

The Biotech Startup Class of 2013: Don't Worry, It's a Short List

Luke Timmerman | 10/18/13

We've heard a lot this year about the IPO boom for biotech companies. Even after a few high-profile blowups (Ariad, Sarepta), the public biotech stock indexes are still outperforming the Nasdaq Composite Index and S&P 500. Some biotechs have been acquired for megabucks (Onyx, ViroPharma). We've heard about another biotech bubble in the making.

Normally, you'd expect all that wealth creation and associated excitement to ripple across the biotech industry and stimulate all kinds of exciting new biotech startups. You'd think lots of venture capitalists, flush from the latest happy trip to the Nasdaq casino, would be itching to throw the house money into the best new crop of biotech startups.

But you would be wrong.

The data aren't final yet for this year, but it's safe to say we are living in the stingiest funding cycle for first-time biotech financings in almost two decades. There were only 102 first-time financings of life sciences companies through the first nine



months of 2013, the lowest amount since 1996, according to data from Thomson Reuters that's used for the MoneyTree Report from PricewaterhouseCoopers and the National Venture Capital Association. If you subtract out one big private equity deal for a life sciences service provider—a \$150 million investment in Bethesda, MD-based Precision for Medicine—then just \$467 million went into first-time biotech financings through the first nine months of the year.

This trend, of course, has been visible for a few years now, as the biotech venture capital business goes through a historic shrinkage. Even with the emergence of crowdfunding,

corporate venture capital, and a new breed of businesslike philanthropies, there's still a glaring lack of truly exciting, newsworthy, swing-for-the-fence biotech startups being created today.

As I did last year, I spent some time this week reviewing databases and asking a dozen VCs from the U.S. and Europe to come up with a list of the important biotech startups of 2013. For the purpose of this exercise, I defined a "newsworthy" biotech startup as one that has a big idea, a credible management team, and one that got at least \$5 million from a first-time financing in 2013. I set \$5 million as the cut-off, because it weeds out a lot of poseurs, yet it sets a pretty low bar for inclusion. It takes at least \$5 million to do an even half-way substantive manufacturing run for a new protein drug candidate to begin clinical trials. It's not much money.

Why should anyone care about these little companies that no one has ever heard of? Because biotech needs to keep churning out new companies every year. Players disappear all the time, whether it's because of failure or success (acquisition). New startups are often the ones free to take on the daring ideas, the ones that can truly advance medicine. Whenever someone e-mails me with "Hey, here's a new company with star scientific entrepreneur XYZ that just raised a \$30 million Series A to do the next big thing in cancer/Alzheimer's/genomic tools/whatever," that usually makes me drop what I'm doing to stop and listen. If the industry

can barely pop out a handful of these kind of companies each year, then we're all going to have to start looking to Big Pharma/Big Biotech again as the source for innovation—even though they've been hoping little biotech would solve the innovation problem the past 15 years.

So why is this happening? There are fewer active VC firms now than there were five years ago, as many have failed to raise new funds to keep going. Many big institutional investors feel that the rewards of biotech (which aren't as big as an investment in the next Facebook or Twitter) don't justify the risk. Yet, if you talk to scientists, pharma leaders,



Bruce Booth. Photo: Keith Spiro, courtesy of Kendall Press.

and venture capitalists, they almost all agree that there's never been a better moment to invest in biotech.

Last week, I shared my (short) list of newsworthy biotechs from 2013 with Bruce Booth, a partner at Atlas Venture, and asked him why he thinks so few big-time biotech startups are being created. Here's what he said via e-mail.

At its peak in the mid-2000s, 120-150 new biotechs were being formed each year. Now it's closer to 80-100. What's the "right" number to support a healthy ecosystem? Is there really one transformational idea every two days around which to create a new biotech? Part of the decline is a reduction in the number of 'spec pharm' reformulation plays. We see far fewer of those. Your list underpins that point - many of these are biotechs working on innovative new therapies not incrementalist innovations. That's the silver lining on the shorter list. One can argue on both sides about what the right number is to support a sustainable biotech industry, but we certainly believe now is a fantastic time to be starting new companies: the supply of high impact ideas - the substrate that powers up new startups - is as strong as ever, and the demand for new, novel medicines from both Pharma, and surprisingly the public markets, continues to outstrip the supply. This dynamic bodes well for future returns in early stage venture creation going forward.

It should be noted that a few of these companies in the list below may have been op-

erating on shoestring grants here or there before this year, but appear to have gotten their first financing to pursue their goals at full throttle in 2013. Some of these companies are trying to remain in stealth mode, so I've done my best to describe what they do in simple blurbs from the Thomson Reuters dataset, the company websites, or from our own Xconomy reporting. Some companies crowed about large financing amounts in press releases, but appear to have raised much smaller tranches of financing when I checked their filings in the SEC's EDGAR database.

And to be sure, I am hearing promises that the list will grow with a few more newsworthy biotech startup financings before Christmas. If these things materialize, I will update this chart in coming weeks so that it can serve as a reference for all of 2013.

Lastly, I should note that when I scrubbed through the Thomson Reuters data on first-time financings, I was struck by how inflated the reported number of 102 first-time financings appears to be. Several of the companies counted shouldn't qualify for a variety of reasons. Either it wasn't their first financing, the first financing was much smaller than reported, or the company isn't even a true life sciences entity. My review eliminated seven of the 32 biggest financings (22 percent), and I didn't even bother to go really deep into the weeds of the \$1 million financings.

With that, here are the 45 members of the "newsworthy" biotech startup class of 2013.

Company	Location	What does it do?	Who invested?	Amount	Source
Precision for Medicine	Bethesda, MD	Drug development services	J.H. Whitney, Oak Investment Partners	\$150m	Thomson Reuters
Juno Therapeutics	Seattle	Cancer immunotherapy	Arch Venture Partners, Alaska Permanent Fund	\$120m	Xconomy reporting (updated 12/4/13)
Spark Therapeutics	Philadelphia	Gene Therapy	Children's Hospital of Philadelphia	\$50m	Press release (updated 12/13/13)
Jounce Therapeutics	Cambridge, MA	Cancer immunotherapy	Third Rock Ventures	\$47m (likely smaller b)	Thomson Reuters
Editas Medicine	Cambridge, MA	Gene editing	Polaris Partners, Third Rock Ventures, Flagship Ventures	\$43m	Xconomy reporting (11/25/13)
GenSight Biologics	Paris, France	Gene therapy for ophthalmology	Novartis Venture Fund, Abingworth, Versant Ventures, Index Ventures	\$41.3m	press release
ObsEva	Geneva, Switzerland	Drugs for pre-term labor	Sofinnova Partners, Sofinnova Ventures, Novo A/S, MS Ventures	\$34.5m	press release
Audentes Therapeutics	San Francisco	Gene therapy for rare diseases	OrbiMed Advisors, 5AM Ventures, Versant Ventures	\$30m	Thomson Reuters
Seragon Pharmaceuticals	San Diego	Cancer drugs	venBio, Topspin Fund, Aisling Capital, OrbiMed Advisors, The Column Group	\$30m	Thomson Reuters
Pulmocide	London	Inhaled therapies for respiratory diseases	Imperial Innovations, SV Life Sciences, Fidelity Biosciences, Johnson & Johnson	\$27.4m	BioCentury
Cydan	Cambridge, MA	Orphan drug startups	NEA, Pfizer Venture Investments, Alexandria Venture Investments, Lundbeckfond Ventures, Bay City Capital	\$26m	press release
Envisia Therapeutics	Research Triangle Park, NC	Polymer drug delivery	Canaan Partners, NEA, Pappas Ventures, Morningside Technology Ventures, Wakefield Group.	\$25m	press release
Apexigen	Burlingame, CA	Antibody drug development for cancer, inflammation	Amkey Ventures, WSR Capital, China Development Industrial Bank, Themes Investment Partners, and Sycamore Ventures.	\$20m	Xconomy reporting (updated 12:45 pm PT)
Armo Therapeutics	Redwood City, CA	Cancer immunotherapy, fibrosis, cardiovascular disease	Kleiner Perkins Caufield & Byers, OrbiMed Advisors, DAG Ventures	\$20m	Xconomy reporting 11/25/13)
BioClin Therapeutics	San Ramon, CA	Antibody drug for a rare genetic orphan disease (not disclosed) and cancer	Novo A/S	\$20m	Xconomy reporting (updated 12:30 pm PT 11/19)
Allegra Therapeutics	Lorrach, Germany	Antibiotics	Edmond de Rothschild Investment Partners, Forbion Capital Partners, EMBL Ventures	\$19.6m	press release
Solstice Biologics	San Francisco	RNA interference	venBio, Aeris Capital	\$18m	press release
Effector Therapeutics	San Diego	Cancer drugs	U.S. Venture Partners, Abingworth, Novartis Venture Funds, SR One, Astellas Venture Management, Osage University Partners and Mission Bay Capital	\$17.4m (press release says \$45m)	Thomson Reuters
Sideris Pharmaceuticals	Boston	Iron-chelating drug	MPM Capital, Osage University Partners, Hatteras Venture Partners, Novartis	\$17m	SEC filing (updated 10:45 am ET)
Allergen Research Corp.	San Mateo, CA	Oral immunotherapy for peanut allergies	Longitude Capital, Food Allergy Research and Education	\$17m	press release
Biodesy	Burlingame, CA	Real-time analysis of protein function	5AM Ventures, Pfizer Venture Investments and Roche Venture Fund.	\$15m	press release
Tacurion Pharma	New York	Drug for frequent urination at night	InterWest Partners, Sutter Hill Ventures and Astellas Venture Management	\$15m	Thomson Reuters

NextCode Health	Cambridge, MA	Genomic data interpretation/diagnosis	Arch Venture Partners, Polaris Partners	\$15m	press release
Arvinas	New Haven, CT	Drug development	Canaan Partners, 5AM Ventures, Connecticut Innovations and Elm Street Ventures	\$15m	press release
Labrys Biologics	San Mateo, CA	Antibody drug for migraines	venBio, Canaan Partners, InterWest Partners, and Sofinnova Ventures.	\$14.6m	SEC filing (Jan. 3 press release said \$31m)
Fractyl Laboratories	Waltham, MA	Medical devices for chronic diseases	Bessemer Venture Partners, Domain Associates	\$14.4m	Thomson Reuters
Amphivena Therapeutics	Heidelberg, Germany	Drugs for blood cancers	MPM Capital, Aeris Capital, Affimed AG.	\$14m	Thomson Reuters
X01	Cambridge, UK	Anticoagulant therapy	Index Ventures	\$11m	press release
Middle Peak Medical	Palo Alto, CA	Mitral valve heart device	Wellington Partners, Seventure Partners, High-Tech Gruenderfonds, BioMedInvest II, Edwards LifeSciences.	\$11m	press release
Scanadu	Mountain View, CA	Personal health electronics/equipping smartphones for health monitoring	Relay Ventures, Tony Hsieh's VegasTechFund, Jerry Yang's AME Cloud Ventures	\$10.5m	press release
Calorics Pharmaceuticals	Waltham, MA	Yeast-based drug discovery for calorie-restriction/diseases of aging	Polaris Partners, undisclosed investor	\$10.2m	Thomson Reuters
CoStim Pharmaceuticals	Boston	Immunotherapy/antibody drugs for checkpoint inhibition	Not disclosed. But board has members from Atlas Venture, MPM Capital, J&J Development Corp.	\$10m	SEC filing
Syros Pharmaceuticals	Watertown, MA	Cancer drugs	Arch Venture Partners, Flagship Ventures	\$10m	SEC filing
Loxo Oncology	New York	Cancer drugs	Aisling Capital, OrbiMed Advisors and an undisclosed investor.	\$10m	Thomson Reuters
Sitari Pharmaceuticals	San Diego	Drugs for celiac disease	Avalon Ventures, GlaxoSmithKline	\$10m	press release
Channel Medsystems	San Francisco	Medical technology for heavy menstrual bleeding	Aperture Venture Partners LLC, Boston Scientific, DFJ Incube Ventures, Scientific Health Development Ltd, Undisclosed Investor	\$9.8m	Thomson Reuters
ImmunGene	Thousand Oaks, CA	Cancer drugs	Ally Bridge Group	\$9m	press release
ScioDerm	Raleigh, NC	Topical skin drug	Morgenthaler Ventures, Technology Partners	\$9m	Thomson Reuters
InformedDNA	St. Petersburg, FL	Genetic counseling	MPM Capital, other undisclosed investors	\$7.7m	Thomson Reuters
New Leaf Symbiotics	St. Louis, MO	Plant bacteria-derived products	Rockport Capital, Open Prairie Ventures, Pangaea Ventures, and several individuals.	\$7m	Thomson Reuters
Arcturus Therapeutics	San Diego	RNA interference	Individual investors	\$6.3m	Xconomy reporting
Semnur Pharmaceuticals	Mountain View, CA	Non-opioid drugs for back pain	Not disclosed, but board has members from Vivo Capital, Canaan Partners, and Frazier Healthcare Ventures	\$6m	SEC filing
Dimension Therapeutics	Cambridge, MA	Gene therapy for rare diseases	Fidelity Biosciences	More than \$5m	Xconomy reporting
Alector	San Francisco	Alzheimer's drugs	Polaris Partners, OrbiMed Advisors	More than \$5m	Xconomy reporting
Sofie Biosciences	Culver City, CA	New PET imaging technology	Tata Industries, MRM Capital, Cycad Group.	\$5m	press release