 | 1.26 | 0.80 | 2.44 | 730 |
| Novavax | NVAX | 1.35 | 1.56 | 15.56 | 24.80 | 4230 |
| NPS Pharma | NPSP | 8.21 | 8.61 | 4.87 | 31.45 | 5138 |
| NuPathe | PATH | 3.48 | 4.03 | 15.80 | 126.40 | 440 |
| Omeros | OMER | 13.25 | 10 | -24.53 | 150.00 | 3949 |
| OncoGenex Pharma | OGXI | 13.51 | 13.44 | -0.52 | 15.76 | 185 |
| Oncothyreon | ONTY | 4.88 | 4.68 | -4.10 | -38.50 | 2680 |
| Onyx Pharma | ONXX | 65.67 | 66.45 | 1.19 | 51.96 | 11685 |
| Opko Health | OPK | 4.59 | 4.6 | 0.22 | -4.17 | 3781 |
| Optimer Pharma | OPTR | 15.05 | 15.46 | 2.72 | 26.83 | 1861 |
| OraSure Tech | OSUR | 10.37 | 11.24 | 8.39 | 22.57 | 1111 |
| Orexigen | OREX | 4.07 | 5.54 | 36.12 | 244.10 | 67719 |
| Osiris Thera | OSIR | 12.5 | 10.97 | -12.24 | 110.56 | 4880 |
| Oxis International | OXIS | 0.03 | 0.03 | 0.00 | 0.00 | 8 |
| Pacific Biosciences | PACB | 2.06 | 2.17 | 5.34 | -18.42 | 1226 |
| Pacira Pharma | PCRX | 15.5 | 16.04 | 3.48 | 87.82 | 1585 |
| Pain Therapeutics | PTIE | 4.85 | 4.69 | -3.30 | 25.74 | 491 |
| Palatin Tech | PTN | 0.45 | 0.5 | 11.11 | 19.05 | 270 |
| Peregrine Pharma | PPHM | 0.47 | 0.54 | 14.89 | -50.00 | 3082 |
| Pharmacyclics | PCYC | 47.8 | 54.61 | 14.25 | 262.62 | 11970 |
| Pharmos | PARS | 0.07 | 0.08 | 14.29 | 60.00 | 33 |
| Poniard Pharma | PARD | 0.37 | 0.35 | -5.41 | -68.75 | 0 |
| Pozen | POZN | 6.26 | 6.23 | -0.48 | 59.74 | 841 |
| Progenics Pharma | PGNX | 8.77 | 9.78 | 11.52 | 13.59 | 960 |
| Protalix Biothera | PLX | 6.19 | 5.73 | -7.43 | 15.76 | 2053 |
| Protein Design | PDLI | 6.48 | 6.63 | 2.31 | 7.63 | 6768 |
| Qiagen | QGEN | 16.52 | 16.7 | 1.09 | 20.49 | 3016 |
| QLT Inc. | QLTI | 7.72 | 7.62 | -1.30 | 6.57 | 387 |
| Raptor Pharma | RPTP | 5.67 | 5.58 | -1.59 | -10.29 | 909 |
| Regeneron Pharma | REGN | 115.9 | 114.22 | -1.45 | 102.88 | 3171 |
| Repligen | RGEN | 3.95 | 4.3 | 8.86 | 21.47 | 743 |
| Rexahn Pharma | RNN | 0.31 | 0.32 | 3.23 | -13.51 | 885 |
| Rigel Pharma | RIGL | 9.02 | 9.3 | 3.10 | 16.25 | 2533 |
| Sagent Pharma | SGNT | 18.47 | 18.08 | -2.11 | -11.42 | 343 |
| Sangamo Biosci | SGMO | 5.29 | 5.52 | 4.35 | 98.56 | 1006 |
| Santarus | SNTS | 7.12 | 7.09 | -0.42 | 110.39 | 1883 |
| Savient Pharma | SVNT | 0.69 | 0.54 | -21.74 | -75.45 | 5143 |
| SciClone Pharma | SCLN | 6.92 | 7.01 | 1.30 | 64.94 | 1799 |
| Seattle Genetics | SGEN | 25.24 | 25.39 | 0.59 | 52.22 | 3498 |
| Sequenom | SQNM | 4.14 | 4.06 | -1.93 | -6.24 | 14806 |
| SIGA Tech | SIGA | 2.87 | 2.86 | -0.35 | 24.89 | 644 |
| Soligenix | SNGX | 0.31 | 0.28 | -9.68 | -65.00 | 58 |
| Somaxon Pharma | SOMX | 0.26 | 0.28 | 7.69 | -39.13 | 926 |
| Spectrum Pharma | SPPI | 13.89 | 15.56 | 12.02 | 6.21 | 13691 |
| StemCells | STEM | 0.83 | 0.81 | -2.41 | -1.22 | 643 |
| Sucampo Pharma | SCMP | 7.1 | 7.03 | -0.99 | 57.27 | 137 |
| Supernus Pharma | SUPN | 5.15 | 9.36 | 81.75 | 63.07 | 5792 |
| Synageva Bio | GEVA | 38.5 | 40.56 | 5.35 | 52.31 | 1038 |
| Synta Pharma | SNTA | 7.24 | 5.47 | -24.45 | 15.16 | 15355 |
| Talon Thera | TLOX | 0.9 | 1.15 | 27.78 | 173.81 | 3672 |
| Targacept | TRGT | 4.21 | 4.3 | 2.14 | -20.07 | 877 |
| Telik | TELK | 2.63 | 2.09 | -20.53 | -61.30 | 1455 |
| Tengion | TNGN | 3.05 | 2.95 | -3.28 | -37.23 | 99 |
| Theravance | THRX | 20.81 | 22.22 | 6.78 | 0.23 | 1643 |

| Company | Symbol | Close 6/22 | Close 6/29 | %Change | | Vol (000) |
|---------------------|--------|---------------|---------------|---------|--------|--------------|
| | | | | WK | YTD | |
| Titan Pharma | TTNP | 0.7 | 0.7 | 0.00 | -37.50 | 338 |
| Transcept Pharma | TSPT | 6.19 | 6.2 | 0.16 | -18.95 | 946 |
| Transgenomic | TBIO | 0.8 | 0.9 | 12.50 | -31.82 | 73 |
| Tranzyme | TZYM | 3.27 | 3.76 | 14.98 | 27.46 | 50 |
| Trinity Biotech | TRIB | 11.82 | 12 | 1.52 | 17.65 | 554 |
| Trius Therap | TSRX | 5.99 | 5.76 | -3.84 | -14.16 | 829 |
| Unigene | UGNE | 0.3 | 0.28 | -6.67 | -44.00 | 170 |
| United Therap | UTHR | 48.01 | 49.38 | 2.85 | 3.87 | 2095 |
| Vanda Pharma | VNDA | 4.4 | 4.4 | 0.00 | -1.35 | 280 |
| Ventrus Biosciences | VTUS | 12.26 | 4.27 | -65.17 | -43.22 | 7376 |
| Verastem | VSTM | 9.8 | 9.69 | -1.12 | -15.00 | 45 |
| Vermillion | VRML | 2.19 | 2.25 | 2.74 | 99.12 | 455 |
| Vertex Pharma | VRTX | 60.61 | 55.92 | -7.74 | 70.70 | 29918 |
| Vical | VICL | 3.38 | 3.6 | 6.51 | -19.82 | 3560 |
| ViroPharma | VPHM | 23.16 | 23.7 | 2.33 | -15.15 | 4303 |
| Vivus | VVUS | 26.51 | 28.54 | 7.66 | 193.62 | 24257 |
| XenoPort | XNPT | 6.1 | 6.04 | -0.98 | 67.78 | 1551 |
| XOMA | XOMA | 2.66 | 2.98 | 12.03 | 159.13 | 4923 |
| Zaliscus Inc | ZLCS | 1.36 | 1.2 | -11.76 | 0.00 | 13685 |
| Zogenix | ZGNX | 2.37 | 2.48 | 4.64 | 13.24 | 1157 |

| LONDON STOCK EXCHANGE | | | | | | |
|-----------------------|--------|-------|--------|-------|--------|--------|
| Company | Symbol | 6/22 | 6/29 | %WK | %YTD | Volume |
| Antisoma | ASM | 1.62 | 1.63 | 0.62 | -95.06 | 687 |
| Ark Therapeutics | AKT | 2.9 | 2.874 | -0.90 | -79.54 | 2233 |
| Asterand | ATD | 0.99 | 0.9 | -9.09 | -95.16 | 3460 |
| Oxford Biomedica | OXB | 2.36 | 2.35 | -0.42 | -79.11 | 6644 |
| Phytopharm | PYM | 5.8 | 5.9 | 1.72 | -45.57 | 129 |
| Puricore | PURI | 50 | 48 | -4.00 | 258.21 | 181 |
| Renovo Group | RNVO | 17.52 | 17.52 | 0.00 | -39.38 | 45 |
| SkyePharma | SKP | 75.85 | 78.3 | 3.23 | -8.91 | 119 |
| Vernalis | VER | 23 | 22.908 | -0.40 | -73.67 | 288 |

Note: Prices are denoted in pence.

| TORONTO STOCK EXCHANGE | | | | | | |
|------------------------|--------|------|------|-------|--------|--------|
| Company | Symbol | 6/22 | 6/29 | %WK | %YTD | Volume |
| Adherex Technol | AHX | 0.16 | 0.15 | -6.25 | 233.33 | 30 |
| Allon Therapeutics | NPC | 0.24 | 0.24 | 0.00 | -25.00 | 17 |
| BELLUS Health | BLU | 0.8 | 0.74 | -7.50 | 311.11 | 26 |
| Bioniche Life Sci | BNC | 0.4 | 0.44 | 10.00 | -21.43 | 617 |
| Cangene | CNJ | 1.5 | 1.42 | -5.33 | -72.16 | 50 |
| Isotechnika | ISA | 0.06 | 0.09 | 50.00 | -45.45 | 43 |
| Lorus Therapeutics | LOR | 0.51 | 0.47 | -7.84 | 623.08 | 170 |
| Medicago | MDG | 0.47 | 0.49 | 4.26 | -26.87 | 1279 |
| MethylGene | MYG | 0.24 | 0.24 | 0.00 | -14.29 | 149 |
| Oncolytics Biotech | ONC | 3.38 | 3.37 | -0.30 | 22.55 | 605 |
| Resverlogix | RVX | 1.59 | 1.83 | 15.09 | 29.79 | 227 |
| Sophiris Bio | SHSX | 0.33 | 0.36 | 9.09 | 0.00 | 78 |
| Tekmira Pharma | TKM | 2.03 | 2.09 | 2.96 | 124.73 | 52 |
| Thallion Pharma | TLN | 0.07 | 0.07 | 0.00 | -36.36 | 229 |
| Theratechnologies | TH | 0.73 | 0.82 | 12.33 | -81.49 | 670 |
| YM BioSciences | YM | 2 | 2.02 | 1.00 | 39.31 | 136 |

Note: Prices are denoted in Canadian dollars.

NOTES:

Trading volumes for Nasdaq, Amex and NYSE are recorded as the total number of shares traded (in thousands) on a weekly basis (cumulative Monday through Friday); the weekly and YTD % changes are from IPO completion, where applicable.

Average Percent Change Week: +1.84%

Range: -76.71% to +81.75%; Number Of Companies: 211 (does not include LSE or TSX; not market weighted)

Average Percent Change YTD: +28.83%

Range: -88.40% to +446.34%; Number Of Companies: 211 (does not include LSE or TSX; not market weighted)