IN brief

Life swallows Ion Torrent

Instruments provider Life Technologies has acquired sequencing firm Ion Torrent of Guilford, Connecticut and S. San Francisco in a deal worth $725 million—a price tag that has left some industry observers reeling. In August, the Carlsbad, California–based Life paid $375 million upfront, with potential for an additional $350 million in milestones. The prize is Ion Torrent's Personal Genome Machine, a system that uses semiconductors rather than optics for sequencing DNA. According to Life, the first-generation system, due in Q4 2010, will cost $50,000, and its potential scalability suggests it could tackle entire genomes relatively soon. This machine cannot readily compete with the multi-gigabase output of San Diego-based Illumina's HiSeq2000 or Life's SOLiD 4—and Ion Torrent founder and CEO Jonathan Rothberg stressed at a recent meeting that it is not intended to do so. "In the near term, there could be some virology and pathogen applications, and longer term there could be some clinical diagnostic applications," says Doug Schenkel, managing director and senior research analyst at Cowen & Company, New York. However, Life's investment considerably exceeds their target market—estimated at $200 million—suggesting a focus on long term opportunities. Success is contingent upon both expansion of the sequencing market and the impact of other powerful contenders: newcomers Pacific Biosciences and Complete Genomics have recently filed initial public offerings, and market leader Illumina is unlikely to rest on its laurels. *Michael Eisenstein*

Anti-anemics price hike

New payment rules for dialysis services could further erode the use of erythropoietin-stimulating agents (ESAs), already under scrutiny for potential safety risks. The US Centers for Medicare & Medicaid Services are changing how Medicare pays for end-stage renal disease services. From 1 January 2011, payment will bundle equipment and drugs into a single base rate, which will be increased from $198 to $229.60. This single rate will include injectable ESAs, prescribed to stimulate red blood cell production, which are currently reimbursed separately. "The move could affect prescribing patterns for ESAs and may discourage healthcare providers from using large doses of erythropoietin for patients as it could lead to financial loss," says Aparna Krishnan, senior research analyst at IHS Global Insight in Lexington, Massachusetts. Makers of all versions of epoetin alpha are likely to be affected. The US Food and Drug Administration already requires a risk evaluation and mitigation strategy for ESAs, following studies linking an increase in tumor growth or risk of cardiovascular events to the drugs (*Nat. Biotechnol.* **28**, 303, 2010). With the new rules, "Companies that manufacture ESAs will be forced to reduce drug prices or risk loss [of] market share," says Swetha Shantikumar, research associate at Frost & Sullivan, Chennai, India. *Emma Dorey*

Genzyme resumes shipping as Sanofi-aventis hovers


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Henri A. Termeer, Genzyme's Chairman, President and Chief Executive Officer, has been fending off Sanofi-aventis' overtures while dealing with manufacturing problems.

Genzyme is moving towards resolving the manufacturing issues that have curtailed supplies of its biologics to treat Gaucher's disease and Fabry's disease for over a year. In late August, in the midst of reacting to a hostile takeover bid from French drug maker Sanofi-aventis, the biotech sent patient communities separate letters detailing the company's near-term plans for supply of the drugs. In September, people with Gaucher's disease would receive two full doses of Cerezyme (imiglucerase; recombinant human (rh) β-glucocerebrosidase)—the same as before the company had to cut back supplies after discovery of vesivirus 2117 contamination at its Allston, Massachusetts, manufacturing facility (*Nat. Biotechnol.* **27**, 681, 2009). Individuals treated for Fabry's disease would receive one full dose of Fabrazyme (agalsidase β; rh α-galactosidase A) in September and another this month, which is double what the Cambridge, Massachusetts–based firm had been supplying, but still below full dosage.

But the company now expects the remediation work at the Allston plant to take four years. This is up from the two to three years it had estimated earlier this year, when it signed a draft consent decree with the US Food & Drug Administration that detailed the process for completing that work and the penalties for missing deadlines (*Nat. Biotechnol.* **28**, 388, 2010). As part of that process, Genzyme is required to complete an initial inspection of the facility later this year.

The good news is that in the end, Genzyme should have a more efficient production process. By introducing a new working cell bank for Fabrazyme, for example, Genzyme has already increased productivity 30%, and hopes to go 30% higher than that. By controlling the process parameters around cell density, "we think we'll be able to get the additional productivity," said Scott Canute, newly hired president, global manufacturing and corporate operations, on the conference call.

"Every company emerges from a consent decree in much better shape," says William Tanner, biotech analyst with Lazard Capital Markets in New York. "Operating under a consent decree, things are going to be tighter, protocols more tightly adhered to. It stands to reason your production costs should go down." What's more, the lost revenue from discarded batches of a high-value biologic "far eclipses the cost of having some people on the ground to assure that they are in compliance with the consent decree," he says.

That said, with competitors aiming at the Gaucher's and Fabry's markets, the timing of these problems couldn't have been worse for Genzyme. Basingstoke, UK–based Shire obtained EU approval for its Vpriv (velaglucerase alfa) Gaucher's therapy, on the heels of a US approval in March 2010. It also sells Replagal (agalsidase alfa) for Fabry's in the EU and other countries (it is under review in the US). And Protalix, in Carmiel, Israel, is partnering with Pfizer, in New York, to commercialize plant-derived glucocerebrosidase (taliglucerase alfa); it is also in early-stage development of a plant-derived enzyme drug to treat Fabry's (*Nat. Biotechnol.* **28**, 107–108, 2010). "It's irreparable damage," says Tanner. His initial projections for Vpriv, for example, were for 10–15% of the market but now, based on physician feedback, they're at 30–40%.

These issues haven't stopped Sanofi-aventis, however, from pursuing a takeover of Genzyme. After months of discussions, on August 29, the Paris-based pharma made a formal offer at $69 per share, or $18.5 billion, which Genzyme promptly rejected. However, Tanner estimates that Genzyme lost around $1–1.3 billion in value because of its manufacturing stumbles. "If they were better able to hang onto the Gaucher['s] and Fabry['s] franchises," he says, "fair value would be $4–5 per share higher." Mid-September, Genzyme sold its Genetic Testing Unit to LabCorp of America Holdings, located in Burlington, North Carolina, for $925 million and, in a cost cutting exercise, the biotech will implement over 1,000 job cuts. **Mark Ratner** *Cambridge, Massachusetts*