Life sciences briefing: Thursday, Nov. 29, 2007

Featured companies: *Allylix, Equipois, F-Star, Insightec, MedAssets, MedNets.com, Renal Solutions, Transport Pharmaceuticals*

ADDING HEADLINES: Stay tuned.

MedAssets sets IPO range, aims for $221M take — MedAssets, an Alpharetta, Ga., provider of IT and services designed to maximize hospital revenue, said it plans to sell as many as 13.8 million shares at a price of $14 to $16 apiece, for a maximum IPO take of $221 million. The company's latest SEC filing is here.

The offering would value MedAssets at as much as $685.8 million. In overall size, the amount MedAssets hopes to raise in the offering is slightly less than the $230 million it first estimated when it filed the IPO.

MedAssets, which we covered briefly here when it first filed its IPO, cloaks its business strategy in such a thicket of buzzwords that at first glance, it's difficult to figure out what the company actually does. It describes its offerings as ways to bolster "revenue cycle management," streamline operating costs, save on supply purchases and integrate information flow for "improved decision making."

In practice, one big chunk of MedAssets business appears similar to what Athenahealth does for physicians' practices, which is essentially to help amass and organize enough information to successfully challenge insurance companies and Medicare when they deny claims or offer lower-than-desired reimbursements. In that sense, it's part of the giant game of whack-a-mole that is the U.S. healthcare system, where most of the major players are intent on squeezing as much money out of each other as possible. Between that and other efficiency improvements, MedAssets claims to improve per-patient revenues by one percent to three percent.

How much does MedAssets love its healthcare-finance geekspeak? Well, in a recent press release for a new "workflow management" tool, MedAssets claimed that the product "enhances hospitals' revenue integrity by enabling managers to disperse chargemaster information and assignments to revenue stakeholders organization-

wide and, subsequently, to track task status and completion." Similarly, a quick stroll through the trade literature turned up the following gem in a Biotech Week article from last week:

> "In response to customer feedback and the current transparency trends in healthcare, we created a chargemaster tool that assists healthcare providers in preparing their chargemaster for public consumption while remaining compliant with current regulations and optimizing revenue," said Kate Banks, senior vice president, MedAssets Net Revenue Systems.

"Chargemasters" are the folks in charge of managing insurance and Medicare claims, which helps clarify MedAsset's main selling point. (This 2005 article from Healthcare Financial Management provides some more insight into the way people in this field actually think, although it's pretty heavy going.) I have to say, though, that I'm still scratching my head over what in the world Ms. Banks means when she says the tool helps prepare chargemasters for "public consumption."

That said, it's worth noting that "revenue-cycle management" accounts for only about 45 percent of MedAssets' revenues in 2006, with "spend management" — mostly, it seems, jawboning lower prices out of suppliers of medical products and devices — making up the rest. The company's revenue growth appears to be slowing, and its net loss attributable to common shareholders has risen sharply in the last few years, to $23.6 million in 2006. It'll be interesting to see if the company can pull off an Athenahealth-style triumph with its IPO.

OTHER HEADLINES OF NOTE:

- Transport Pharma raises $35M for cold-sore treatment *(VentureWire, sub req'd)*
- InSightec takes in $30M for ultrasound surgery *(release)*
- Ergonomic-arm maker Equipois raises $1.5M *(VW)*
- F-Star adds $4.5M for engineered antibodies *(release)*
- Healthnostics acquires med-info portal MedNets.com *(release)*
- Flavor and fragrance producer Allylix raises $3.4M *(release)*
- Renal Solutions acquired by Fresenius Medical for $190M *(Reuters)*

by David P. Hamilton 11.29.07 Leave a comment

Intelligent Bio-Systems stakes out new ground in the gene race — a $5,000 genome by late next year

The cost of sequencing human genomes is dropping steadily, from several hundred million dollars a decade ago to $100,000 or so today, thanks to a bevy of entrepreneurial companies that have attacked the problem of making the process faster and cheaper with gusto. We've looked at several of the newer upstarts in the field, most recently Complete Genomics and Bionanomatrix, Genome Corp. (seventh item), and Genomic Diagnostics (fourth item).

Now another startup is preparing to establish a new benchmark in the fast, cheap and out-of-control gene-sequencing race. Intelligent Bio-Systems, a Waltham, Mass., sequencer, says that by late next year, its new technology should make it possible to sequence a full genome in 24 hours at a cost of just $5,000, according to this VentureWire story (subscription required). Not only is that a jaw-dropping reduction compared to today's

costs, it potentially brings the Holy Grail of the $1,000 genome far closer than than even many optimistic forecasts.

Of course, talk is cheap. IBS, however, says it's already placed one of its sequencing systems with an undisclosed institution as part of its beta testing, and plans to distribute three more systems next year, with a full launch by the end of 2008. The company's CEO, Steven Gordon, says the system should be able to sequence five billion DNA "letters" — technically, DNA base pairs — in a day. A full human genome consisting of 23 pairs of chromosomes — such as Craig Venter's new high-resolution genome — contains six billion base pairs, although many sequencing efforts to date have settled for only one set of chromosomes, or three billion base pairs.

The details of sequencing technology are generally of interest only to experts, so anyone interested in the guts of the IBS approach is welcome to check out the company's description here. This GenomeWeb story from late last year offers some additional technical analysis.

Assuming that IBS isn't being wildly over-optimistic, which wouldn't exactly come as a stunning surprise in this field, the new technology raises the possibility that a sufficiently motivated group might capture the Archon X Prize for Genomics within the next year or so. The $10 million award, offered by the X Prize Foundation, will go to anyone who can sequence 100 genomes in ten days.

Since that challenge amounts to sequencing 60 billion base pairs in 240 hours, anyone who ponies up for a dozen IBS sequencing systems could just barely knock off the requisite 100 genomes in that time period — assuming nothing goes wrong. In actuality, though, this strategy probably wouldn't qualify for the prize, since the rules require the use of a single "device" in the challenge.

Still, it's fun to play with the numbers, since this approach — were it legal — could even be profitable. IBS estimates that each system will cost $250,000 to $275,000, or just $3.4 million for the dozen. It's a fascinating indication of just how fast the whole genomics revolution is moving.

On the far more mundane business front, VentureWire reports that IBS raised an undisclosed amount of first-round venture funding in June from angels and angel groups. The company will be looking for another $10 million to $20 million for commercial launch unless it finds a distribution partner.

by David P. Hamilton 11.28.07 2 Comments

Life sciences briefing: Wednesday, Nov. 28, 2007

Featured companies: *American Aerogel, Clinicient, Frazier Healthcare Ventures, Genome Diagnostics, RadPharm, RainDance Technologies, Vivacta*

UPDATED: Expanded items on Vitae, RadPharm, Vivacta and Genome Diagnostics. Intelligent Bio-Systems is now covered in a standalone item here.

Vitae Pharma takes in $15M for blood pressure, diabetes drugs — Vitae Pharmaceuticals, a Fort Washington, Pa., biotech focused on new drugs for hypertension and metabolic disorders, raised $15 million in a fourth funding round, VentureWire reports (subscription required). Boehringer Ingelheim, which struck a major partnership with Vitae in mid-October (PDF link), provided the funding.

That partnership calls for the two companies to co-develop Vitae drug candidates that inhibit a protein called 11beta-HSD1, an enzyme that helps regulate the hormone cortisol. The drugs may be useful in treating diabetes, obesity and hypertension. B-I agreed to pay Vitae $36.5 million in cash, research funding and an at-the-time

unspecified equity investment, as well as up to $300 million in potential milestone payments.

Vitae's other major drug program involves compounds that inhibit the protein renin, which regulates blood pressure and vascular function. Renin inhibitors, which could be useful in treating hypertension, have been a white whale of sorts for the drug industry over the past 30 years (see, for instance, this somewhat technical discussion of the history here).

UK's Vivacta draws in $12M for medical diagnostics — Vivacta, a U.K. medical-diagnostic company formerly known as PanOpSys, raised $12 million in a second funding round. Investors included AGF Private Equity, HBM BioVentures, Spark Ventures and Viking.

Vivacta is developing a fast, "point of care" diagnostic system intended to deliver laboratory-quality test readings from drawn blood in doctors' offices or at a hospital bedside. The technology is based on a "piezoelectric" film coated with antibodies to particular blood proteins. Piezoelectric devices produce current when compressed, so theoretically this approach should allow a direct measurement of blood proteins by generating current proportional to the density of antibodies that capture any particular blood protein.

RadPharm gets $10M for medical-image reviews — RadPharm, a Princeton, N.J., provider of medical-image review services, raised $10 million in a second funding round. Investors include Siemens Venture Capital, Ampersand Ventures, Adams Street Partners and Tang Capital Management.

RadPharm essentially provides outsourced analysis of medical images ranging from CAT scans to X-rays for clinical trials, whose outcomes can hinge on the way those images are read and analyzed. Trials of cancer drugs, for instance, frequently look at whether tumors shrink, stabilize or grow, and determining that requires someone to look at actual patient X-rays or other images and decide what they actually show. RadPharm's service provides "centralized, independent, blinded interpretation" of such scans.

Genome Diagnostics, cancer-test maker, aims for $1.6M — Genome Diagnostics, a Pasadena, Calif., developer of cancer diagnostic tests, has raised several hundred thousand dollars toward an anticipated $1.6 million first funding round, VentureWire reports. B.C. Capital of Israel and several individual investors provided the funds.

According to VentureWire, the company aims to produce a diagnostic test for prostate cancer based upon gene variations detected by sequencing a patient's entire genome. That sounds unlikely on several levels, the first of which is that "whole-genome sequencing" — VentureWire's description of what the company is doing — is still incredibly expensive, with an estimated cost of $100,000 or more.

It seems far more likely that the company will do a rough-and-ready genome scan that samples only several hundred thousand of the genome's three billion DNA "letters" that are known to vary between individuals — at least, that is, unless Genome Diagnostics is betting that the cost of whole-genome sequencing will drop to the fabled $1,000 or so by the time it gets its product to market. And maybe that's exactly what the company is doing, although that would mean that its initial testing costs are going to be extraordinarily high.

It's also far from clear exactly what sort of prognostic information the company hopes to obtain from a genome scan of either type, since most genetic-association studies can only show increases or decreases in the probability of disease, and with such a margin of error that it's difficult to see how that information could possibly serve a diagnostic purpose. I'll try to circle back to the company in order to get a better idea of what they're up to for a future post.

OTHER HEADLINES OF NOTE:

- Clinicient receives $5M for healthcare revenue-management software *(release)*
- Genome sequencer Intelligent Bio-Systems raises funding *(VW)*
- American Aerogel raises $3.2M for biopharma gels *(VW)*
- Frazier Healthcare Ventures raises $600M life-sciences fund *(Seattle P-I)*
- RainDance Technologies appoints Christopher McNary as CEO *(release)*

by David P. Hamilton 11.28.07 2 Comments

Cancer-drug biotech Agensys sells to Astellas for $387M — but is it a pig in a poke?

Yet another biotech has succumbed to Big Pharma's deep-pocketed blandishments. Agensys, a decade-old Santa Monica, Calif., biotech with an early-stage pipeline, just agreed to sell itself to Japan's Astellas Pharma for $387 million in cash. The company's shareholders can receive up to another $150 million in milestone payments.

Agensys, which called itself UroGenesys until 2001, is developing a range of antibody drugs against cancer. Oddly, though, the company hasn't had much to say about its drug candidates outside of some fairly vague generalities, such as noting that it has developed a "portfolio" more than 40 validated cancer targets or that it has "identified multiple product opportunities" for antibodies and other drugs that attack cancer. (For a full list, see here.) It's not even clear that any of Agensys' drug candidates have entered human testing, which is pretty striking for a company that's been around since 1997. The one drug Agensys managed to get into early-stage testing — a prostate-cancer treatment — hasn't been heard from since 2005.

Given all that, when Agensys raised a $41 million fourth funding round in July (see our coverage) I was half convinced that the company's secrecy cloaked a do-nothing pipeline, one that's full of promise and always will be. Astellas, however, seems to think otherwise, although with its own pipeline is in fairly dismal shape, so it might not be the best judge at the moment. Desperation doesn't tend to encourage critical thinking.

According to BioWorld Today, however, Agensys has 12 antibody programs in its pipeline (although what exactly that means is anyone's guess), and aims to request permission to start a clinical trial for a new kidney-cancer drug later this year. That's certainly something, I suppose.

The other striking thing about this deal is the price Astellas is paying for what is essentially an early stage biotech whose technology has barely reached the proof-of-concept stage. When Merck paid $350 million for NovaCardia in July, it was getting a company with a new heart drug that had already completed one late-stage "phase III" trial. By contrast, Astellas is picking up an unknown quantity in Agensys, whose drug-development technology could be every bit as good as it claims — or a giant bust.

In that, however, Astellas is hardly alone. Bristol-Myers dropped $430 million on Adnexus Therapeutics in September, and that company had only advanced one drug into clinical trials at that point.

In other words, it's still a great time to hawk your biotech to a rich, hungry Big Pharma. The party's in full swing, but don't dawdle — this sort of frenzy won't last forever.

by David P. Hamilton 11.27.07 Leave a comment

Perspective: Medical-device startups weather broader market storms

*[**NOTE:** This is a life-sciences perspective piece by Robin Bellas, a partner at Morgenthaler Ventures. For previous perspective pieces, see here. –D.P.H.]*

By ROBIN BELLAS

Does an ebb tide lower all boats? Not when the ship you're sailing was christened "Medical Devices." Since the beginning of the year, the Dow Jones Medical Equipment Index of public medtech companies has registered a 13 percent increase in value compared to just a 1.6 percent increase for the Standard & Poor 500 Index. Earlier in the year those two indexes marched upwards in tandem, but began diverging with the onset of general stock market volatility in July.

The continued buoyancy of medical device stocks in the face of broader market storms represents one more victory for this recently enlarged category. Until just a few years ago, public medical device stocks consisted mainly of a handful of large battleships led by Johnson & Johnson, Boston Scientific, Guidant, Medtronic, and St Jude Medical. Since then, they've been joined by a flotilla of several dozen smaller companies like Kyphon, Conor MedSystems, Fox Hollow, Insulet, and Masimo. While the former have churned steadily forward, the latter have either gotten acquired at post-IPO multiples of sometimes 4X or more or are speeding ahead independently with annual share growth over 50 percent. No matter what the state of the broader economy, doctors are unlikely to curtail adoption of the more effective treatment of spines, coronary and peripheral arteries, diabetes or neonatal illnesses.

Aside from rapid growth, one of the common characteristics of these smaller medical device companies is that they usually began life backed by venture capital. Their post-IPO performance, unsurprisingly, has attracted even more venture capital — just under $1 billion per quarter in 2007, or 25 percent above last year's pace. New VC entrants are also flocking to the business; I count a dozen or so new ones in the last year.

Such an investment wave raises the question of sustainability. My guess is that the higher level of investment is here to stay and will even continue to rise. In fact, we may be on the verge of seeing the disappearance of an old venture capital truism — namely, that life-science investment cycles up whenever IT investment cycles down, and vice versa.

Why? Largely because the whole medical device industry has matured. Compare for a moment the performance of medical device stocks during their previous upswelling back in 1996. That rise proved brief and, in retrospect, highly frothy. A few companies with revenues (e.g., Perclose, a Morgenthaler vascular closure company that was ultimately acquired by Abbott for $650 million) did well. Others, however, representing the majority of IPOs at that time, were concept companies like Heartport and CardioThoracic Systems (another Morgenthaler company). Most such companies ultimately failed to live up to expectations.

Investors underestimated the difficulty that concept companies would have in opening new markets. It was a case of not-always-straightforward products aimed at slow-to-adopt physicians. With each unexciting outcome, public investing enthusiasm sank that much lower. Throughout the late 1990s and early 2000s, medical device venture capitalists could only exit by selling companies to the large medtechs. VCs would first identify a product gap in the portfolio of a given medtech, invest in the company developing the new product through proof of concept, then sell. Solid, but nothing worthy of a 21-gun salute!

Look, however, at medical device investing today:

- We've got experienced CEOs on their third and fourth startup and more experienced VCs to support them. In short, we've got more people who know how to build successful medical device companies.
- We've got large, proven device markets like stents and joint replacements. We know that if our companies develop a significantly better product in such markets, physicians are on the lookout for improved patient outcomes.
- Even where our companies are opening new device markets — for instance, fresh approaches to chronic obstructive pulmonary disease such as emphysema — improved technology and the increasingly less invasive nature of the products lead to much faster physician acceptance. It's common today for a simple, insertable device requiring a one-hour procedure to replace a highly complex, expensive and lengthy surgical procedure. It's harder to resist change that is easy to implement and improves outcomes while lowering health care costs.
- A number of new devices—e.g. for treatment of obesity, heart disease, glaucoma, etc.– have the potential to achieve the "blockbuster" billion-dollar-revenue status previously attained mainly by Big Pharma.
- Finally, we've got far more experienced bankers, analysts and investors who know much better how to evaluate companies and markets. As a result, we have remarkably un-frothy markets which reward companies commensurate to performance, either up or down.

Such facts all add up to a rising tide that can support two distinct VC investing strategies. The most common is late stage device investing, the approach favored by most new VC entrants, but also many established device investors, as well. The rationale is to finance largely proven technology to market and then exit relatively quickly—say, two to three years.

The less common is early stage investing, the one we and a few other VCs prefer and one that capitalizes on our experience at early identification of winning technologies. We think such an approach offers higher returns, albeit within a longer time frame. As our portfolio companies mature, we prefer to use other people's money for higher-priced later rounds.

We think the rising tide of medical device investing is strong enough to support both strategies. Indeed, as we scan the horizon we only see three small clouds. One is the more recent reluctance of large medtechs to buy young medical device companies early in their development. Instead, they will often wait until the company demonstrates growing revenues and profits. This puts VCs more than ever on their mettle to develop real, fully-staffed companies rather than merely effective technologies.

The second is the increasingly short attention spans of public investors—which, of late, includes many hedge funds. As Thom Gunderson, the able medical device analyst at Piper, Jaffray likes to put it, "it used to be that a long-term investor would check his portfolio every quarter. Now it's every five minutes." This fact of investment life has led to increased volatility for device company stocks, especially those that are still pre-revenue. Such volatility can threaten to put further financing for such costly activities as U.S. clinical trials, at least temporarily, under water.

Finally and third, some areas of medical device investing like obesity, artificial spinal disks and neural stimulation seem to be attracting the kind of over-investment that leads to widespread company failures. We think such situations can be avoided by investing early in large markets capable of supporting several winners and by picking projects that offer faster clinical endpoints.

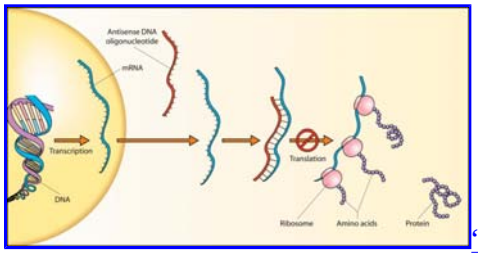
Overall, however, these clouds seem unlikely to expand into storms that bring unmanageable turbulence. The quality of and demand for better medical devices is just too strong. For the foreseeable future in medical device investing, we expect "fair winds and following seas."

Robin Bellas, a former nuclear submariner, continually scans the horizon for new medical device deals. He is a partner at Morgenthaler Ventures in Menlo Park, Calif.

by David P. Hamilton 11.27.07 Leave a comment

New biotech startup Excaliard Pharma raises $16M for a fresh stab at antisense drugs

*(**UPDATED:** See below.)*



"Antisense" drugs that aim to shut down disease-related genes have long been out of favor, and these days live in the shadow of a hotter and newer technology — RNA interference — that does much the same thing. But that hasn't stopped Encinitas, Calif.-based Excaliard Pharmaceuticals, a newly formed biotech focused on scarring and "fibrotic" conditions, from taking a fresh stab at the field.

The startup just licensed a slew of antisense technology from Isis Pharmaceuticals, and announced that it raised $15.5 million in a first funding round, presumably to help pay for it. Investors in the round included Alta Partners, ProQuest Investments, and RiverVest Venture Partners.

Excaliard is still keeping its head down — its Web site is basically a stub — so it's not entirely clear exactly which diseases it plans on tackling. Still, it's notable that the company appears willing to bet fairly heavily on antisense, which Isis and other biotechs have been working on for more than two decades, still without notable success.

Antisense technology essentially involves using short snippets of nucleic acid that bind to "complementary" strands of RNA produced as a gene produces a new protein. That binding effectively shuts down the protein production process, at least in theory. In practice, antisense drugs have failed to live up to their potential, partly because they have had difficulty getting inside cells, which is necessary to get at the RNA involved in protein production. For a graphic version of how this is all supposed to work, click on the image at upper left for a larger version.

Excaliard has paid a fairly substantial amount to get into the antisense field. It handed over an unspecified amount of equity to Isis and made a cash payment of $1 million for the rights to develop antisense drugs against a particular gene — presumably one whose malfunction is related to excessive scarring of some sort. Isis is also entitled to milestone payments and royalties should any drugs make progress.

Although antisense has long gotten a bad rap (multiple high-profile failures will do that), it's also worth noting that Isis is getting some positive buzz off its leading antisense candidate, an anti-cholesterol drug it now calls mipomersin that has produced some promising results in mid-stage trials. Of course, previous antisense drugs have also looked good in such "phase II" trials, only to collapse in larger and more rigorous tests, but maybe this time will be different.

UPDATE: Actually, there may be a resurgence of sorts underway in antisense. It slipped my mind earlier that the U.K. startup Antisense Pharma just raised the equivalent of $38 million for a late-stage trial of an antisense brain-cancer drug. Also, Isis recently spun out Altair Therapeutics to pursue antisense in respiratory disease.

by David P. Hamilton 11.27.07 1 Comment

Evalve pulls in $60M, heating up heart-valve implant race

Evalve, a Menlo Park, Calif., developer of minimally invasive heart-valve repair implants, raised $60 million in a fourth funding round.

Evalve's device is designed to replace risky open-heart surgery for patients whose mitral valve, which regulates blood flow between the left two chambers of the heart, fails to close properly. The device allows interventional cardiologists to thread an implant clip through the femoral artery of the leg to the heart, where it can pin together two "leaflets" on the mitral valve.

The images at left show the mitral valve prior to the procedure and following installation of the company's MitraClip. (Obviously, these represent a somewhat idealized view of how this is all supposed to work.) Evalve also has a video illustrating the technique at its Web site here.

The company said the funding will lay the groundwork for commercial launch of its MitraClip device in Europe and to complete late-stage human tests of the device in the U.S. Evalve is still enrolling patients in that study, which will compare MitraClip to standard open-heart surgery. and expects to complete enrollment next year. Patients will be followed for 24 months following the procedure.

Investors included BBT Fund, Delphi Ventures, New Enterprise Associates, Split Rock Partners and Abbott Laboratories. Evalve isn't alone in this market, although it appears to be ahead of one rival we've previously covered, Cardiosolutions (see here).

Cardiosolutions aims to restore mitral-valve function with a paddle-type implant that pushes the valve's leaflets closed during ventricular contraction. For additional — albeit somewhat dense — explanation, plus its own video of the process, see the company's site here.

by David P. Hamilton 11.27.07 2 Comments

Life sciences briefing: Tuesday, Nov. 27, 2007

Featured companies: *Bind Biosciences, Clarus Therapeutics, HealOr, HistroRx, Plasticell, SpinalMotion, Xenome, Yaupon Therapeutics*

UPDATED: Expanded items on SpinalMotion and Plasticell. Previous items on Evalve and Excaliard have been expanded into standalone posts here and here.

Spinal-disc maker SpinalMotion arranges $14M loan facility — SpinalMotion, a

Mountain View, Calif., developer of artificial spinal discs, arranged a $14 million "loan facility" — sort of a line of credit — with GE Healthcare Financial Services. The company last raised $20 million in a third round in September 2006, and to date has raised a total of $44.2 million in venture funding, according to VentureWire (subscription required).

SpinalMotion's artificial cervical and and lumbar discs are designed to provide alternatives to spinal-fusion surgery or an approved artificial disc (J&J's Charite) for degenerative-disc conditions. Both are being tested in large clinical trials, and the company said in June that both trials are now fully enrolled.

I wasn't able to reach anyone at the company — the release itself was issued by GE Healthcare — and so haven't had a chance to ask why SpinalMotion decided to take on debt rather than pursuing another venture-financing round. The obvious answer would be that management believes the company can get better terms from either VCs, IPO investors or potential acquirers following the release of those clinical-trial results, and is willing to take on debt to tide the company over until the data is in.

The obvious risk, meanwhile, is that if either or both trials go sour, the company will be in much more of a hole if it plans to raise new funds. It's a calculated gamble, one whose outcome will be interesting to observe.

Plasticell takes in £690K for stem-cell work — Plasticell, a U.K. biotech hoping to develop new drugs that mimic the regenerative effects of stem cells, has pulled in £690,000 ($1.4 million) in the company's first institutional funding round.

The Capital Fund, a London-based VC outfit, provided £250,000 of that funding, while unidentified existing invested accounted for another £440,000. Plasticell also received a £1.1 million grant from the U.K. government in January to develop robotic systems for culturing stem cells.

Plasticell hasn't yet made much of a splash, although its scientific advisors include some heavy hitters in the U.K. stem-cell research community, including Sir Martin Evans, who shared the Nobel Prize last month. The company is pursuing two complementary objectives: Culturing stem cells in order to identify the various biochemical signals that cause them to "differentiate" into various types of body tissue, and searching for drugs that might mimic or alter those signals in both stem cells and normal cells.

Such work could have a variety of applications, such as cancer treatments or "regenerative medicine" that restores tissues damaged by disease or injury. In a way, the company's efforts parallel work by other research teams that recently reported a way of "reprogramming" normal cells to convert them into stem cells (see our coverage).

OTHER HEADLINES OF NOTE:

- Exiqon to buy cancer-diagnostics startup Oncotech for $45M *(GenomeWeb, reg req'd)*
- Australia's Xenome raises $10M for new peptide drugs *(release)*
- Nanoparticle-drug maker Bind Biosciences receives $16M *(release)*
- Yaupon takes in $16M for cancer, CNS drugs *(release)*
- Hormone-drug maker Clarus draws $8M *(release)*
- Israel's HealOr receives $8M for skin-care drugs *(release)*
- HistoRx names Rana Gupta as CEO *(release)*

by David P. Hamilton 11.27.07 1 Comment

Life sciences briefing: Monday, Nov. 26, 2007

Featured companies: *Biospace Med, Carbylan BioSurgery, GVK BioSciences, IntraSafe Medical, InViragen,*

Medingo, ParadigmHealth, Precimed, SV Life Sciences

UPDATED: Expanded items on Carbylan, Medingo, and GVK Biosciences.

Carbylan raises $20M for arthritis, sinusitis drug implants — Palo Alto, Calif.-based Carbylan BioSurgery, a medical-device maker focused on polymer-based drug-delivery technologies, raised $20 million in a second funding round. Investors included Vivo Ventures, Alta Partners and InterWest Partners.

Carbylan is developing a biomaterial-based drug-delivery system in which drug-impregnated polymers of hyaluronic acid are injected into the body in liquid form. Those polymers bind to one another and to the body's tissues, allowing controlled release of the drug in a particular location. The company's first drug candidates are aimed at treating sinusitis and osteoarthritis.

Israel's Medingo gets $27M to develop insulin patch — Medingo, a Tel Aviv, Israel, medical-device maker, raised $27 million. The company's group parent, Elron Electronic Industries, invested between $13 million and $22 million in the round, including $4 million in convertible loans.

Radius Ventures invested $5 million in the round. Medingo is developing an insulin-delivery patch — although given that it's remote controlled and holds a reservoir of insulin, it's probably more like a computerized disk that regulates insulin flow. Medingo says it can be worn anywhere during almost any activity, including showers, swimming, and the other five of the "seven S's" the company touts on its Web site. (We're a family Web site, but yes, that particular "S" is there.)

Medingo says it expects to receive FDA approval next year. Not bad for a company founded just two years ago. Medingo's timetable sounds a bit on the optimistic side to me, but maybe they're really on the ball with this new-style insulin pump.

Indian contract researcher GVK Biosciences raises $27M from Sequoia Capital — GVK Biosciences, an Indian contract research organization, raised 1 billion rupees ($27 million) from Sequoia Capital. The company runs clinical trials and performs other biomedical services for pharmaceutical clients.

OTHER HEADLINES OF NOTE:

- Inverness acquires care and disease manager ParadigmHealth for $230M *(release)*
- Biospace Med raises €12M for orthopedic imaging *(release)*
- IV-system maker IntraSafe raises $2M *(VentureWire, sub req'd)*
- SV Life Sciences adds Robert Palmisano as venture partner *(release)*
- InViragen receives funding for dengue vaccine *(release)*
- Greatbatch acquires orthopedic-instrumentation supplier Precimed *(release)*

by David P. Hamilton 11.26.07 1 Comment

Turkey weekend update: Brain-scan your teen, probe your Nubian ancestry, learn healthcare economics, and more

 Welcome back, American readers, from what we hope was a long and leftover-filled weekend. The news was slow, but here are a few stories you might have missed while still in your post-dinner food coma.

Frustrated by your teenager? Scan his brain — Actually, that probably wouldn't help, although Arthur Toga has given it a try. Sort of. Toga, director of UCLA's Laboratory for Neuro Imaging, has scanned the brain of his daughter Elizabeth 's every year or so since she was six. The results of those scans, plus similar scans of Toga's other two children, have produced one of the longest chronological sequences of brain development ever attempted. That and other work have produced some fascinating findings on the way child and adolescent brains develop, "transforming our understanding of what it means to come of age," WSJ science columnist Robert Lee Hotz wrote in his Friday column. Unfortunately, as Toga himself attests, knowing more about your teen's neural development doesn't necessarily help you deal with adolescent rebellion.

Gates takes on genetic genealogy — Harvard scholar Henry Louis Gates, that is, who recently launched his own DNA-ancestry company, African DNA, after he became convinced that existing firms that claim to help African-Americans trace their country of origin were potentially misleading customers. An NYT story yesterday uses Gates' experience to expound on the limitations and potential pitfalls involved in genetic genealogy, a subject we touched on here. As it turns out, however, the WSJ wrote substantially the same story a week earlier, which you can check out here (subscription required).

Healthcare economics 101 — The NYT editorializes on the high cost of U.S. healthcare in a lengthy piece, one that touches upon many of the usual suspects — patient demand for the latest, most expensive treatments, the overspecialization of the medical profession, perverse insurance incentives and high overhead costs associated with the fragmented and inefficient insurance industry — that we've noted in occasional pieces (here and here, for instance). The NYT's proposed solutions, however, are a real mixed bag. More evidence-based medicine to ensure that drugs, devices and surgical procedures actually work is certainly a good idea, as would be wider deployment of IT and electronic medical records. It's far from clear exactly what the NYT editorial board is expecting from the greater use of "managed care," which particularly in its for-profit incarnation became a synonym for extracting greater investor returns at the expense of patient care.

And finally the editorial simply dissolves into incoherence. It favors letting Medicare negotiate lower drug prices, for instance, but doubts that doing so would produce big savings. So why bother? Paying doctors closer to what they earn in other countries — far less than the U.S., that is — would save money, but might be politically impossible. So is it part of the solution or not? Consumer-driven healthcare could reduce what people spend on unnecessary care — but they might also cut necessary care. And so on. Ultimately, the paper's august editors conclude that there is "no silver bullet" for the problem, and that a "wide range of contributing factors needs to be tackled simultaneously." While that's almost certainly true, the NYT has managed to turn a challenging and timely subject into an object lesson on how not to write a convincing editorial. It might as well have been titled: "Confused about healthcare costs? So are we."

Healthcare economics 201 — Meanwhile, an NYT news story brought the surprising news that the Medicare "doughnut hole" — a big financial gap in the program's prescription-drug coverage — may actually have a silver lining by encouraging wider use of generic drugs. Similarly, Rite-Aid drugstores have started selling a genetic paternity kit made by Sorenson Genomics, and psychiatrist Daniel Carlat writes in the NYT Magazine about how he came to grips with the often-subtle influence wielded by pharmaceutical drug reps.

by David P. Hamilton 11.26.07 Leave a comment
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