

*Better Late Than Never*

## Science, Rare Disease Push Help Developmental Disorders

By Anette Breindl  
Science Editor

In its last issue of the year, *Science* – one of the premier journals for peer-reviewed scientific research – published both what it considers to be the biggest breakthrough of the past year, and areas to watch for the next year. For 2012, one of those hopeful areas was “treating intellectual disability.”

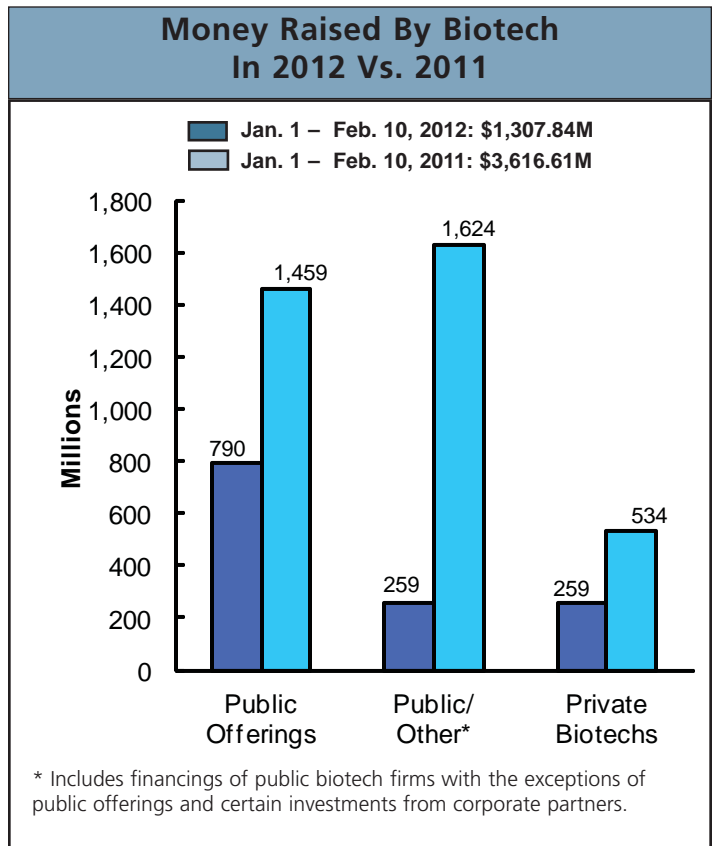
According to the story, “the cognitive deficits and behavioral problems caused by Rett, Fragile X and Down syndromes have long been considered irreversible. In each syndrome, a genetic glitch causes brain development to go awry even before birth. But recent work with mouse models of those conditions suggests, remarkably, that some cognitive and behavioral symptoms may be reversible.”

For Rett syndrome, Monica Coenraads traces the realization that developmental disorders do not necessarily mean a lifetime of disability, to a paper published almost exactly five years ago, in the Feb. 8, 2007, issue of *Science*. In that paper, researchers reported that when they replaced the mutated MeCP2 protein with a normal one in adult mice with full-blown Rett syndrome – animals whose life expectancy without medical intervention could be measured in days – the mice could be rescued, and many of their symptoms reversed.

### 2007: A Sea Change

Those results “changed the perspective, not just for Rett syndrome, but for other developmental disorders,” Coenraads told *BioWorld Insight*. She is the executive director of the Rett Syndrome Research Trust.

Because the data showed that the deficits in Rett syndrome “have more to do with maintenance than



development,” they also showed that there was a much larger time window for treatment than had previously been appreciated – which, in turn, makes the logistics of treatment a lot less daunting. From a therapeutic standpoint, “you don’t want to have to think about prevention, or treatment in the first year at the most, to have an effect,” Coenraads said.

Though there are as yet no industry programs for

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*Raising Capital in the 21st Century*

## R&R's DirectMarkets Links Companies with Investors

By **Brian Orelli**

**BioWorld Insight Contributing Writer**

Since the beginning of the biotech industry, finding capital has always been a major factor in the success of a company. Without cash, it's hard to develop drugs.

Over the years, a wide variety of ways to raise capital have come in and out of favor: venture capital, initial public offerings, secondary offerings, private investment in public equity (PIPE) and at the market offerings (ATMs). But they all have one thing in common: investors interested in parting with their cash in hopes of reaping rewards.

Rodman & Renshaw Capital Group Inc. hopes to link investors looking for a place to invest with public companies that are in need of cash through its new automated electronic transaction platform called DirectMarkets, while improving transaction time and decreasing costs.

Companies that have completed a shelf registration can sell shares through DirectMarkets, which will launch next month. Selling directly into the public markets to unknown investors is already an option through an ATM, but Kevin Lupowitz, CEO of DirectMarkets, said that while his platform can serve this purpose, its real benefit is that it allows companies to attract new investors and then interact with them directly through a bid solicitation process that culminates in the company choosing which investors to accept.

DirectMarkets will provide a website where the company can put information typically presented at non-deal road shows, making it easier for the investors to learn about the company.

"They'll be able to raise awareness of their name and brand," Lupowitz told *BioWorld Insight*.

Once a company signals its interest in selling shares, investors will bid on shares, removing the manual effort of sourcing investors that's typically carried out by investment bankers. The company can then choose the bids its most

interested in pursuing further.

By soliciting bids, companies might be able to get better terms than they could selling into the public markets. Lupowitz said investors might be willing to pay a premium to acquire a large number of shares, which might be difficult in the public markets for companies with thinly traded shares. The investors also will know that their cash is going directly to the company's coffers.

Investors will have the option of contacting companies through DirectMarkets and expressing their interest in purchasing shares.

By choosing the investors, companies have some control over who buys their shares, potentially favoring investors looking to become long-term shareholders. "The advantage to issuers is they're empowered," Lupowitz said. "Investment banks usually source from their usual suspects; more often than not, they're looking to make a quick buck."

Todd Wyche, founder of Brinson Patrick Securities, an investment banking boutique specializing in ATMs where the buyers of the shares aren't known, worries that there's still a conflict of interest with DirectMarkets representing both the buyer and seller. "People in the middle might favor the buyer side," he pointed out.

DirectMarkets expects to maintain low costs by keeping everything electronic. An electronic closing room is "meant to be as simple as a checkout process on Amazon," Lupowitz said.

Companies will pay a subscription fee to use the service, but then sales of shares will be in line with trading fees – on the order of a penny or two per share – rather than investment banking fees.

For that cost savings, DirectMarkets appears to be a little more do-it-yourself than a typical capital raise through an investment bank. Brinson Patrick's Wyche wonders if saving a little money is worth the effort. "We think companies should spend energy on running their business instead of figuring out the intricacies of the capital markets," Wyche said. ■

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*Patients Seek Regulatory Voice*

## CF Patient Power Fuels Early Kalydeco Approval

**By Mari Serebrov  
Washington Editor**

Early approval of a new drug is usually valued by the dollars that will be made through additional sales.

But for Vertex Pharmaceuticals Inc.'s cystic fibrosis (CF) team, the benefit of getting Kalydeco (ivacaftor) approved three months before its PDUFA date is calculated by what it means to patients.

That focus comes from almost daily contact with CF patients, their families and care centers as the biotech worked with Cystic Fibrosis Foundation Therapeutics Inc. (CFFT) to develop the drug, Eric Olson, Vertex vice president and lead of the CF franchise, told *BioWorld Insight*.

The involvement with patients "really motivates the team . . . and infuses a sense of urgency," he said, telling of one family he met that lost all three kids to CF within a few years.

Because of that urgency, the Cystic Fibrosis Foundation years ago harnessed the power and experience of CF patients to begin pioneering venture philanthropy by partnering with various drug companies, picking up a portion of development costs, providing researchers with insights about the patient population and helping to recruit patients for clinical trials.

Since 1998, the foundation's patient-powered model has yielded dozens of collaborations with leading biotechs and a "pipeline of promise" with more than 30 therapies in development for CF. As of last year, it had invested \$315 million in collaborations with drug companies. (See *BioWorld Today*, July 17, 2008.)

One of the biggest chunks of that investment, \$75 million, helped fund Vertex's R&D of CFTR modulators, and CFFT has made an additional commitment to the Cambridge, Mass.-based biotech of \$75 million through 2016. In addition to the funding, Vertex benefited from patient input into trial design for Kalydeco and the foundation's trial recruitment efforts.

Now that it's time to launch Kalydeco, Vertex also could benefit from the nonprofit's patient registry, which includes the genotype mutation of CF patients. Because of that registry, the patients and care centers know who could be helped by Kalydeco, which was approved to treat the G551D mutation.

With patient-fueled drug discovery and development proving successful, patient organizations are looking for new avenues to exert their influence. The latest quest is getting a seat at the regulatory table.

A number of patient organizations recently submitted a proposal to the FDA on how the patient community can weigh in as the agency makes risk tolerance and other decisions regarding specific drug applications or policy decisions.

In testimony before the first House subcommittee hearing

on PDUFA reauthorization, Diane Edquist Dorman, vice president of the National Organization for Rare Disorders, stressed the importance of patient communication beyond the current confines of a testimonial at an advisory committee meeting or public workshop.

"As the FDA commits to a more patient-centric posture, and as patients themselves become more knowledgeable and sophisticated about diseases and their treatment options," Dorman said, "we advocate that more systematic processes be established at FDA to enable contributions from the patient community at the time that critical decisions on risk tolerance are being made, and from a representative sample of patient views."

The patients don't want to add to the burden of the regulatory system, but they have a unique perspective the FDA, and drugmakers, need to hear. For instance, they know better than the "experts" the amount of risk patients at various stages of an illness are willing to take, Dorman said.

Patients also can speak to the quality-of-life challenges they face and the ways they receive information about the proper use of therapies.

In many cases involving extremely rare diseases, the patients often know more about the disease, and what it means to live with it, than the physician, Dorman said, as she encouraged the FDA, as a matter of policy, to seek patient input at specific milestones during the drug review and approval process. ■

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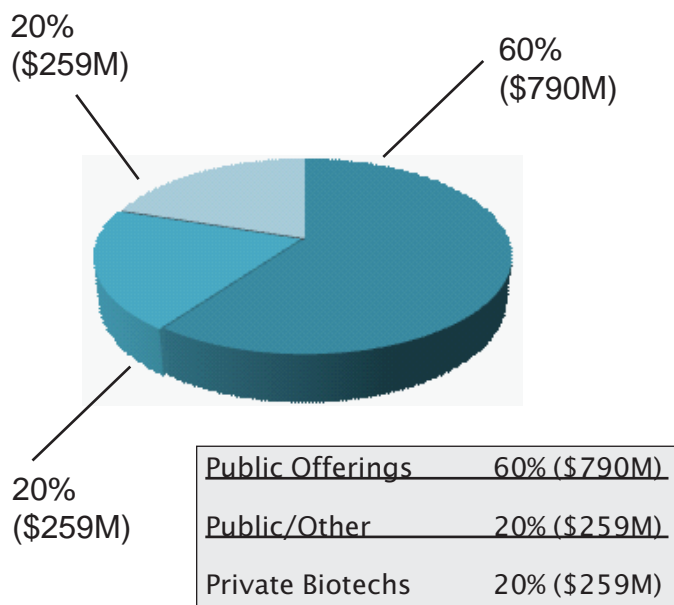
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## Money Raised By Biotech: Jan. 1 - Feb. 10, 2012



### Science

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Rett syndrome, Coenraads said her foundation is in talks with several biopharmaceutical companies about possibly pursuing such programs.

Coenraads credits that interest to several other factors besides the seminal paper in *Science*.

Rett syndrome research, she said, has benefited from a push to focus on rare disorders more generally. Over the last few years, big pharma firms like Pfizer Inc., GlaxoSmithKline plc and Sanofi SA have expanded beyond their traditional focus on major markets and plunged into rare diseases, pursuing collaborations, acquisitions and internal research initiatives in indications like Gaucher, Fabry and muscular dystrophy. (See *BioWorld Insight*, Dec. 7, 2009.)

To academics, Rett is also a disease that is simultaneously tractable and intriguing. Its tractability comes from the fact that it is a single-gene disorder whose gene has been identified, and for which “we have really good animal models of the disease.”

Scientifically, Rett syndrome sits at the intersection of neurobiology and epigenetics, since the MeCP2 protein is involved in methylation.

Rett syndrome is also connected to other disorders. Some of those disorders, such as autism, come as no surprise. But other links may be more unexpected to those who are not Rett syndrome experts. In particular, Coenraads said there are links between Rett syndrome and Parkinson’s disease. “It’s very hard to gauge cognitive intellect in children who

are nonverbal, cannot use their hands and are really not in control of their bodies,” Coenraads said, adding that there is most likely a spectrum of cognitive disability, just as there is a spectrum of physical disability in individuals with Rett syndrome. But she believes that “at heart, Rett syndrome is a movement disorder.”

Judith Kelleher-Andersson, CEO of Neuronascent Inc., also cited the push toward treatments for rare diseases as part of what has brought about the realization that many intellectual disabilities may be treatable. “There really is a sea change going on where not just the NIH, but even some pharmaceutical companies are looking more at rare disorders,” she told *BioWorld Insight*. That, in turn, provides “a big impetus” to look at such rare disorders.

Neuronascent was founded in 2004 and is focused mainly on neurodegenerative disease, but it also has a program going for Down syndrome.

Like Rett syndrome, Down syndrome has connections to other disorders that have a longer history of being in biopharma’s crosshairs. Most individuals with Down syndrome develop Alzheimer’s disease, and Kelleher – who is quite critical of the amyloid-beta model of Alzheimer’s – said that looking at models of Down syndrome might bring better insights into the disorder.

A successful Alzheimer’s drug, of course, would be all but guaranteed blockbuster status. And its clinical path is far clearer than that of a trailblazer to treat cognitive disorders. So what makes companies go for rare indications instead?

### Rare or Common?

Partly, Jay Lichter told *BioWorld Insight*, it is that in many ways, it’s hard for the unknown path for a trailblazer to be any worse than the known path for many large indications. While pivotal trials in bigger indications can take a two-year trial of 1,000 patients, it is not unheard of for rare disease drugs to be approved on the basis of a six-month trial in 30 or 40 patients.

Lichter is the CEO of Afraxis Inc., which is in preclinical development with a drug for Fragile X syndrome. He is also a managing director at Avalon Ventures.

Like Rett syndrome, attitudes towards Fragile X underwent a fundamental shift with the publication of a research paper in 2007. In that case, the paper came out of the lab of Nobelist and M.I.T. professor Susumu Tonegawa. Work at Afraxis targets the kinase that Tonegawa and his team identified in that paper, the p21-activated kinase, or PAK.

Lichter said, from a venture capital standpoint, whether new scientific findings will translate into a willingness for a company to go after a disease depends on many things. As with Rett syndrome, the paper showing that Fragile X could be treated into animal adulthood was one key factor.

*See Science, page 5*

## WEEK IN REVIEW

### Financings

**Acetylon Pharmaceuticals Inc.** scored a \$15 million equity investment from **Celgene Corp.**

**Altheos Inc.** raised \$12.5 million in a Series A extension round.

**Anacor Pharmaceuticals Inc.** is raising \$21.5 million in a public stock offering.

**Array Biopharma Inc.** raised \$52 million in a public stock offering.

**Cempra Inc.** raised \$50.4 million in its initial public offering.

**ChemoCentryx Inc.** raised \$45 million in its initial public offering.

**MannKind Corp.** raised \$75 million in a public offering of stock and warrants.

**Radius Health Inc.** filed to raise up to \$86.25 million in an initial public offering.

**Synchroneuron Inc.** raised \$6 million in a Series A financing for movement disorders.

### Deals

**Cytomedix Inc.** acquired cell therapy firm **Aldagen Inc.** for \$16 million in stock.

**Threshold Pharmaceuticals Inc.** signed a \$550 million deal with **Merck KgaA** for cancer drug TH-302.

**Tocagen Inc.** signed a companion diagnostics partnership with **Siemens Healthcare Diagnostics**.

### ... And More

Check *BioWorld Today* for coverage of the American Heart Association International Stroke Conference, the Society for Laboratory Automation and Screening's annual meeting and the Biocom Global Life Science Partnering Conference.

**Amgen Inc.**'s Xgeva (denosumab) got vetoed by an FDA panel for preventing prostate-to-bone metastases.

**Avanir Pharmaceuticals Inc.**'s AVP-923 reduced pain in a diabetic peripheral neuropathy Phase III trial.

**Eisai Co. Ltd.**'s and **Astex Pharmaceuticals Inc.**'s Dacogen (decitabine) got an advisory committee's thumbs-down for an expansion from myelodysplastic syndromes into acute myeloid leukemia.

**Forest Laboratories Inc.**'s and **Gedeon Richter plc**'s antipsychotic cariprazine got good Phase III data.

**NeurogesX Inc.**'s Qutenza (capsaicin) got an advisory panel's veto in HIV-associated peripheral neuropathy.

**ViroPharma Inc.** got a complete response on Cinryze (CI esterase inhibitor) manufacturing expansions.

## Science

*Continued from page 4*

Another factor is that, in the case of Fragile X, Tonegawa identified a kinase – pretty much the oldest frenemy of the biopharmaceutical industry. While there are challenges with getting a kinase inhibitor to the right place in high enough concentrations, how to address those challenges is hardly something that stumps industry in principle – whereas “if all you have is a target of unknown function, that’s intractable,” Lichter told *BioWorld Insight*.

Though it has been about five years since the realization

that both Rett syndrome and Fragile X may be treatable in adults, the latter has attracted more commercial attention in those five years. Furthest along is Seaside Therapeutics Inc., which is in a Phase III trial for Fragile X with its STX-209. Marinus Pharmaceuticals Inc., like Afraxis, is at the preclinical stage.

But Lichter said Fragile X is likely further along the development path than Rett syndrome due to serendipity rather than any intrinsic differences between how tractable the two disorders are. In fact, he said, “a compound that works in Fragile X is likely to work in Rett syndrome as well.” ■

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## WORD ON THE STREET

"It's a good reaction to the fear and retrenchment."

– Bijan Salehizadeh, co-founder and managing director of NaviMed Capital, on the emergence of new venture business models

"Synergy always starts with people, and in these kinds of enterprises it starts with the scientists."

– Amir Nashat, partner at Polaris Venture Partners and member of the board of directors at Avila Therapeutics Inc., discussing the acquisition by Celgene Corp.

"I've been dismayed that in this whole Republican primary, I've heard not one word about the FDA. Everybody's talking about jobs, but nobody talks about FDA."

– John Reed, CEO of Sanford-Burnham Medical Research Institute, pointing out that the FDA regulates roughly one-fifth of the U.S. economy

## WEEK IN WASHINGTON

The FDA released three draft guidances on biosimilars, describing a risk-based "totality-of-the-evidence" approach to establishing similarity to a reference product. Other guidances are in the works, although the FDA said it will not follow the European model of issuing separate guidances for each drug class.

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## Public Financing Of Biotechnology: January 2012

### I. COMMENCED TRADING IN JANUARY

Company (Symbol)#	Date Filed	Date Comm.	Shares/ Units (M)	Price	Shares Out (M)@	Lead, Other Underwriters	Gross (US\$M)	Post-Offering Market Cap (M)%
<b>Verastem Inc.</b> (Cambridge, Mass.; VSTM) <sup>1</sup>	11/3/11	1/27/12	6.325S	\$10	21.06	UBS Investment Bank Leerink Swann (co-lead) Lazard Capital Markets Oppenheimer & Co. Rodman & Renshaw LLC	\$63.25	\$210.6

### TOTAL: \$63.25M

NUMBER OF IPOs IN JANUARY: 1

AVERAGE VALUE OF JANUARY IPOs: \$63.25M

NUMBER OF IPOs IN 2012: 1

TOTAL RAISED IN IPOs IN 2012: \$63.25M

AVERAGE VALUE OF IPOs IN 2012: \$63.25M

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

<b>Aeterna Zentaris Inc.</b> (Quebec City; AEZS) <sup>2</sup>	1/23/12	1/23/12	10.4S	N/A	N/A	MLV & Co. LLC	(up to \$16)	N/A
<b>Chelsea Therapeutics International Ltd.</b> (Charlotte, N.C.; CHTP) <sup>3</sup>	1/10/11	1/6/12	4.99S	\$4.75	66.84	Leerink Swann Needham & Co. Roth Capital Partners	\$23.7	\$317.49
<b>iBio Inc.</b> (Newark, Del.; AMEX:IBIO) <sup>4</sup>	7/26/11	1/9/12	15.385U	\$0.65	47.8	Roth Capital Partners	\$10	\$31.07
<b>ImmunoCellular Therapeutics Ltd.</b> (Woodland Hills, Calif.; OTC QB:IMUC) <sup>5</sup>	1/11/12	1/11/12	9.49U	\$1.10	38.7	Cowen & Co. Summer Street Research	\$10.44	\$42.57
<b>Neurocrine Biosciences Inc.</b> (San Diego; NBIX) <sup>6</sup>	12/29/10	1/19/12	10.925S	\$8.10	66.19	Jefferies Deutsche Bank (co-lead) Piper Jaffray Leerink Swann	\$88.49	\$536.14
<b>Senesco Technologies Inc.</b> (Bridgewater, N.J.; AMEX:SNT)	10/26/10	1/9/12	8.7S and W for 3.75S	\$0.26	89.5	N/A	\$2.26	\$23.27

Company (Symbol)#	Date Filed	Date Comm.	Shares/ Units (M)	Price	Shares Out (M)@	Lead, Other Underwriters	Gross (US\$M)	Post-Offering Market Cap (M)%
<b>Synageva BioPharma Corp.</b> (Lexington, Mass.; GEVA) <sup>7</sup>	12/20/11	1/5/12	3.57S	\$25.18	21.17	Morgan Stanley (co-lead) JP Morgan (co-lead) Cowen & Co. Leerink Swann Wedbush PacGrow Life	\$89.89	\$533.1
<b>Synta Pharmaceuticals Corp.</b> (Lexington, Mass.; SNTA) <sup>8</sup>	8/19/11	1/6/12	8.05S	\$4.40	57.55	Jefferies Canaccord Genuity Roth Capital Partners	\$35.42	\$253.22
<b>Trius Therapeutics Inc.</b> (San Diego; TSRX) <sup>9</sup>	9/15/11	1/26/12	9.89S	\$5.25	38.44	Citigroup Piper Jaffray (co-lead) Canaccord Genuity Ladenburg Thalmann	\$51.92	\$201.81
<b>Vical Inc.</b> (San Diego; VICAL) <sup>10</sup>	1/29/10	1/6/12	13.3S	\$3.75	95.87	Citigroup (co-lead) Credit Suisse Sec. (co-lead) Leerink Swann (co-lead) Rodman & Renshaw LLC	\$50	\$359.5
<b>Ziopharm Oncology Inc.</b> (New York; ZIOP) <sup>11</sup>	11/16/12	1/23/12	9.65S	\$5.20	78.1	J.P. Morgan Lazard Capital Markets Piper Jaffray Collins Stewart Griffin Securities Inc.	\$50.18	\$406.12

**TOTAL: \$412.3M**

NUMBER OF FOLLOW-ON OFFERINGS IN JANUARY: 10

AVERAGE VALUE OF JANUARY FOLLOW-ONS: \$41.23M

NUMBER OF FOLLOW-ON OFFERINGS IN 2012: 10

TOTAL RAISED IN FOLLOW-ONS IN 2012: \$412.3M

AVERAGE VALUE OF FOLLOW-ONS IN 2012: \$41.23M

## 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.

<sup>1</sup> Includes Verastem's overallotment option: 825,000 shares.

<sup>2</sup> Aeterna commenced an at-the-market financing to sell up to 10.4M shares for up to \$16M. The company raised approximately \$35.5M through the same method in 2011.

<sup>3</sup> Includes Chelsea's overallotment option: 650,775 shares.

<sup>4</sup> iBio's units contain one share of common stock and 0.75 units of a warrant to purchase one share of common stock; warrants are exercisable at 88 cents per share a year and a day after issuance.

<sup>5</sup> ImmunoCellular's units consist of one share of common stock and a warrant to buy one half share of common stock; the warrants have a five-year term and are exercisable at \$1.41 per share.

<sup>6</sup> Includes Neurocrine's overallotment option: 1.425M shares.

<sup>7</sup> Includes Synageva's overallotment option: 466,209 shares.

<sup>8</sup> Includes Synta's overallotment option: 1.05M shares.

<sup>9</sup> Includes Trius' overallotment option: 1.29M shares.

<sup>10</sup> Vical's overallotment option: 2M shares.

<sup>11</sup> Ziopharm's overallotment option: 1.448M shares.



**II. FILED AND PENDING**

<b>Company (Symbol)#*</b>	<b>Date Filed</b>	<b>Shares/ Units (M)</b>	<b>Price</b>	<b>Shares Out</b>	<b>Lead, Other Underwriters (M)®</b>	<b>Gross (US\$M)</b>
<b>INITIAL OFFERINGS</b>						
<b>Argos Therapeutics Inc.</b> (Durham, N.C.; ARGS)	7/29/11	N/A	N/A	N/A	Lazard Capital Markets Canaccord Genuity (co-lead) Needham & Co. BMO Capital Markets	\$86.25
<b>Cempra Holdings LLC</b> (Chapel Hill, N.C.; CEMP) <sup>1</sup>	10/12/11	N/A	N/A	N/A	Stifel Nicolaus Weisel Leerink Swann (co-lead) Cowen & Co. (co-lead) Needham & Co.	\$86.25
<b>ChemoCentryx Inc.</b> (Mountain View, Calif.; CCXI) <sup>2</sup>	10/14/11	4S	\$14-\$16	34.02	J.P. Morgan Citigroup (co-lead) Cowen and Co.	\$60
<b>Insys Therapeutics Inc.</b> (Phoenix; INRX)	3/30/11	N/A	N/A	N/A	Wells Fargo Securities JMP Securities (co-lead) Oppenheimer & Co.	\$55
<b>Merrimack Pharmaceuticals Inc.</b> (Cambridge, Mass.; MACK)	7/8/11	N/A	N/A	N/A	J.P. Morgan BofA Merrill Lynch Cowen & Co. Oppenheimer & Co.	\$172.5
<b>Rib-X Pharmaceuticals Inc.</b> (New Haven, Conn.; RIBX)	11/28/11	N/A	N/A	N/A	Deutsche Bank Securities William Blair & Co. Lazard Capital Markets Needham & Co. LLC	\$80
<b>Supernus Pharmaceuticals Inc.</b> (Rockville, Md.; SUPN)	12/23/10	N/A	N/A	N/A	Citigroup Piper Jaffray (co-lead) Cowen and Co. Stifel Nicolaus Weisel	\$100
<b>TVAX Biomedical Inc.</b> (Lenexa, Kan.; TVAX) <sup>3</sup>	11/7/11	2S	\$9-\$11	N/A	Roth Capital Partners Cantor Fitzgerald & Co. Aegis Capital Corp.	\$20

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.

<sup>1</sup> Cempra completed its IPO Feb. 3, raising \$50.4M, and will appear as completed in the February chart.

<sup>2</sup> ChemoCentryx completed its IPO Feb. 8, raising \$45M, and will appear as completed in the February chart.

<sup>3</sup> TVAX's overallotment option: 300,000 shares.

## Biotech Money Raised By Month In 2012

Type of financing	January	Total (\$M)
Public offerings	475.6	475.6
Public/other	245.3	245.3
Private biotechs	250.4	250.4
Total (\$M)	971.3	971.3

## 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: January 2012

**TOTAL: \$245.296M**

Company (Location)	Type Of Financing	Number Of Shares, Units Or Warrants (M)	Amount Raised (M)	Investors; Placement Agents; Details (Date)
<b>Advaxis Inc.</b> (Princeton, N.J.)	Convertible notes purchase agreement	Notes	\$1.2	Advaxis entered into the agreement with certain investors to purchase \$1.2M in notes; Rodman & Renshaw LLC acted as exclusive placement agent (1/4)
<b>Amarin Corp. plc</b> (Dublin, Ireland)	Offering of exchangeable senior notes maturing Jan. 15, 2032	Notes	\$150	Amarin's subsidiary Corsicanto Ltd. priced a \$150M offering with institutional buyers; initial purchasers have a 30-day option for another \$22.5M in notes; the initial exchange rate is 113.4752 American Depositary Shares of Amarin per \$1,000 principal of the notes, or about \$8.81 per ADS (1/5)
<b>Amsterdam Molecular Therapeutics BV</b> (Amsterdam, the Netherlands)	Private placement	7.45	€2.5 (\$3.3)	Amsterdam raised \$3.3M in the private placement with Forbion Capital Partners, Gilde Healthcare Partners and Advent Venture Partners (1/4)
<b>Arena Pharmaceuticals Inc.</b> (San Diego)	Registered direct offering	9.955	\$28	Arena sold nearly 10M shares at \$1.66 per share, and 9,953 shares of preferred stock at \$1,657.75 per share; the buyers are affiliated with Deerfield Management; \$5M of the \$33M total is being used to pay off part of a loan (1/12)
<b>Bionovo Inc.</b> (Emeryville, Calif.)	Private placement	N/A	\$5	Bionovo entered a \$5M securities purchase agreement with Socius CG II Ltd. (1/4)
<b>Cel-Sci Corp.</b> (Vienna, Va.)	Registered direct offering	16S and W for 12S	\$5.76	Cel-Sci raised \$5.76M by selling 16M shares priced at 36 cents each in a registered direct offering; the investor also receives warrants to purchase 12M shares (1/27)

## Top Private Financings Of Public Companies: 2012

Company	Amount Raised
Amarin Corp. plc	\$150M
Arena Pharmaceuticals Inc.	\$28M
Repros Therapeutics Inc.	\$11.1M
Talon Therapeutics Inc.	\$11M

Company (Location)	Type Of Financing	Number Of Shares, Units Or Warrants (M)	Amount Raised (M)	Investors; Placement Agents; Details (Date)
<b>DARA BioSciences Inc.</b> (Raleigh, N.C.)	Private placement of common stock and warrants	1.2S and W for 0.619S	\$1.7	DARA signed an agreement with an institutional investor for \$1.7M in Series B convertible preferred stock, convertible into about 1.2M shares of common stock, and warrants to purchase 619,308 shares of common stock; Ladenburg Thalmann & Co. acted as exclusive placement agent (1/20)
<b>Elite Pharmaceuticals Inc.</b> (Northvale, N.J.)	Private placement of nonconvertible Series F preferred stock	N/A	(up to \$5)	Elite entered an agreement to sell up to \$5M of stock to Socius Capital Group over a two-year period (1/4)
<b>EntreMed Inc.</b> (Rockville, Md.)	Private placement of convertible notes and warrants	N/A	\$10	EntreMed issued \$10M in convertible notes and warrants to certain accredited investors, including IDG-Accel China Growth Fund II LP, Emerging Technology Partners LLC and Tak W. Mak, director of the Campbell Family Institute for Breast Cancer Research (1/24)
<b>GenereX Biotechnology Corp.</b> (Worcester, Mass.)	One-year term loans	N/A	C\$3.6 (\$3.56)	GenereX secured two commitments to raise \$3.56M in capital through one-year term loans from private lenders, secured by the company's real estate (1/26)
<b>GeoVax Labs Inc.</b> (Atlanta)	Private placement of units	N/A	\$1.5	GeoVax is offering a private placement of up to \$1.5M of units consisting of one share of common stock and a five-year warrant to purchase 1.5M shares of common stock at \$1 per share (1/5)
<b>Marshall Edwards Inc.</b> (San Diego)	Private placement of common stock	1.94S	\$2	Marshall Edwards raised \$2M in the placement with majority shareholder and parent company Novogen Ltd. (1/3)
<b>Pacgen Biopharmaceuticals Co.</b> (Vancouver, British Columbia)	Private placement of common stock	4.376S	\$0.3	Pacgen raised \$300,000 by placing the shares with CurieMed Corp. (1/13)
<b>PharmaGap Inc.</b> (Ottawa, Ont.)	Private placement of units	1.0IU; 3.3U	\$0.071; \$0.231	PharmaGap completed an offering of 1.01M units for 7 cents each, raising \$70,744 (1/13); it completed an offering of 3.3M units for 7 cents apiece, raising \$231,000 (1/24)

Company (Location)	Type Of Financing	Number Of Shares, Units Or Warrants (M)	Amount Raised (M)	Investors; Placement Agents; Details (Date)
<b>Repros Therapeutics Inc.</b> (The Woodlands, Texas)	Registered direct offering	2.45	\$11.1	Repros raised \$11.1M by selling about 2.4M shares at \$4.50 each; Ladenburg Thalmann and Co. Inc. was the placement agent (1/30)
<b>Soligenix Inc.</b> (Princeton, N.J.)	Nondilutive financing	N/A	\$0.574	Soligenix received \$574,000 in nondilutive financing via the New Jersey's Technology Business Tax Certificate Transfer Program (1/27)
<b>Talon Therapeutics Inc.</b> (San Mateo, Calif.)	Private placement of preferred stock	N/A	\$11	Talon sold \$11M in preferred stock to Warburg Pincus and Deerfield Management (1/11)
<b>XOMA Ltd.</b> (Berkeley, Calif.)	Term loan agreement	N/A	\$10	XOMA signed a \$10M, 42-month secured term loan agreement with GE Capital Healthcare Financial Services (1/3)

## 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.

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

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## Venture Capital And Other Investments In Private Biotechnology Companies: January 2012

**TOTAL: \$250.44M**

Company	Location	Date	Amt. (M)	Details
<b>3-V Biosciences Inc.</b>	Menlo Park, Calif.	1/6	\$20	3-V Biosciences closed a preferred stock financing providing a minimum of \$20M with existing investors Kleiner Perkins Caufield and Byers and New Enterprise Associates
<b>Apogenix AG</b>	Heidelberg, Germany	1/6	€7.5 (\$9.6)	Apogenix raised \$9.6M in a Series C investment from Dievini Hopp BioTech Holding GmbH & Co. KG, the German Cancer Research Center and the company's founders and management
<b>Avexxin AS</b>	Trondheim, Norway	1/10	ND	Avexxin closed an undisclosed Series A round; Sarsia Seed managed the investment in syndication with Leiv Eiriksson Invest
<b>BergenBio AS</b>	Bergen, Norway	1/10	\$8.8	BergenBio raised \$8.8M in a Series A round from Sarsia Seed AS and Investinor AS
<b>BioRelix Inc.</b>	New Haven, Conn.	1/19	\$0.5	BioRelix received \$500,000 from Connecticut Innovations as part of a \$4.2M round of funding
<b>Blend Therapeutics Inc.</b>	Watertown, Mass.	1/9	ND	Blend raised an undisclosed amount from Flagship Ventures, New Enterprise Associates and NanoDimension
<b>Clearside Biomedical Inc.</b>	Atlanta	1/6	\$4	Clearside launched with a \$4M Series A from Hatteras Venture Partners
<b>CrystalGenomics Inc.</b>	Pangyo, South Korea	1/17	KRW3B (\$2.6)	CrystalGenomics raised \$2.6M through a private placement to the Korea Seoul Life Science Fund
<b>Elevation Pharmaceuticals Inc.</b>	San Diego	1/5	\$30	Elevation raised \$30M in a Series A round led by Novo Ventures, and including Canaan Partners, TPG Biotech, Care Capital and Mesa Verde Venture Partners
<b>Galecto Biotech AB</b>	Lund, Sweden	1/4	ND	Galecto received seed funding from Novo A/S, Merck Serono Ventures and Forskarpatent
<b>MacuClear Inc.</b>	Plano, Texas	1/4	\$1	MacuClear secured more than \$1M in funds from current investors
<b>MedGenesis Therapeutix Inc.</b>	Victoria, British Columbia	1/11	\$5	MedGenesis raised \$5M from undisclosed sources for Phase II trials of its Parkinson's therapy
<b>Midatech Ltd.</b>	Oxford, UK	1/6	£6.3 (\$9.76)	Midatech raised \$9.76M through a private investment round

## Top Financings Of Private Companies: 2012

Company	Amount Raised
Supernus Pharmaceuticals Inc.	\$42M
Elevation Pharmaceuticals Inc.	\$30M
Prosensa Therapeutics BV	\$29.9M
RaNA Therapeutics Inc.	\$21M
3-V Biosciences Inc.	\$20M

Company	Location	Date	Amt. (M)	Details
<b>Oxford Cancer Biomarkers Ltd.</b>	Research Triangle Park, N.C.	1/25	£3 (\$4.68)	Quintiles Transnational Corp. invested \$4.68M to gain a 27.5% stake in Oxford Cancer Biomarkers
<b>Pharmalink AB</b>	Stockholm, Sweden	1/5	SEK35 (\$5.1)	Pharmalink raised \$5.1M through a rights issue of new shares to existing shareholders, including Industrifonden
<b>Probiodrug AG</b>	Halle, Germany	1/5	€15 (\$19.4)	Probiodrug raised \$19.4M from investors BB Biotech, Edmond de Rothschild Investment Partners, Life Sciences Partners, Biogen Idec New Ventures, TVM Capital, HBM BioVentures, Goodvent/IBG and private investors
<b>Prosensa Therapeutics BV</b>	Leiden, the Netherlands	1/26	€23 (\$29.9)	Prosensa raised \$29.9M in a Series C round led by New Enterprise Associates; other investors were Abingworth, Life Sciences Partners, Gimv, Idinvest Partners and MedSciences Capital
<b>RaNA Therapeutics Inc.</b>	Cambridge, Mass.	1/19	\$21	RaNA Therapeutics raised \$20.7M in a Series A round led by Atlas Venture, SR One and Monsanto Co., with participation by Partners Innovation Fund
<b>Supernus Pharmaceuticals Inc.</b>	Rockville, Md.	1/9	\$42	Supernus closed two transactions: one involving the sale of royalties to Sanctura XR for overactive bladder and Oracea for rosacea for \$27M; and one generating \$15M through the issuance of venture debt
<b>Syndexa Pharmaceuticals Corp.</b>	Watertown, Mass.	1/6	\$8.5	Syndexa secured additional financing in a Series B1 round from MP Healthcare Venture Management bringing the total raised since April 2011 to \$8.5M; the round was initially led by Yalcin Ayasli
<b>Telormedix SA</b>	Bioggio, Switzerland	1/11	CHF7.5 (\$7.9)	Telormedix raised \$7.9M from Aravis Venture and Proquest Investment
<b>Thrombotech Ltd.</b>	Jerusalem	1/19	\$1.4	Thrombotech received \$1.4M in an investment from Hadasit Bio-Holdings Ltd., Clal Biotechnology Industries and Ofer Hi-Tech
<b>Tonix Pharmaceuticals Holding Corp.</b>	New York	1/24	\$4.3	Tonix raised \$4.3M by selling 172 units for \$25,000 apiece, with each unit consisting of 25,000 shares of common stock, Class A warrants to purchase 25,000 shares of common stock and Class B warrants to receive up to 25,000 shares of common stock
<b>Vitae Pharmaceuticals Inc.</b>	Fort Washington, Pa.	1/19	\$15	Vitae obtained a \$15M round of debt financing from Oxford Finance LLC and Silicon Valley Bank

## Notes:

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ND = Not disclosed.

## Milestone Payments From Corporate Partners: January 2012

**TOTAL: \$34.407M**

**YEAR TO DATE: \$34.407M**

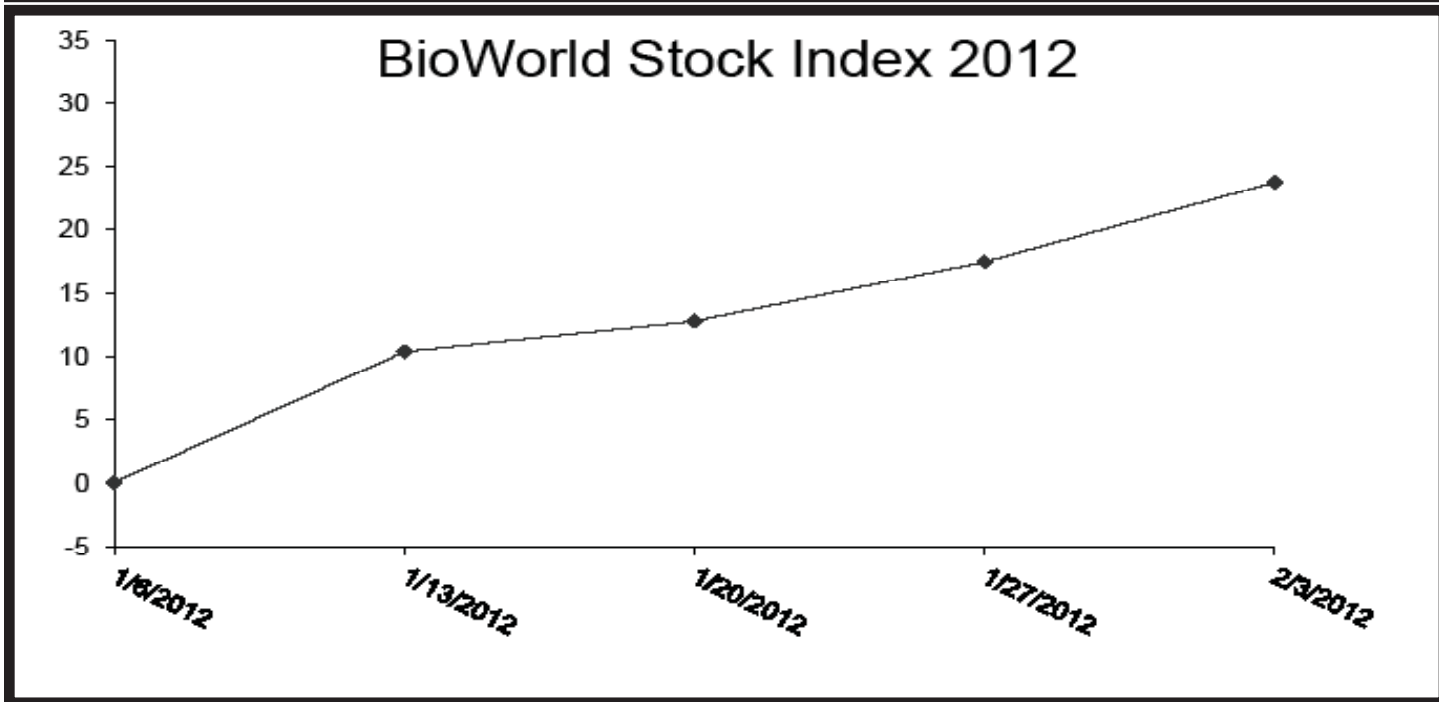
Company (Location)	Partner (Location)	Amt. (M)	Details (Date)
<b>Aeterna Zentaris Inc.</b> (Quebec City)	<b>Yakult Honsha Co. Ltd.</b> (Tokyo)	ND	For the start of a Phase I/II trial in Japan of perifosine in combination with capecitabine in patients with refractory advanced colorectal cancer (1/4)
<b>BioAlliance Pharma SA</b> (Paris)	<b>Therabel Group</b>	€1 (\$1.29)	For the approval from Italian health authorities for Loramyc, a treatment for oropharyngeal candidiasis in immunosuppressed patients (1/5)
<b>Catalyst Biosciences Inc.</b> (South San Francisco)	<b>Pfizer Inc.</b> (New York)	\$7	For the start of a Phase I trial for PF-05280602 for hemophilia A and B patients (1/6)
<b>Epizyme Inc.</b> (Cambridge, Mass.)	<b>Eisai Co. Ltd.</b> (Tokyo)	\$4	For hitting a preclinical milestone in the EZH2-targeted cancer collaboration (1/11)
<b>Evotec AG</b> (Hamburg, Germany)	<b>Boehringer Ingelheim GmbH</b> (Ingelheim, Germany)	€2.5 (\$3.2)	For the identification and selection of an oncology compound to be advanced into extended profiling prior to preclinical development (1/12)
<b>Trius Therapeutics Inc.</b> (San Diego)	<b>Bayer Pharma AG</b> (Leverkusen, Germany)	\$5	For meeting efficacy and safety objectives in the pivotal Phase III study of the oral formulation of TR701-II2 compared to linezolid in bacterial skin and skin structure infections (1/24)
<b>XenoPort Inc.</b> (Santa Clara, Calif.)	<b>Astellas Pharma Inc.</b> (Tokyo)	\$10	For the Japanese approval of Regnite for moderate to severe primary restless legs syndrome (1/19)
<b>Zealand Pharma A/S</b> (Copenhagen, Denmark)	<b>Helsinn Healthcare SA</b> (Lugano, Switzerland)	€3 (\$3.917)	For reaching a development milestone with elsiglutide, a GLP-2 peptide agonist, for chemotherapy-induced diarrhea (1/4)

Notes:

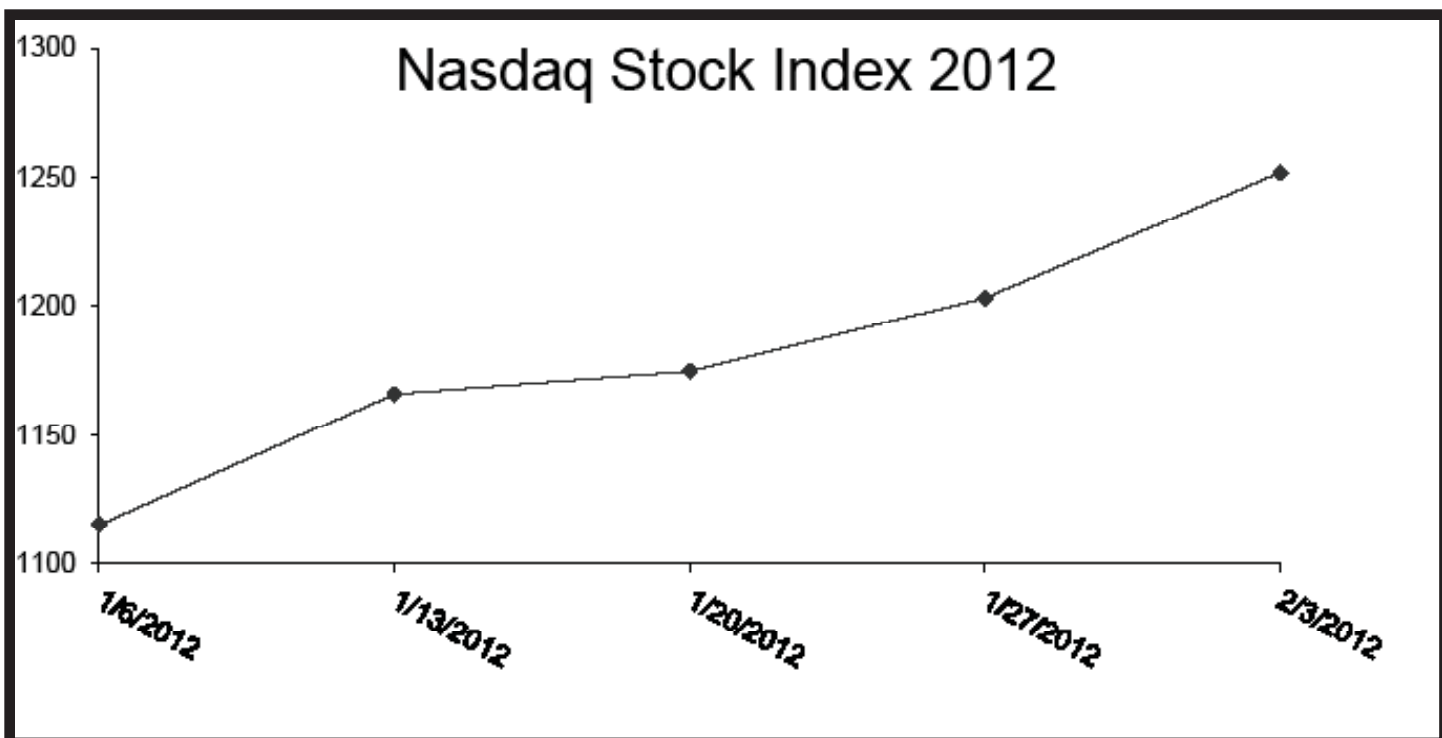
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These graphs compare the performance of the biotech stocks for all of 2012 using two different measures. The BioWorld Stock Indicator measures the average percent change year to date in the approximately 206 U.S. biotech and biotech-related stocks 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)	
Medgenics	54.95	Regeneron Pharma	5.22
Emisphere Tech	31.82	Alexion Pharma	4.56
CytRx	31.03	Pharmacyclics	3.93
Dara Biosciences	28.97	Medgenics	2.00
NuPathe	27.15	BG Medicine	1.62
Agenus	21.60	3S Bio	0.63
Pharmacyclics	20.36	Agenus	0.62
CEL-SCI	17.65	NuPathe	0.60
ImmunoCellular Thera	15.24	Ventrus Biosci	0.53
BioSante Pharma	14.86	Chelsea Therap	0.49

### 10 BIGGEST U.S. LOSERS FOR THE WEEK

(By Percent)		(By Dollars)	
NeurogesX	-44.76	Biogen Idec	-3.74
Alseres	-41.67	Genomic Health	-2.42
Astex Pharma	-27.40	Theravance	-2.06
Pharmos	-22.22	Amgen	-1.92
Codexis	-19.57	Clovis Oncology	-1.91
Osiris Thera	-18.99	Achillion	-1.83
Anacor Pharma	-16.58	InterMune	-1.50
Corcept	-16.11	Celgene	-1.47
Achillion	-15.60	Sagent Pharma	-1.44
Dyax	-12.27	AMAG Pharma	-1.40

## BioWorld Stock Report For Public Biotechnology Companies

Company	Symbol	Close 2/3	Close 2/10	%Change		Vol (000)
				WK	YTD	
3S Bio	SSRX	10.97	11.6	5.74	15.65	288
Aastrom Biosci	ASTM	2	1.83	-8.50	0.55	1141
Acadia Pharma	ACAD	1.77	1.8	1.69	60.71	2342
Accentia Biopharma	ABPI	0.54	0.51	-5.56	70.00	167
Access Pharma	ACCP	1.44	1.4	-2.78	3.70	77
AcelRx Pharma	ACRX	3.3	3.22	-2.42	50.47	36
Achillion	ACHN	11.73	9.9	-15.60	28.07	9057
Acorda Therap	ACOR	26.43	25.44	-3.75	7.93	2707
Adamis	ADMP	0.17	0.17	0.00	0.00	658
Adventrx Pharma	ANX	0.67	0.71	5.97	24.56	5548
Aegerion Pharma	AEGR	17.24	16.51	-4.23	1.85	206
AEterna Zentaris	AEZS	1.84	1.63	-11.41	7.24	3736
Affymax	AFFY	10.38	10.47	0.87	58.16	7307
Agenus	AGEN	2.87	3.49	21.60	71.08	1388
Albany Molecular	AMRI	3.04	2.97	-2.30	1.37	423
Alexion Pharma	ALXN	78.88	83.44	5.78	17.55	8310
Alexza Pharma	ALXA	0.76	0.72	-5.26	-10.00	1603
Alimera Sciences	ALIM	1.76	1.65	-6.25	26.92	630
Alkermes	ALKS	19.16	17.98	-6.16	3.10	4015
Allos Therapeutics	ALTH	1.71	1.7	-0.58	22.30	1830
Alnylam Pharma	ALNY	13.01	12.15	-6.61	47.81	2431
Alseres	ALSE	0.36	0.21	-41.67	5.00	8
AMAG Pharma	AMAG	17.25	15.85	-8.12	-16.27	459
Amarin	AMRN	8.79	8.4	-4.44	16.18	10982
Amgen	AMGN	69.28	67.36	-2.77	4.05	44024
Amicus	FOLD	6.78	6.7	-1.18	98.81	802
Amphiphi Biosci	APHB	0.14	0.14	0.00	7.69	56
Amylin Pharma	AMLN	17.1	17.17	0.41	48.40	30851
Anacor Pharma	ANAC	7.42	6.19	-16.58	0.00	1681
Anthera Pharma	ANTH	8.28	7.78	-6.04	32.76	341
Ardea Biosciences	RDEA	19.43	18.76	-3.45	10.03	1039
Arena Pharma	ARNA	1.87	1.94	3.74	1.57	17783
Ariad Pharma	ARIA	15.48	14.65	-5.36	19.49	13667
ArQule	ARQL	8.14	7.73	-5.04	34.67	1275
Array BioPharma	ARRY	3.01	2.66	-11.63	27.88	12031
Aryx	ARYX	0.01	0.01	0.00	0.00	34
Astex Pharma	ASTX	2.81	2.04	-27.40	15.91	7846
Auxilium Pharma	AUXL	20.07	19.29	-3.89	-1.23	1278
Avanir	AVNR	3.31	2.93	-11.48	49.49	12799
Avax Tech	AVXT	0.06	0.06	0.00	100.00	56
AVEO Pharma	AVEO	13.5	13.65	1.11	-21.28	1678
AVI BioPharma	AVII	1	1.11	11.00	46.05	7157
Bellus Health	BLUS	0.04	0.04	0.00	0.00	167
BG Medicine	BGMD	6.89	8.51	23.51	70.54	130
BioCryst Pharma	BCRX	4.03	3.84	-4.71	62.03	897
Biodel	BIOD	0.6	0.64	6.67	14.29	2674
Biodelivery Sci	BDSI	2.05	2.07	0.98	152.44	620
Biogen Idec	BIIB	121.88	118.14	-3.07	6.78	7321
BioMarin Pharma	BMRN	37.53	37.21	-0.85	9.25	6393
Bio-path Holdings	BPTH	0.34	0.35	2.94	2.94	57
BioSante Pharma	BPAX	0.74	0.85	14.86	66.67	98794
Cadence Pharma	CADX	4.27	4.03	-5.62	6.61	1376
Cardiome	CRME	2.41	2.41	0.00	-7.66	571
Cardiovascular Bio	CVBT	0.33	0.34	3.03	3.03	386
Catalyst Pharma	CPRX	1.11	1.07	-3.60	-10.83	445

Company	Symbol	Close 2/3	Close 2/10	%Change		Vol (000)
				WK	YTD	
Celgene	CELG	73.21	71.74	-2.01	6.20	13654
Cell Therapeutics	CTIC	1.11	1.08	-2.70	-3.57	5508
CellDX Therap	CLDX	4.98	5.07	1.81	92.78	2308
CEL-SCI	CVM	0.34	0.4	17.65	42.86	32152
Cerus	CERS	3.16	3.2	1.27	13.48	2233
Chelsea Therap	CHTP	4.5	4.99	10.89	-2.92	6254
Cleveland Biolabs	CBLI	3.32	3.09	-6.93	10.36	432
Clovis Oncology	CLVS	23.81	21.9	-8.02	55.43	554
Codexis	CDXS	6.08	4.89	-19.57	-7.39	1676
Columbia Labs	CBRX	0.81	0.78	-3.70	-68.92	5178
CombiMatrix	CBMX	1.66	1.66	0.00	6.41	14
Complete Genomics	GNOM	3.01	3.29	9.30	14.24	8085
Compugen	CGEN	5.89	6.15	4.41	23.00	1105
Corcept	CORT	3.29	2.76	-16.11	-19.77	3610
CorMedix	CRMD	0.37	0.42	-2.33	40.00	26
Cornerstone Therap	CRTX	6.85	6.01	-12.26	2.39	85
Cubist Pharma	CBST	41.61	40.43	-2.84	1.66	4905
Curis	CRIS	5.01	4.77	-4.79	2.14	7667
Cytokinetics	CYTK	1.08	1.18	9.26	21.65	1522
CytRx	CYTR	0.29	0.38	31.03	31.03	12279
Dara Biosciences	DARA	1.45	1.87	28.97	44.96	893
Dendreon	DNDN	14.17	14.05	-0.85	85.36	82954
DepoMed	DEPO	6.7	6.49	-3.13	21.31	3042
DiaDexus	DDXS	0.27	0.29	7.41	81.25	540
Discovery Labs	DSCO	2.51	2.65	5.58	58.68	2570
DURECT	DRRX	0.78	0.8	2.56	-33.33	1548
Dusa Pharma	DUSA	5	4.69	-6.20	4.69	632
Dyax	DYAX	1.63	1.43	-12.27	7.52	821
Dynavax	DVAX	4.3	4.05	-5.81	22.73	7404
Emergent BioSol	EBS	18.27	17.35	-5.04	0.75	558
Emisphere Tech	EMIS	0.22	0.29	31.82	31.82	1081
Endocyte	ECYT	3.64	3.53	-3.02	1.15	1390
Entremed	ENMD	2.35	2.59	10.21	161.62	640
Enzo Biochem	ENZ	2.86	2.77	-3.15	22.57	643
Enzon Pharma	ENZN	7.76	7.43	-4.25	11.39	450
Epicept	EPCT	0.26	0.26	0.00	-3.70	1194
Exelixis	EXEL	6.31	6.14	-2.69	29.26	19154
Flamel Tech	FLML	6.57	6.65	1.22	34.07	433
Fluidigm	FLDM	14.98	14.5	-3.20	10.18	230
Forest Labs	FRX	31.85	31.54	-0.97	4.16	7361
Furiex Pharma	FURX	17.32	16.81	-2.94	3.45	195
Galena Biopharma	GALE	1.04	1.1	5.77	134.04	12661
Generex Biotech	GNBT	0.15	0.15	0.00	0.00	5577
Genomic Health	GHDX	29.34	26.92	-8.25	5.86	1643
GenVec	GNVC	2.4	2.63	9.58	10.97	131
Geron	GERN	2.08	2	-3.85	42.86	4763
Gilead Sciences	GILD	54.69	53.75	-1.72	32.52	59570
GTx	GTXI	6.13	5.7	-7.01	86.27	2640
Harvard Bio	HBIO	4.26	4.13	-3.05	6.44	149
Horzon Pharma	HZNP	4.07	4.2	3.19	18.31	201
Human Genome	HGSI	10.16	9.51	-6.40	30.81	50237
Idenix Pharma	IDIX	11.68	10.92	-6.51	43.50	10075
Idera Pharma	IDRA	1.09	1.19	9.17	5.31	178
ImmunoCellular	IMUC	1.64	1.89	15.24	41.04	1902
ImmunoGen	IMGN	14.61	13.32	-8.83	15.63	2430

Company	Symbol	Close 2/3	Close 2/10	%Change WK	%Change YTD	Vol (000)
Immunomedics	IMMU	3.84	3.68	-4.17	10.18	1532
Incyte	INCY	17.66	16.96	-3.96	13.14	7306
Infinity Pharma	INFI	6.95	6.17	-11.22	-30.20	577
Inhibitex	INHx	25.74	25.96	0.85	144.44	8475
InterMune	ITMN	16	14.5	-9.38	19.54	9682
Ironwood Pharma	IRWD	14.98	15.35	2.47	28.34	8140
ISIS Pharma	ISIS	8.8	8.33	-5.34	16.83	2054
Keryx Biopharma	KERX	3.6	3.2	-11.11	34.45	7045
Lexicon	LXRx	1.67	1.71	2.40	48.70	2478
Ligand Pharma	LGND	13.83	14.7	6.29	23.63	756
MannKind	MNKD	2.17	2.33	7.37	-10.38	16739
Map Pharma	MAPP	14.98	15.26	1.87	13.71	681
Maxygen	MAXY	5.73	5.49	-4.19	-2.49	391
MDRNA	MRNA	0.51	0.5	-1.96	-49.49	430
Medgenics	MDGN	3.64	5.64	54.95	126.51	230
Micromet	MITI	10.94	10.95	0.09	51.87	18457
Momenta Pharma	MNTA	16.55	15.27	-7.73	-12.59	5241
Myrexix	MYRX	2.76	2.81	1.81	4.85	129
Myriad Genetics	MYGN	23.84	23.28	-2.35	11.39	2431
Nabi Biopharma	NABI	1.86	1.88	1.08	0.00	979
Nektar Therap	NKTR	7.17	6.84	-4.60	23.02	5188
Neurocrine Biosci	NBIX	9.48	8.62	-9.07	0.47	3486
NeurogesX	NGSX	1.05	0.58	-44.76	-32.56	6070
NewLink Genetics	NLNK	6.97	7.25	4.02	2.98	89
NovaBay	NBY	1.36	1.41	3.68	14.63	569
Novavax	NVAX	1.49	1.35	-9.40	8.00	2497
NPS Pharma	NPSP	7.99	7.41	-7.26	13.13	4254
NuPathe	PATH	2.21	2.81	27.15	57.87	596
Omeros	OMER	5.9	6.32	7.12	58.00	416
Oncogenex Pharma	OGXI	14.25	14.26	0.07	22.83	473
Oncothyreon	ONTY	7.91	8.4	6.19	10.38	5056
Onyx Pharma	ONXX	42.62	41.78	-1.97	-4.46	3542
Opko Health	OPK	5.28	5.14	-2.65	7.08	5063
Optimer Pharma	OPTR	13.21	13.54	2.50	11.07	2083
OraSure Tech	OSUR	11.35	10.41	-8.28	13.52	2428
Orexigen	OREX	2.76	3.03	9.78	88.20	3939
Osiris Thera	OSIR	5.95	4.82	-18.99	-7.49	613
Oxis International	OXIS	0.03	0.03	0.00	0.00	291
Pacific Biosciences	PACB	4.83	4.46	-7.66	67.67	2267
Pacira Pharma	PCRx	10.72	10.32	-3.73	20.84	380
Pain Therapeutics	PTIE	4.29	4.05	-5.59	8.58	321
Palatin Tech	PTN	0.59	0.66	11.86	57.14	337
Peregrine Pharma	PPHM	1.01	1	-0.99	-7.41	16518
Pharmacyclics	PCYC	19.3	23.23	20.36	54.25	7018
Pharmos	PARS	0.09	0.07	-22.22	40.00	15
Poniard Pharma	PARD	1.05	1.02	-2.86	-8.93	15
Pozen	POZN	4.74	4.42	-6.75	13.33	345
Progenics Pharma	PGNX	10.03	9.51	-5.18	10.45	525
Protalix Biothera	PLX	6.13	6.4	4.40	29.29	781
Protein Design	PDLI	6.48	6.39	-1.39	3.73	10133
Qiagen	QGEN	15.91	15.15	-4.78	9.31	5269
QLT Inc.	QLTI	7.16	7.62	6.42	6.57	530
Raptor Pharma	RPTP	7.39	7.79	5.41	25.24	2095
Regeneron Pharma	REGN	96.86	102.08	5.39	81.31	6951
Repligen	RGEN	4.11	4.2	2.19	18.64	96
Rexahn Pharma	RNN	0.6	0.6	0.00	62.16	319
Rigel Pharma	RIGL	10.48	9.43	-10.02	17.88	1446
Sagent Pharma	SGNT	22.38	20.94	-6.43	2.60	328
Sangamo Biosci	SGMO	4.55	4.24	-6.81	52.52	3011
Santarus	SNTS	4.94	4.85	-1.82	43.92	3044
Savient Pharma	SVNT	2.26	2.16	-4.42	-1.82	5742
SciClone Pharma	SCLN	4.99	5.1	2.20	20.00	769
Seattle Genetics	SGEN	19.53	18.59	-4.81	11.45	6410
Sequenom	SQNM	4.92	4.59	-6.71	6.00	14727
SIGA Tech	SIGA	3.75	3.51	-6.40	53.28	2998
Soligenix	SNGXD	0.79	0.71	-10.13	-11.25	
Somaxon Pharma	SOMX	0.6	0.6	0.00	30.43	473
Spectrum Pharma	SPPI	14.35	14.1	-1.74	-3.75	7033
StemCells	STEM	1.08	1.01	-6.48	23.17	2702
Sucampo Pharma	SCMP	6.24	6.49	4.01	45.19	304
Synageva Bio	GEVA	35.25	35.72	1.33	34.13	115
Synta Pharma	SNTA	4.98	5.06	1.61	6.53	1643
Talon Thera	TLON	0.89	0.92	3.37	119.05	701
Targacept	TRGT	6.38	6.07	-4.86	12.83	1188
Telik	TELK	0.18	0.18	0.00	0.00	3159
Tengion	TNGN	0.59	0.64	8.47	33.33	785
Theravance	THRx	18.59	16.53	-11.08	-25.44	2467
Titan Pharma	TTNP	1.35	1.34	-0.74	19.64	439
Transcept Pharma	TSPT	8.04	8.28	2.99	8.24	408
Transgenomic	TBIO	1.17	1.19	1.71	-9.85	1238
Tranzyme	TZYM	4.05	4.22	4.20	43.05	203

Company	Symbol	Close 2/3	Close 2/10	%Change WK	%Change YTD	Vol (000)
Trinity Biotech	TRIB	10.45	10.18	-2.58	-0.20	157
Trius Therap	TSRX	5.57	5.47	-1.80	-18.48	1830
Unigene	UGNE	0.62	0.6	-3.23	20.00	140
United Therap	UTHR	50.21	49.05	-2.31	3.18	3520
Vanda Pharma	VNDA	5.33	5.09	-4.50	14.13	649
Ventrus Biosciences	VTUS	8.87	9.4	5.98	25.00	326
Verastem	VSTM	10.85	10.87	0.18	-4.65	
Vermillion	VRML	1.52	1.55	1.97	37.17	634
Vertex Pharma	VRTX	36.78	36.13	-1.77	10.29	17119
Vical	VICL	3.64	3.22	-11.54	-28.29	9398
ViroPharma	VPHM	30.33	30.61	0.92	9.60	5126
Vivus	VVUS	12.47	12.35	-0.96	27.06	10219
XenoPort	XNPT	4.71	4.3	-8.70	19.44	727
Zalucis Inc	ZLCS	1.1	1.12	1.82	-6.67	5995
Zogenix	ZGNX	2.73	2.71	-0.73	23.74	3379

**LONDON STOCK EXCHANGE**

Company	Symbol	2/3	2/10	%WK	%YTD	Volume
Antisoma	ASM	1.85	1.79	-3.24	-94.58	17355
Ark Therapeutics	AKT	3.55	3.698	4.17	-73.68	2459
Asterand	ATD	7.75	6.4538	-16.73	-65.30	2850
Oxford Biomedica	OXB	3.26	3.216	-1.35	-71.41	5115
Phytopharm	PYM	8.92	8.625	-3.31	-20.43	1371
Puricore	PURI	60.7	67	10.38	400.00	117
Renovo Group	RNVO	16.753	16.753	0.00	-42.03	1589
SkyePharma	SKP	34.4	36	4.65	-58.12	157
Vernalis plc	VER	19.344	25.125	29.89	-71.12	6798

Note: Prices are denoted in pence.

**TORONTO STOCK EXCHANGE**

Company	Symbol	2/3	2/10	%WK	%YTD	Volume
Adherex Technol	AHX	0.24	0.2	-16.67	344.44	5
Allon Therap	NPC	0.26	0.24	-7.69	-25.00	132
BELLUS Health	BLU	0.04	0.04	0.00	-77.78	380
Bioniche Life Sci	BNC	0.77	0.69	-10.39	23.21	547
Cangene	CNJ	1.74	1.75	0.57	-65.69	39
Isotechnika	ISA	0.15	0.13	-13.33	-21.21	491
Lorus Therap	LOR	0.18	0.22	22.22	238.46	45
Medicago	MDG	0.58	0.62	6.90	-7.46	626
MethylGene	MYG	0.29	0.29	0.00	3.57	60
Oncolytics Biotech	ONC	5.4	5.15	-4.63	87.27	197
Protox Therap	PRX	0.35	0.3	-14.29	-64.71	653
Resverlogix	RVX	1.65	1.9	15.15	-21.49	802
SemBioSys Gen	SBS	0.1	0.1	0.00	-50.00	2859
Tekmira Pharma	TKM	2.12	2.33	9.91	150.54	57
Thallion Pharma	TLN	0.17	0.17	0.00	54.55	215
Theratechnologies	TH	2.69	2.29	-14.87	-48.31	477
YM BioSciences	YM	2.3	2.26	-1.74	55.86	180

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: -1.05%**

Range: -44.76% to +54.95%; Number Of Companies: 206 (does not include LSE or TSX; not market weighted)

**Average Percent Change YTD: +22.25%**

Range: -68.92% to +161.62%; Number Of Companies: 206 (does not include LSE or TSX; not market weighted)