IN brief

Jackson's $1.1 billion makeover

Connecticut lawmakers passed a $291 million plan to create a state-of-the-art research institute for personalized medicine and systems genomics to be called The Jackson Laboratory for Genomic Medicine. The center, to be erected near the University of Connecticut Health Center campus in Farmington, represents an expansion for the Jackson Laboratory family, which already houses a preeminent mouse genetics facility in Maine and a preclinical testing center in California. Jackson will contribute $809 million towards the project, bringing the total investment to $1.1 billion. The site will occupy 17 acres and is expected to employ 320 people in its first decade—including 30 principal investigators—and more than double its staff in 15 to 20 years. In addition to basic research, the institute plans to commercialize its findings in the area of diagnostics and therapeutics for personalized patient genomics. According to Robert Braun, the associate director of Jackson, having a physical presence on a medical school campus and direct access to a healthcare system will greatly enhance his organization. What's more, he said, personalized medicine will benefit enormously from Jackson's expertise in mouse genetics, as interpreting the huge and growing mass of human genomic data will require functional studies in model systems. The state's investment is part of an initiative known as Bioscience Connecticut, which seeks to bolster biomedical industry in the region. *Jennifer Rohn*

Near-record drug approvals

A near-record 35 innovative drugs were approved by the US Food and Drug Administration (FDA) in the 2011 fiscal year, which ended September 30. The FDA beat other agencies around the world in its approval times, with 24 of those 35 products approved before any other agencies, including the European Medicines Agency, according to an annual performance report under the auspices of the Prescription Drug User Fee Act (PDUFA). "Thirty-five major drug approvals in one year represents a very strong performance, both by industry and by the FDA," says FDA commissioner Margaret Hamburg. That set of 35 includes 10 for treating rare or orphan diseases and 7 new cancer treatments—among them, one for melanoma and another for lung cancer, each of which was approved along with a diagnostic test to identify which patients are most likely to benefit from those treatments. Nearly half of the group was approved under 'priority review', two-thirds within a single review cycle, and three under the 'accelerated approval'. "Before the PDUFA program, American patients waited for new drugs long after they were available elsewhere," says Janet Woodcock, director of the FDA Center for Drug Evaluation and Research. "As a result of the user fee program, new drugs are rapidly available to patients in the United States while maintaining our high standards for safety and efficacy." This year's approvals are second only to 2009 when 37 new drugs were approved. *Jeffrey L. Fox*

New startup models emerge as investor landscape shifts

Two Cambridge, Massachusetts–based startups are among this year's financings that depart from traditional venture models. In October, neurology startup Sage Therapeutics raised $35 million in a Series A round from a single fund; and three months earlier, Nimbus Discovery attracted financing from a syndicate of three funds, receiving $24 million in a Series A round. The financings exemplify the creative ways by which venture capital (VC) firms are overcoming the challenging timelines and restricted exits for early-stage life sciences investments.

Sage Therapeutics was founded by Third Rock Ventures of Boston, which installed ten advisors and provided the entire tranche of Series A funding. The idea was to bring together leaders in the field while also ensuring the financial power needed for growth, avoiding "the old pattern of a $5 million Series A, which is kind of a bridge to nowhere," says Kevin Starr, partner at Third Rock.

Nimbus, on the other hand, raised its $24 million from a three-company syndicate, led by Atlas Ventures, and including SR One (the corporate investing arm of GlaxoSmithKline, of London) and Lilly Ventures (the investing arm of Eli Lilly, of Indianapolis). Nimbus uses computational technology in a quest for developing leads against disease targets previously thought undruggable. The company is also partly virtual: it has four programs ongoing but no wet lab on site, and some 60 people working on its projects externally.

Both deals came against a backdrop where early-stage startups are finding VC cash difficult to attract, with investors turned away from discovery biomedical science, or at least moving to later-stage deals, deterred by increasingly longer development times (due to a risk averse, safety-conscious US Food and Drug Administration), a public market that is open fitfully to a select type of company (usually at highly discounted prices) and trade sales limited by the number of transactions that the larger companies are capable of. In October, the doomsayers became more strident when Prospect Venture Partners, of Palo Alto, California, returned $150 million to its limited partners, rather than investing them in startup biotech companies. But the picture in early-stage life sciences venture investing looks more complex.

The total amount of VC money going into the US biotech sector is consistent with previous years. In fact, according to Arlington, Virginia–based National Venture Capital Association data, VC funding is on pace this year to better both 2009 and 2010, with seed and early-stage money holding up well enough (**Fig. 1a**). Moreover, Europe has been steady, too (**Fig. 1b**), though it has been affected by problems with sovereign debt and monetary upheaval in euro-zone countries.

There is bad news—the number of US-based VC funds has decreased, falling from 1,701 in 2000 to 1,183 in 2010, according to figures from Cambridge, Massachusetts–based financial data provider OnBioVC, and that trend extends to life sciences. As a result, only top-shelf ideas are being funded, and many solid technologies and platforms are being rejected. Bart Bergstein,

Box 1 Early entry

New models are also being applied to academia. Publicly traded Imperial Innovations—formed out of the tech transfer office at Imperial College London—works as a pre-seed investor, putting up funds directly from its balance sheet. This means it has no limited partners to answer to and can stay in an investment as long as necessary.

Though it used to work exclusively with it's parent institution, Imperial College London, Imperial Innovations raised £140 ($220) million in 2010 to broaden its association to other centers of excellence, namely University College London, Oxford University and Cambridge University. The fund sees ~500 propositions annually from these four institutions and prefers to invest at the idea stage, bringing in a startup manager or CEO. It invests "across the board"—platforms, single assets, R&D entities—and does work in syndicates, says Susan Searle, CEO of Imperial Innovations.

There also is Biogeneration Ventures, a 50-50 joint venture formed with Forbion. It closed its first fund in 2006 to address the equity gap between VC firms and the ideas coming out of Dutch institutes and universities. Biogeneration is housed in Forbion's facilities, allowing it to save on infrastructure costs and spend more on hiring. Although autonomous, Biogeneration and Forbion interact, with Forbion sometimes investing in Biogeneration companies down the road, or passing along opportunities that are deemed too early or small for Forbion. **BH**