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New York Hospital Uses Prepaid Cards to Pay Study Participants

feature

The Theresa & Eugene M. Lang Center for Research & Education—the clinical trial and research arm of New York Hospital Queens (NYHQ)—has replaced its paper-check payment system for clinical trial participants. Instead, patients who earn a stipend for participating in a clinical trial receive a Mastercard card preloaded with their allotted funds.

The card was created by Payoneer, a provider of prepaid cards to companies that remit payments to remote, dispersed populations. Designed specifically for the clinical research market, the cards alleviate the burden of paying cash or checks to trial participants. Payoneer said about a dozen contract research organizations and investigative sites are using its Mastercard system.

Karen Hultberg, NYHQ's clinical research administrator, first heard about the prepaid card concept at a conference where Payoneer was exhibiting. She said she could tell immediately that

the cards would improve NYHQ's process for paying study stipends.

"[Our process] was just very, very, very cumbersome. Let's say we were doing a study, and [participants] have 10 visits. A patient would come in for Visit 1, and they might have to get reimbursed for \$20. We'd have to get a check request. We'd have to get appropriate signatures. We'd send it to finance, they'd cut a check—which could be anywhere from one to three months before we get the check. Then, we'd send it to the patient. By that time, they could have been to Visits 2, 3, 4 and 5," Hultberg said. "It was just very paper-heavy and cumbersome to do any type of an immediate thank you or [to give] feedback to our subjects for participating in a study."

The ready-to-use cards are branded with the NYHQ logo and delivered directly to the research site. NYHQ assigns the cards to patients and loads them online when a patient stipend is due. The cards, which do not identify trial participants in any way, can be reused multiple times when a

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study encompasses many visits over a period of time. Patients can use the cards anywhere that accepts Debit Mastercard.

NYHQ, which currently has 120 active studies, began using the prepaid cards last year. Before implementing the new payment process, Hultberg worked with her staff, information technology and finance to ensure that the process was acceptable to all and secure for both patients and NYHQ.

Rather than submitting dozens of individual check requests to the finance department, the research department now only needs to do an occasional request for a large lump sum to replenish the Payoneer master account. From that account, approved users (only Hultberg and the office manager) can load cards with smaller amounts to pay study participants, and the finance department gets regular reports of the money spent and what study it was spent on.

“[Patients] walk in the door. Our coordinator tells our office manager, ‘I have a patient today, eligible for \$20.’ If they’ve already been in the study, all she has to do is go online, click ‘\$20,’ and they add another \$20 to the debit card,” Hultberg said.

Hultberg estimated that the prepaid cards save the research and finance department staffs about a half-day of work each week. Perhaps most importantly, study participants love the new system.

“Do they have any problem? On the contrary, they love it. because they’re literally walking out the door with the \$20,” Hultberg said. “Before, they’d have to sit and wait a month or so.

And then they’d have to go to the bank, which is a pain. They’re not participating for the money; that’s not why these people do it anyway. But if we can help give back and retain the subjects to keep them in the study, all the better.”



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Covance-Lilly Deal Continues to Bloom

A little more than a year after Covance entered into a ground-breaking \$1.6-billion drug development agreement with Eli Lilly, the contract research organization (CRO) continues to reap the awards of that deal and recently expanded the relationship.

The two companies initially entered into a partnership in October 2008 that included Covance's acquisition of Lilly's Greenfield, Ind., preclinical research facility for \$50 million. In return, Lilly agreed to provide Covance with a broad range of drug development services work over the next 10 years for a minimum contract value of \$1.6 billion. As part of that deal, Covance took on 264 Lilly employees who were based in Greenfield and assumed responsibility for Lilly's toxicology testing and discovery support activities in Greenfield.

Last month, the two companies expanded their partnership to include a three-year biotechnology services

agreement, which includes Covance building a \$15-million biotech facility on its Greenfield campus to take over Lilly's bioproduct analytical testing. Covance has also offered employment to 20 Lilly employees.

The Covance-Lilly partnership has been a "win-win-win" for Lilly, Covance, employees at both companies and the affected communities, said John Watson, corporate vice president and president of Covance's strategic partnering and integrated drug development business unit.

"Acquiring the Greenfield facility has enhanced Covance's ability to support the development of medicines from Lilly and other companies in the biopharmaceutical industry for many years to come," Watson said. "Gaining new preclinical service offerings in October 2008—such as discovery toxicology, *in vivo* pharmacology, and non-clinical imaging services—allows us to accelerate our strategic growth plans in toxicology testing and discovery support activities."

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According to Watson, more than 95% of the original 264 employees hired from Lilly have remained with Covance, and the CRO has added 70 new employees in Greenfield with plans to add another 300 in the near future.

“Since the initial agreement, Covance has also added three new service lines to Greenfield in the form of our Biomarker Center of Excellence, nutritional chemistry, and biotechnology services to support Lilly and over 20 new clients ranging in size from very small start-ups to top ten pharmaceutical companies such as Lilly,” Watson said.

The challenges in the industry that made the partnership with Covance so attractive for Lilly still exist, Watson said. Pharmaceutical companies must find quick and cost-effective strategies for bringing drugs safely to market, and partnering with CROs may be the best way to do this.

“In the first year, Covance has proven that we can help accelerate drug development timelines and improve efficiencies, enabling Lilly to focus on its core competencies in delivering better patient outcomes over the longer-term,” Watson said. “We anticipate that other companies will consider strategic partnerships as a smart way for them to go, too ... especially with the success we’ve demonstrated in our first-year partnership with Lilly. Today, sponsors are also clearly leveraging global CROs to expand into new geographies, which often times presents a staff transfer or joint-focused opportunity.”

As more CROs and sponsors look to develop relationships similar to that of Covance and Lilly, Watson said it’s

critical that these companies have executive-level support and ongoing participation; mutually understand each other’s strategic needs and core competencies; establish governance and operating structure; clearly define expectations, roles and responsibilities, as well as operational processes, systems and measures of performance; and foster frequent, open communication. Finally, Watson said, the companies must be flexible and adaptable with a true willingness to make the partnership work.

“Covance’s alliance with Lilly demonstrates that the pharmaceutical industry is recognizing that CROs have the ability to help accelerate drug development timelines and improve efficiencies,” Watson said. 



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CROs

MDS completed its sale of the discovery and preclinical business of MDS Pharma Services, the company's contract research organization (CRO). Under the terms of the deal, early-stage CRO **Ricerca Biosciences** of Concord, Ohio, acquired facilities in Bothell, Wash.; Lyon, France; and Taipei, Taiwan. Approximately 600 MDS employees will join Ricerca as part of the acquisition.

MDS is selling the remainder of its CRO business—the development and regulatory services consultancy as well as five early-stage facilities in Ireland, Nebraska, New Jersey, Arizona and Switzerland—to a new corporation primarily owned by private investment firms Bain Capital Ventures and SV Life Sciences. That sale is expected to close by the end of April. According to published reports, the total of both deals is approximately \$45 million.

Neither deal includes the sale of MDS Pharma's King of Prussia, Pa., executive office or its early clinical research and bioanalysis operations in Montreal, Quebec. The Pennsylvania office closed earlier this year, and the Montreal operations will be decommissioned over the next year with final close occurring in early 2011. Approximately 225 employees will be laid off as a result of the closures, while another 50 jobs will be eliminated from MDS Pharma Services' other locations.

■

Kendle plans to open a new facility in India by the middle of April. The new unit will be based in a Special Economic Zone (SEZ) in the upcoming Ahmedabad-Gandhinagar Knowledge Corridor. The Indian government has established SEZs throughout the country to increase foreign investment and business.

Kendle already has offices in Ahmedabad and New Delhi. The CRO will initially employ 50 people at the SEZ operations center with room to grow to up to 300. The company will offer the following services at the new facility: clinical data management, medical writing, pharmacovigilance/safety, biostatistics/programming and other knowledge processing-related services.

“Continued expansion throughout the Asia-Pacific region is crucial to the future growth of Kendle,” said Stephen Cutler, Ph.D., senior vice president and chief operating officer, in a statement. “Our increased capacity in the region will allow us to better meet the growing demands of our customers who are seeking to capitalize on India's rapidly expanding high-quality biopharmaceutical capabilities.”

■

BioClinica added two CROs—**Health Sciences International** and **PRL Central Laboratory Services**—to its Certified Partner Program, a group established

by the CRO to broaden its service offerings.

Based in Connecticut, Health Sciences International conducts phase I to phase IV clinical trials, focusing on cardiology, vascular disorders, central nervous system, endocrinology and internal medicine. Kansas-based PRL Central Laboratory Services specializes in diagnostic testing with a focus on protocol requirements.



Health Decisions, another CRO that's created a network of regional CROs to tackle multinational trials, added Moscow-based **Congenix** to its list of affiliates.

With offices in Moscow and Hercules, Calif., Congenix offers phase I to phase IV services, including regulatory affairs, clinical monitoring, project management, investigational site management, study supplies custom clearance, warehousing and distribution.

Technology

ClearTrial, a provider of clinical trial software, recently launched its Study Costing and Optimization Service (SCOS), a product that combines ClearTrial's existing trial management software with the consultation services of the company's clinical services staff. ClearTrial said the new offering will give smaller biopharma companies more control over clinical trial costs, resources and timelines.

As part of the SCOS, ClearTrials provides a clinical services manager who works with a client's internal clinical team to generate detailed cost, resource and timeline reports for multiple study scenarios. These scenarios enable the client to analyze different possible cost- and time-cutting measures.

"Many smaller biopharma companies lack the visibility to accurately forecast clinical trials, leading to them not understanding how much clinical trials should really cost, as well as deal-

ing with unforeseen shifts in trial timelines," said Andrew Grygiel, vice president of marketing and product management, in a statement. "We conducted an extensive pilot program of the ClearTrial Study Costing and Optimization Service, and, in every case, were able to identify dramatic reductions in study costs and timelines, while ensuring that the studies were still achievable."



Clinical trial software company **Medidata Solutions** reported its first full-year financial results since going public last June.

Net revenues for 2009 were up 33% to \$140.4 million compared with \$105.7 million in 2008. Full-year 2009 net income was \$11.7 million, or \$0.57 per diluted share, compared with a loss of \$13.8 million, or \$2.11 per diluted share, in 2008.

Fourth quarter revenues were \$37.6 million, compared to \$31.2 million in the fourth quarter 2008. Net income for the quarter was \$3.5 million, or \$0.15 per diluted share, up from \$0.9 million, or \$0.05 million per diluted share, a year ago.

The company expects revenues between \$160 million and \$164 million in 2010.



Cognitive Testing Services Company

An interview with Subhash Goswami, Chief Operating Officer

The Cognition Group (TCG), Newark, Del.

How and why was The Cognition Group founded?

The Cognition Group (TCG) started with two professors at UCLA [University of California, Los Angeles] and London Institute of Psychiatry who converted a selection of cognitive tests, which were in a paper-and-pencil format, into an electronic format. We started with a five-member team in 2000 and created CogTest, the flagship brand of the company. CogTest is a full suite of cognitive test batteries ranging up to 35 different tests. It has been deployed during the last 10 years in 65 countries and translated into 54 languages at 655 sites globally.

Whilst we were working with our customers on the cognitive testing battery, we listened to their needs and found out that they also required rater training. Training the raters under one platform was an essential tool. We had the skill sets within the company to deliver this, so we developed rater training and then the company grew. We have more than 100 employees now.

Year founded: 2000
Employees: 100+
Offices: Newark, Del.; London, UK; Bydgoszcz, Poland; New Delhi and Gurgaon, India
Tel: +44 1322 312102, +44 7960 156140
Email: subhash.goswami@cognitiongroup.com
Web site: www.cognitiongroup.com

What differentiates The Cognition Group from other cognitive testing services companies?

The fundamental difference between TCG and other vendors in the same market space is that we have global offices and are able to offer local solutions to global challenges. The needs in various countries are different, and, because we have project management placed across India, Poland, United Kingdom and the United States, we can cater to our customers' needs with a very local perspective.

The second thing is that we are a technology-driven company, and we listen to our customers constantly. This allows us to develop innovative products and provide cost-effective solutions to our customers, one of which is

our Signal Enhancement System, or SES, that Schering-Plough and TCG jointly developed three years ago. TCG is the only company in the world that has come up with a technology like this, which has been tried and tested and has the data to support its validity. The Signal Enhancement System and our service line to our customers differentiates TCG from our competitors.

Tell me more about TCG's Signal Enhancement System.

The Signal Enhancement System video records the entire interview between the site rater and the patient and then transfers that video via a secure line to an expert independent rater based elsewhere. This expert then reviews that video, provides comments on the score and the pattern of how the interview was conducted and gives feedback on whether the patient meets the inclusion/exclusion criteria of the study. So, the sponsor gets an unbiased second opinion. It works well for the patient also because the patient knows that there's an expert involved in the diagnosis.

The Signal Enhancement System brings a number of benefits to sponsors. One of those benefits is that it facilitates the active involvement of site raters on a large scale. Second, it removes the need for continuous re-training or re-certification during the study because, with the Signal Enhancement System, customers get monitoring of the site raters, and site raters get feedback from an expert independent rater via video feed. Third, it helps site raters avoid unconsciously inflating the clinical score. The fourth benefit is that it also allows a second opinion from an independent expert who's not associated with the site and patient. Thus, the sponsor gets an unbiased opinion.

TCG's Signal Enhancement System is available as a stand-alone software system on a laptop with a web cam. It's a very cost-effective and easy-to-deploy solution. When the patient

comes for an interview, the site rater switches on the software system and then that video is transmitted via a secure connection to a web browser, and then an independent expert rater, who is country-specific, will comment and give feedback. Then, the site rater and the expert rater can talk about whether the diagnosis was correct, the interview was exact and according to the protocol or whether the patient who was selected for the study meets the inclusion/exclusion criteria. These are services that were not available within a clinical trial prior to the Signal Enhancement System being on the market. Our product has improved the way sponsors can do clinical trials so that they can get good value for money.

We have deployed this technology in 12 countries spanning North America, South America, Europe and Russia. We have conducted clinical trials at 50 global sites in eight foreign languages, in addition to English, with more than 1,000 videos recorded, reviewed and used.

Are there cultural issues that come up during rater training?

There are cultural issues that come up. If a patient-doctor interview is conducted in Spain, and you ask someone from the United States to review it, cultural differences will creep in. Country-specific raters prevent cultural bias from entering into the picture. In each country, there are key opinion leaders and expert raters. Patients also love it because they rarely get an opportunity to get a view from an expert in their day-to-day diagnosis with their local doctor. It gives them that extra sense of value by participating in a clinical trial.

What are your plans for growth?

We have a two-pronged strategy. First, we need to continue to foster our existing clients and give them more and better value for the business they give us. Second, we need to constantly strive to stay ahead of competition and be a unique provider in this space by bringing out better technology. We are very focused on bringing cost-effective solutions to our customers and changing the way clinical trials are conducted globally.

The Signal Enhancement System has created a paradigm shift in how clinical trials are done. We are in the final stages of releasing two more products, which are undergoing validation at the moment. These new and different products should bring about even bigger changes and more cost-effective solutions to our customers.

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Company	Drug/Device	Therapeutic Area	Status	Sponsor Info
sanofi-aventis	SAR650984	hematological malignancies	Phase I trials planned enrolling 60 subjects	(800) 981-2491 www.sanofi-aventis.com
Isis Pharmaceuticals	ISIS-SOD1Rx	familial amyotrophic lateral sclerosis	Phase I trials initiated enrolling 32 subjects in the U.S.	(760) 931-9200 www.isispharm.com
Amsterdam Molecular Therapeutics	gene therapy	hemophilia B	Phase I/II trials initiated in the U.S. and UK	+31 20 566 7394 www.amtbiopharma.com
Ischemix	CMX-2043	peri-operative ischemia-reperfusion injury	Phase IIa trials initiated enrolling 220 subjects	(978) 897-5139 www.ischemix.com
LEO Pharma	LEO 80185	scalp psoriasis	Phase II trials planned enrolling 30 children in the U.S.	(877) 494-4536 www.leo-pharma.us.com
Boehringer Ingelheim	dabigatran etexilate	thrombosis	Phase II trials initiated enrolling 16 children in Canada	(800) 243-0127 www.boehringer-ingelheim.com
Chimerix	CMX001	cytomegalovirus in stem cell transplant recipients	Phase II trials initiated enrolling 120 subjects in the U.S.	(919) 806-1074 www.chimerix-inc.com
Mologen	MGN1703	colorectal cancer	Phase II trials planned in Europe	+49 (0)30 84 17 88 0 www.mologen.com
Novartis	panobinostat	multiple myeloma	Phase II trials planned enrolling 47 subjects	(862) 778-8300 www.novartis.com
Harbor BioSciences	Apoptone	castration-resistant prostate cancer	Phase IIb trials planned	(858) 587-9333 www.harborbiosciences.com
Transgene S.A.	TG4010	non-small-cell lung cancer	Phase IIb/III trials planned enrolling 1,000 subjects internationally	+33 (0) 3 88 27 91 00 www.transgene.com
Affymax/ Takeda	Hematide	anemia/ chronic renal failure	Phase III trials initiated in Japan	(650) 812-8861 www.affymax.com
Boehringer Ingelheim	linagliptin	type 2 diabetes	Phase III trials initiated enrolling 240 elderly subjects internationally	(800) 243-0127 www.boehringer-ingelheim.com

Company	Drug/Device	Therapeutic Area	Status	Sponsor Info
Bristol-Myers Squibb/ AstraZeneca	Onglyza	type 2 diabetes	Phase IV trials initiated enrolling 12,000 subjects	(800) 332-2056 www.bms.com
Bayer Schering Pharma	ciprofloxacin dry powder inhaler	pseudomonas aeruginosa infections/ cystic fibrosis	Orphan drug status granted in the U.S.	+49 214 30 1 www.bayer.com
Cytokinetics	CK-2017357	amyotrophic lateral sclerosis	Orphan drug status granted in the U.S.	(650) 624-3000 www.cytokinetics.com
ImmunoGen	IMGN901	Merkel cell carcinoma	Orphan drug status granted in the U.S. and the E.U.	(781) 895-0600 www.immunogen.com
NeoPharm	IL13-PE38QQR	idiopathic pulmonary fibrosis	Orphan drug status granted in the U.S.	(847) 887-0800 www.neopharm.com
Allergan	Botox	upper limb spasticity	FDA approved	(714) 246-4500 www.allergan.com

Hematology

Bristol-Myers Squibb and **Pfizer** reported positive results from a phase III trial of **apixaban** for the prevention and treatment of venous thromboembolism. This head-to-head, randomized, double-blind, safety and efficacy study, dubbed ADVANCE-2, enrolled 3,221 subjects undergoing elective knee replacement surgery. The subjects received 2.5mg of apixaban orally twice daily or subcutaneous enoxaparin 40mg once daily, over a 10- to 14-day treatment period. The primary efficacy endpoint was the composite of asymptomatic and symptomatic deep vein thrombosis, non-fatal pulmonary embolism, and death from any cause during study treatment. The primary efficacy endpoint occurred in 15.1% of the apixaban group and 24.4% of the enoxaparin group, resulting in a statistically significant relative risk reduction for apixaban of 38% ($p < 0.0001$). The secondary efficacy endpoint, major venous thromboembolism, occurred in 1.1% of the apixaban group compared with 2.2% of the enoxaparin group (one-sided $p = 0.02$). The incidences of major bleeding and clinically relevant non-major bleeding were similar between the treatment arms. All other safety parameters were comparable. Several additional phase III trials are currently under way.

Nephrology

AM-Pharma issued positive results from a phase II trial of **alkaline phosphatase** for acute kidney injury. This double-blind, placebo-controlled study enrolled 36 subjects with acute kidney injury secondary to sepsis. The subjects received alkaline phosphatase intravenously for 48 hours and were followed for 28 days. A composite analysis of all primary renal function efficacy parameters,

creatinine clearance, serum creatinine and dialysis requirement showed statistically significant improvement compared to placebo ($p = 0.005$). Renal creatinine clearance improved more than twice as fast in the treated group during the first seven days, ($p < 0.02$) resulting in normalization of creatinine clearance for the rest of the 28 days, compared with the placebo group, where creatinine clearance remained impaired ($p < 0.02$). There was a reduction of dialysis requirement after treatment with alkaline phosphatase compared with placebo (means: 10 hours versus 53 hours, $p = 0.08$). Secondary endpoints were also reached with significance. Treatment with alkaline phosphatase resulted in shorter stay in the intensive care unit (11 days versus 25 days; $p < 0.02$) and in reduced need for mechanical ventilation (3.9 days versus 6.0 days; $p < 0.03$). AM-Pharma plans to move forward with the development of alkaline phosphatase.

Oncology

Argos released positive results from a phase I/II trial of **AGS-003**, a personalized, RNA-loaded, dendritic-cell-based immunotherapy for metastatic renal cell carcinoma (mRCC). This open-label study enrolled 20 newly diagnosed post-nephrectomy patients with clear cell mRCC. The subjects received intradermal injections of AGS-003 in the following sequence: five biweekly doses, four monthly doses, and one dose every three months until disease progression. Primary endpoints of the study included clinical and immune response. At baseline, the majority of evaluable subjects suffered impaired cellular immunity to RCC tumor antigens. Following AGS-003 treatment, the majority of evaluable patients experienced detectable cellular immunity to these same antigens, demonstrating that AGS-003 induced

a tumor-specific immune response. In addition, 50% of subjects had re-stored T cell-mediated interleukin-2 and interferon-3 responses, indicating general immune reconstitution. Secondary endpoints included progression-free survival (PFS). The median length of PFS was 5.6 months, in contrast to the historical median PFS for intermediate and poor-risk subjects, respectively. Clinical benefit, defined as either a partial response or stable disease, was reached by 41% of the subjects. AGS-003 was well tolerated, with no drug-related serious adverse events. A phase II trial is currently under way.



Amicus Therapeutics said it was set to close an \$18.5-million registered direct stock offering, priced at \$3.74 per share, money that will be used to support phase III and regulatory activities for its lead drug candidate, Amigal, for Fabry disease. A phase III study that would be used to support approval of Amigal (migalastat hydrochloride) in the U.S. (Study 011) began in the second quarter of 2009, and treatment of the first patient began in the fourth quarter. Amicus expects to complete enrollment by the end of the year and to have preliminary results from this study in mid-2011. In addition, Amicus expects to commence a separate phase III study (Study 012) before year-end that is intended to support approval in the European Union. That study will be an 18-month, randomized, open-label study comparing migalastat HCl to enzyme replacement therapy in about 60 subjects. The primary outcome of efficacy will be renal function as measured by glomerular filtration rate. In documents filed with the SEC, Amicus said some of the proceeds from the financing would be used toward the study in support of the European regulatory filing.

Vaxart closed a \$12.5-million Series B financing that will be used to advance the company's lead product, an oral vaccine for Avian influenza, through phase I trials. The company's pre-investigational new drug application meeting with the FDA is set for March 25, and Vaxart estimates that it is within a year of launching trials of the vaccine candidate. The company said that "all options are on the table" for funding the lead program beyond phase I, including partnering, a Series C and M&A discussions. Vaxart completed studies in 2008 showing the vaccine successfully protected large animals against death from Avian flu infection.

SpePharm Holding, of Amsterdam, the Netherlands, added a marketed product to its portfolio, signed a partnership with Montreal-based **Paladin Labs** and brought in €11 million (US\$15 million) in financing to help expand the company's growth in Europe. The acquired product is Savene, a topoisomerase II inhibitor approved in Europe to counter chemotherapy extravasations—specifically the leakage of anthracyclines outside of the bloodstream. Developer TopoTarget A/S, of Copenhagen, Denmark, gained European approval of the drug in 2006 and reported worldwide sales of DKK39.1 million (about US\$7 million) in 2008. Financial terms were not disclosed, but SpePharm will pick up TopoTarget's European sales force.

Quatrx Pharmaceuticals licensed its late-stage women's health product, ospemifene, to Japan's **Shionogi & Co.** in a deal valued at more than \$125 million, providing a potential growth opportunity for Shionogi's U.S.-based group. Atlanta-based Shionogi Pharma (formerly Sciele Pharma) focuses on cardiovascular/diabetes, pediatrics and women's health. Parent company Shionogi & Co., of Osaka, acquired Sciele in October 2008, attracted by its U.S. sales infrastructure as well as expertise in women's health. Under the licensing agreement, Quatrx will receive an upfront payment of \$25 million and is eligible to receive in excess of \$100 million in development and regulatory milestone payments related to ospemifene. A new drug application is expected to be filed with the FDA in the second half of this year.

Though rumors were flying that life science tools provider **Millipore** was set to be acquired by rival Thermo Fisher Scientific, the winning bidder turned out to be **Merck** with a

\$7.2-billion offer. Darmstadt, Germany-based Merck paid \$13.3 billion to acquire Geneva-based Serono in 2006, gaining entry to the U.S. markets and franchises in multiple sclerosis and reproductive health to complement its existing strengths in oncology, cardiovascular disease and metabolic disease. Similarly, the acquisition of Billerica, Mass.-based Millipore offers geographic expansion and complementary products. On the geographic end, Millipore's existing sales force in the Americas, Europe and Asia will more than double Merck's presence in each region. In 2009, Millipore boasted \$1.7 billion in sales, 40% of which came from the U.S., 40% of which came from Europe and 20% of which came from Asia. Merck will keep Millipore's headquarters, near Boston, as well as its senior management and workforce. On the product end, just more than half of Millipore's sales came from manufacturing process tools, including cell culture media and filtration devices, while just less than half came from research tools, like purified water, reagents, antibodies and instruments. Merck plans to integrate those offerings with its own lab and life science businesses, while its liquid crystal display business and plastics/printing pigments business will remain separate.

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