Study shows Sapphire II has promise for Alzheimer’s disease detection

By Omar Ford, Staff Writer

Promising results of a multi-center clinical trial evaluating Cognoptix’s (Acton, Massachusetts) Sapphire II eye test could bring the firm one step closer to having an approved application to identify Alzheimer’s disease. Results of the trial were published in the latest issue of the Journal of Alzheimer’s Disease & Other Dementias.

Cognoptix, a privately held company, is developing technologies to enable non-invasive quantitative measurements of amyloid aggregates in the eye, to examine and measure deposits in specific areas of the lens as a means of early detection of Alzheimer’s disease. The company said that with the development of the Sapphire platform it envisions a compact, light, and portable device to be used in the initial diagnosis of Alzheimer’s disease.

See Cognoptix, page 5

AAA to increase clinical trials of MNM diagnostic products

Staff Report

Advanced Accelerator Applications (AAA; Saint-Genis-Pouilly, France), a specialist in Molecular Nuclear Medicine (MNM), has completed a capital increase of €41 million. This capital increase will help fund expansion plans and finance clinical trials of its portfolio of MNM diagnostic and therapeutic products.

The fundraising came from existing and new shareholders, including private investors and funds such as a company of the Tamburi Investment Partners Group and the specialist biotech and pharma investment company HBM Healthcare Investments.

See Europe, page 7

Actavis to pay $25B in cash and stock for Forest Laboratories

Amanda Pedersen, Senior Staff Writer

Actavis (Dublin, Ireland) has agreed to acquire Forest Laboratories (New York) for a combination of cash and equity valued at about $25 billion, or $89.48 a share. The per share consideration represents a premium of roughly 25% a share over Forest’s stock price, and a premium of about 31% over Forest’s 10-day volume weighted average stock price. The transaction is expected to combine two of the world’s fastest-growing specialty pharmaceutical companies, with combined annual revenues of over $15 billion anticipated for 2015.

“With this strategic combination, we create an innovative

See Deals, page 8

Oncology Extra

Washington Editor Mark McCarty on one of med-tech’s key sectors

Read this week’s Wednesday Special
Enzo Biochem and Nuclea market HER-2 serum test

Staff Report

Enzo Biochem (New York) said its Enzo Clinical Labs subsidiary and Nuclea Biotechnologies (Pittsfield, Massachusetts) have entered into a non-exclusive distribution agreement to market Nuclea’s non-invasive HER-2/neu serum test, a key assay in the monitoring of metastatic breast cancer.

This blood test facilitates the monitoring and treatment decisions of women with metastatic breast cancer that overexpresses the HER-2/neu protein in the tumor. Individuals with this condition tend to have a worse prognosis and a more aggressive disease that can resist certain types of chemotherapy. The test measures the portion of HER-2/neu protein that lies outside the surface of the cell and being released into the bloodstream, allowing for more informed treatment decisions for a number of women who may not be responding to breast cancer treatment or may be at risk for metastatic cancer and need revised treatment plans.

“We are pleased to partner with Nuclea Biotechnologies in marketing this key assay,” said Cynthia Bowman, MD, Medical Director of Enzo Clinical Labs. “Offering the serum HER2/neu testing ties in with our expanding program of developing and making available high value esoteric testing, especially in the area of women’s health, and providing our physician clients with yet another tool with which to customize a woman’s assessment and treatment. Moreover, the use of this assay in treatment monitoring may open up our services to the Pharmaceutical market.”

Using the HER-2/neu blood test while monitoring the disease’s progression will enable physicians to better adapt, combine therapies and change treatment protocols. Studies have demonstrated that use of combination chemotherapy regimens provides a statistically significant advantage for survival and tumor response in women with metastatic breast cancer.

Enzo Biochem specializes in molecular diagnostics, leading the convergence of clinical laboratories, life sciences and therapeutics through the development of unique diagnostic platform technologies that provide numerous advantages over previous standards. A global company, Enzo Biochem uses cross-functional teams to develop and deploy products systems and services that meet the ever-changing and rapidly growing needs of healthcare both today and into the future.

Nuclea Biotechnologies has developed and is commercializing unique diagnostic tests for colon, breast, leukemia, lung and prostate cancer.

In other agreements/contracts:

- CareCentrix (Hartford, Connecticut), a provider of home health solutions, has signed a five-year agreement with Cigna (Bloomfield, Connecticut), a health service company. This arrangement means that CareCentrix will continue to provide quality home health solutions to Cigna’s customers, building on what will be more than two decades of collaboration.

Cigna’s renewal of the relationship with CareCentrix highlights the value of providing clinically focused healthcare services in the home. The agreement allows CareCentrix to continue to manage the delivery of home health services such as Durable Medical Equipment, Home Health Nursing and Home Infusion to Cigna customers across the country. Cigna has also committed to extending their relationship with Sleep Management Solutions (SMS), a subsidiary of CareCentrix. SMS will continue to provide Cigna customers with a robust clinical
Critical Alert Systems to introduce CommonPath solution

Critical Alert Systems (Jacksonville, Florida) said it will introduce its new CommonPath reporting solution at the Healthcare Information and Management Systems Society (HIMSS) 2014 conference and exhibition in Orlando, Florida next week. Designed to work with CommonPath nurse call and built-in locating system to monitor, assess and report on HCAHPS hot points, the new CommonPath reporting solution provides a complete forensic picture, enabling management to optimize staffing and deliver better patient care.

According to the firm, the solution offers a full suite of activity reports that are easily accessed from any Internet-enabled computer by authorized staff. Reports are available in summary, graphical and real-time dashboard format and focus on an individual, unit, facility or at the organizational level. Dashboards are driven by the data in the reporting system and provide an at-a-glance indicator of current system and staffing performance metrics. Using these dashboards, hospitals can gain deeper insight into areas with direct impact on HCAHPS, such as response times to patient requests, caregiver call response performance, rounding performance, and workflow analysis.

“It's become increasingly important for hospitals to be able to identify and understand the factors that influence patient satisfaction, caregiver productivity and workflows, and the new CommonPath Reporting Solution is designed to provide actionable information that can help them achieve those goals,” said Critical Alert CEO Ed Meyercord. “Hospitals can also create customized reports that provide deep insights around a specific caregiver, patient, piece of equipment or event. This smart design can accommodate unanticipated reporting scenarios – something out-of-the-box reporting solutions can't do.”

The new CommonPath reporting solution suite includes reports on call events, workflow, performance, messaging and presence. Forensic reports provide details around events that took place in a specific patient room at a specific time. This report serves as an invaluable snapshot for hospitals seeking to easily and accurately document sentinel events for use in debriefings, training and any potential litigation, the firm noted.

“We worked with our customers to develop this new reporting capability and undertook an extensive analysis of hospitals' current need state for reporting,” said Critical Alert President/COO Ted McNaught. “What we discovered not only helped us create deeper reporting capabilities, it also illuminated the evolving reporting and information needs that are driving today's healthcare technology decisions.”

In other HIMSS-related news:
• Claron Technologies (Toronto) said it will debut enhancements to its family of Nil universal, zero-footprint viewers. The enhancements will be available for both mobile devices and desktop PCs, the company noted.

“Mobile devices have quickly become established in many fields for easy-to-use input of image and video,” said Claudio Gatti, Co-CEO for Claron. “But in healthcare, adding mobile device images into a patient clinical record is not straightforward. With our new Nil enhancements we made attaching any image or video to the patient record extremely easy. In addition, this new technology requires a browser only. It does not require installation of an app or engine, making Nil the easiest to deploy universal viewer. The new technology supports not only mobile devices but also allows zero-footprint upload of both DICOM and non-DICOM data from notebook and desktop computers. It complements Nil's existing heavy duty NilFeed web uploader, with a simplified technology for the occasional upload and for input from mobile devices, camera or video.”

The Nil family of viewers includes enterprise-class NilShare and FDA-cleared diagnostic NilRead viewers. At the meeting, Claron plans to demonstrate efficient DICOM file streaming supporting integration with multiple DICOM archives in a high efficiency cache-less configuration. The data streams seamlessly from the remote PACS or VNA to Nil, presenting the user with the images as they are transferred.

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Sequenta receives 3rd patent for MRD detection technology

**Staff Report**

Sequenta (South San Francisco) reported the issuance of its third U.S. patent, “Monitoring Health and Disease Status Using Clonotype Profiles” (Patent No. 8,628,927), which covers minimal residual disease (MRD) monitoring under conditions of clonal evolution, a common source of false negative results with existing MRD detection technology.

The methods covered by this patent will provide exclusive protection for Sequenta’s ClonoSIGHT test in a range of cancers where clonal evolution commonly occurs, such as leukemias and non-Hodgkin’s lymphoma. Sequenta has now been issued a total of nine patents worldwide and has pending allowances in an additional three U.S. applications.

“Sequenta is committed to bringing ultra-sensitive minimal residual disease detection to all patients with lymphoid cancers through our ClonoSIGHT test,” said Tom Willis, CEO of Sequenta. “We are the only entity that we know of with issued or allowed patents covering the use of next-generation sequencing for MRD detection in lymphoid cancers.”

Sequenta’s other U.S. patents cover sequencing-based MRD monitoring and single-cell analysis of lymphocytes. Additionally, in 2013, Sequenta gained exclusive rights to iRepetoire’s early intellectual property on novel sequencing-based methods of immune repertoire analysis, which complements Sequenta’s MRD intellectual property.

In other patent news, Greenway (Carrollton, Georgia) said it has been granted three new U.S. patents related to the automation of medical research designed to improve population health. The three patented inventions work together to coordinate the collection, analysis and reporting of relevant patient data contained in electronic health record (EHR) systems located at various facilities.

Greenway’s EHR solutions capture information to support individual patient care, and that data holds tremendous value for vital health initiatives. Patent number 8,494,874 supports medical research by automating the collection of patient data from EHRs to assist in recruiting qualified research participants. EHR systems communicate patient data in a common format to an enhanced server that searches the data to locate qualifying patients, enabling researchers to recruit them for participation.

Patent number 8,595,038 automates medical research. An enhanced server receives patient data in a common format from EHR systems, identifies participating patients, transfers pertinent data from health records into electronic medical-research documents, communicates with EHR systems as needed for additional information, and transmits completed electronic documents to a research system.

Patent number 8,606,593 coordinates this research automation across a vast patient population, with a system and method for EHR solutions at multiple healthcare provider locations to analyze, collect and track data according to set criteria in real time as it’s captured, or from storage in a database. //

NEW VENTURES

**Ambient Clinical Analytics launched by Mayo Clinic team**

**Staff Report**

A Mayo Clinic (Rochester, Minnesota) academic clinical team and seasoned technology entrepreneurs are launching a new company called Ambient Clinical Analytics. The company is focused on providing critical decision support tools for ICU, Operating Room and Emergency Departments right at the patient’s bedside. Ambient Clinical Analytics brings together a trifecta of powerful new technologies, seeded from Mayo Clinic, to change the way critical care providers operate, offering real-time access to important process-of-care information and analytics, lessening the likelihood of procedural failures and saving lives.

Ambient Clinical Analytics is backed by Silicon Valley venture capitalists, The Social+Capital Partnership, and established healthcare organizations Rock Health and Mayo Clinic. Al Berning will lead the company as its CEO. Berning is a technology veteran of 20 years, having led PEMSTAR to an IPO in 2000 and helmed Liquid Cool Solutions from 2007 to 2012. He is joined by a world-class founding clinical team from Mayo Clinic, including physicians from many specialties.

“Healthcare providers need efficient and organized tools at their fingertips in order to increase patient safety. Ambient Clinical Analytics is providing the real-time bedside and emergency room technology to accomplish this, which in turn leaves both the provider and patient more satisfied,” said Berning. “This is a unique opportunity to truly transform how patients are treated. We all desire an organized healthcare operation especially when the emergency department or ICU are involved. Ambient Analytics provides solutions developed by clinicians for clinicians to accomplish this.”

“The amount of data behind AWARE is vast, but unlike any other system I’ve used, AWARE shows me what I need to see, at the point of care, organized in the way I think. As a result, I can approach patients in a more standardized and organized fashion,” said John Litell, DO, attending physician, emergency and critical care medicine at Beth Israel Deaconess Medical Center and assistant director of emergency medicine research at St. Vincent Hospital (Green Bay, Wisconsin).

“The impetus behind creating AWARE was that I would arrive in the ICU and spend the first hours just coming to terms with basic patient facts. Other physicians face the same situation. By applying technology to this situation, we found a way to hit the ground running. The application was designed to make transitions of care safer and more efficient,” added Brian
Cognoptix
Continued from page 1

easy to use, clinical device for in situ patient examination in a doctor’s office setting.

The study results show that by detecting a specific fluorescent signature of ligand-marked beta-amyloid (A-beta) in the supranuclear region of the human lens, Sapphire II achieved a sensitivity of 85% and a specificity of 95% in differentiating 20 patients who were clinically diagnosed with probable AD from a group of 20 age-matched healthy volunteers.

Fluorescent Ligand Scanning is a technique in which a compound composed of beta amyloid-specific small molecules is dropped into a patient’s eye, which is scanned by the Sapphire instrument. The small molecules are absorbed into the lens and bind to the amyloid aggregates. The system excites the fluorescent ligands that bind to amyloid and quantitatively measures emissions in specific anatomical locations to biochemically confirm the presence of amyloid.

The binding compounds emit light in a specific, detectable range of wavelengths. If binding increases over time, a positive diagnosis can be made, enabling clinicians to track the progress of the disease in patients by measuring levels of fluorescence.

“We have a compact device that can be used by a nurse or doctor and it conducts a test in under five minutes,” Paul Hartung, president/CEO of Cognoptix, told Medical Device Daily. “The data is actually collected in under a second and produces a score, if you will. The basis of our technology is that an amyloid actually grows in the lens of the eye and that parallels in development in the brain. And in fact, in this last study, we not only did eye scans with our technology, but we did brain scans using PET imaging in all of the participants in the trial. We showed we not only had very tight correlation to clinical diagnosis but we also had good correlation to the brain imaging.”

“The easy-to-use Sapphire eye test has demonstrated the clinical potential to remake the paradigm for the way in which Alzheimer’s Disease is currently diagnosed and managed,” Carl Sadowsky, MD, Medical Director, Premiere Research Institute, (West Palm Beach, Florida), and a principal investigator in the clinical trial of the Sapphire eye test, said in a release.

The firm said that there is tremendous potential for the technology and assuming it gains approval from the FDA, it could change the paradigm of how Alzheimer’s disease is detected.

“Basic science shows that there is a change in the eye that starts to occur very early in the disease,” Hartung said. “So, this is the logical starting point, the point where people are starting to show symptoms. But the potential of the technology is actually to be used at even earlier stages of the disease. Potentially, before symptoms arrive.”

The technology has yet to gain approval, but the next step for the firm is to start a pivotal trial.

“Our next trial will be a pivotal and we’re already in conversations with the FDA on getting that trial launched,” he said.

Hartung said that if the technology could gain approval, then it would fill an importantly unmet need.

“The feedback from the Alzheimer’s Association, the thought leaders and top clinicians in Alzheimer’s disease, is that there’s a great need for the point of care to improve the quality of diagnosis,” Hartung told MDD. “And unfortunately about 40% of people who are diagnosed with Alzheimer’s disease are diagnosed by practitioners on a guess. Putting better tools out at the point-of-care where there isn’t necessarily exactly access to large hospital systems where at least the initial part of the workup. They give tools so they’re not only looking at the cognitive changes but at the underlying pathology of the disease. That’s critical to changing the course of this disease.”

Agreements
Continued from page 2

approach that includes the use of home sleep testing services and a sleep therapy adherence program designed to treat Obstructive Sleep Apnea (OSA).

“We are very pleased that Cigna has chosen to continue our productive collaboration, one that will now span over two decades. CareCentrix is passionately focused on home health, ensuring that as many patients as possible receive quality care while surrounded by loved ones in the comfort of their own homes. This partnership will enable us to build on our record of success, providing Cigna with cost effective, home health solutions that significantly improve outcomes for their customers,” said John Driscoll, CEO of CareCentrix.

- Acerde (Sainte-Helence-Du-Lac, France), a company specializing in the development of rotating anodes for X-ray tubes used in the medical imaging industry, reported the signature of a development contract with a major China-based player in medical imaging, its achievement of a number of industrial development milestones and the preparation of the company’s next generation of highly innovative rotating anodes (which are now composite-based rather than graphite-based).

“We are very excited about this agreement with a China-based medical imaging giant that underpins our recent developments and confirms the quality of our rotating anodes for X-ray tubes. Acerde has achieved a key milestone, and this will bring us greater international recognition and exposure. China is seeking to develop its own technology by leveraging the best-performing, most innovative solutions on the market. This contract definitely reinforces our position in China,” said Acerde’s President Hervé Poirel.

The first manufacturing unit has been set up for annual production of 1,000 to 1,500 anodes. Acerde has signed several cooperation agreements with many key participants in the sector and already has numerous pre-production orders, thus giving it a position on various markets.
the repeal in a sense-of-the-Senate motion in 2013.

Ubl’s remark about Sen. Wyden’s support for a repeal of the device tax was in reference to a non-binding resolution regarding the device tax included in a vote on a budget resolution for fiscal 2014 (Medical Device Daily, March 25, 2013). Efforts to repeal the tax have failed to reach the target since then, however, despite that 79 senators voted in favor of the resolution.

AdvaMed’s board chairman David Dvorak, President/CEO of Zimmer (Warsaw, Indiana), asserted that he saw “strong momentum for repeal” of the tax despite the hurdles, adding that the association “remains encouraged by the fact that both the House and Senate repeal bills” are still drawing support. The most prominent of the House repeal bills, H.R. 523, has added only one co-sponsor so far in 2014, although eight of the 10 most recent to sign on are Democrats. Of the 270 co-sponsors, only 43 are Democrats. The Senate companion bill, S. 232, enjoys the support of 38, only six of which are Democrats.

Ubl remarked that device makers “are not able to pass the tax on and are not anticipating a windfall from expanded coverage” provided by the Affordable Care Act, adding that despite that there is “a lot of debate over the effects of the tax . . . it’s clear the tax is taking a heavy toll.” He said R&D “has sharply declined in recent years,” and that first-time financings are at their worst levels since 1995. Ubl jabbed at FDA over device lag as well, remarking, “patients in Europe continue to have access to important breakthrough technologies several years before” patients in the U.S.

Ubl observed that tax reform still has a following on Capitol Hill, stating, “Congress will have discussions about jobs and economic growth” as the year progresses on both tax reform and shorter-term tax policies. “We’ll look for every opportunity” to push tax reform across the line, he remarked.

The tension between the White House and Congress on the point of tax reform revenue neutrality remains, however, and AdvaMed’s senior executive VP for government affairs, JC Scott, remarked that the difficulty in predicting how tax reform efforts might unfold “is that we have leadership changes in Senate Finance,” a reference to the departure of Sen. Max Baucus (D-Montana) and the ascendance of Wyden to the chairmanship. Baucus had teamed up with House Ways and Means Committee chairman Rep. Dave Camp (R-Michigan) to push the tax reform cause, and AdvaMed’s Scott said Wyden has given no indication he is disinterested in tax reform.

However, Scott also remarked that the items Wyden see as priorities “will dictate where those issues go,” although he added that it is not clear where Wyden stands on the revenue neutrality question. Ubl remarked of Camp, “he’s still bullish on tax reform.”

In his opening remarks, Dvorak, said that AdvaMed has invested substantially in developing a presence in Asia, including the hiring of an executive director for China. The association will open an office in Shanghai, Dvorak said.

Dvorak, whose two-year term at the helm of the AdvaMed board is nearing its end, chalked up a few of the successes the association has scored recently. “Despite the threat of price controls, so far China has not moved forward” with such a proposal thanks in part to lobbying by AdvaMed, he stated.

AdvaMed also released an update on the impact of the 2.3% medical device tax on Feb. 19, stating that a survey of firms designed to evaluate the effect of the tax in its first year indicated “a significant reduction in jobs, R&D, and U.S. investment.” An extrapolation of the survey findings to industry in general indicates that the tax “has led to employment reductions of approximately 14,000 industry workers and foregone hiring of 19,000 workers” for a total job impact of roughly 33,000 jobs lost.

The Feb. 19 AdvaMed statement noted that independent estimates of a relationship between direct employment in industry and indirect employment among suppliers and others disclosed “a ratio of four indirect jobs for each direct job,” an assumption that led to a conclusion that the tax has trimmed roughly 132,000 jobs indirectly, which adds up to a total job loss of “as many as 165,000 jobs.”

Roughly three in 10 respondents indicated they had reduced research and development budgets due to the tax, while almost 10% indicated they had or will either relocated their manufacturing operations or expand manufacturing to other nations because of the tax. The statement notes further that 75% of respondents indicated they had dropped or deferred capital spending and spending on new plants, and faced difficulty in raising capital. Employee raises were also victims of the tax, the survey indicated.

The full report stated that AdvaMed conducted the survey Nov. 14-Dec. 9, 2013, polling each of the association’s member companies. Only 38 firms responded (15% of membership), but they accounted for roughly 40 cents of each dollar of domestic sales revenues of AdvaMed member firms. Fifty-five percent of respondents indicated they had revenues of more than $100 million per year, and only 60% of respondents indicated their bottom lines were written in black ink.

Among the remarks offered by responders was one addressing the problem of making the leap toward profitability. “As a start-up company getting ready to launch a product,” one respondent noted, the device tax “will create a $300K potential debt/cash-flow problem. I can’t afford to be successful!” the respondent noted. //
Europe
Continued from page 1

who led the investment with €20 million.

Stefano Buono, CEO of AAA said: “We are very pleased to have completed this €41 million capital increase which shows strong support from current and new shareholders. The support we continue to receive is testament to the confidence of our shareholders in the continued growth and positive achievements of the company and its solid business model. The money raised will help us accelerate our international growth, which includes the expansion of our activities in the US, and finance the development of our promising product pipeline. We welcome HBM Healthcare Investments Ltd as a new shareholder and believe their experience in backing biotech and pharma will be of great use to guide our strategic directions.”

Advanced Accelerator Applications is a European pharmaceutical company founded to make diagnostic and therapeutic products.

HBM Healthcare Investments actively invests in the human medicine, biotechnology, medical technology and diagnostics sectors and related areas. The company holds and manages an international portfolio of some twenty five promising companies. Many of these companies have their lead products already available on the market or at an advanced stage of development. Molecular Nuclear Medicine is a medical specialty using trace amounts of active substances, called radiopharmaceuticals, to create images of organs and lesions and to treat various diseases, like cancer.

VERITEQ, EL GET EXPANDED COVERAGE FOR IMPLANTS

VeriTeQ (Delray Beach, Florida), a provider of medical device identification and radiation dose measurement technologies, said its breast implant partner Establishment Labs (Alajuela, Costa Rica) has received additional CE mark approvals for its Motiva Implant Matrix VelvetSurface PLUS with Q Inside Safety Technology and Motiva Implant Matrix SilkSurface PLUS with Q Inside Safety Technology. EL’s Motiva Implant Matrix product line with VeriTeQ’s Q Inside Safety Technology offers the world’s first externally identifiable breast implant.

VeriTeQ’s FDA-cleared Q Inside Safety Technology acts as an electronic serial number in breast implants and other implantable and reusable medical devices. By including VeriTeQ’s Q Inside Safety Technology in Motiva Implant Matrix implants, manufacturers, physicians and patients will have access to a secure online database to retrieve implant-specific data such as serial number, manufacturer name, date of manufacture, lot number, volume, size, and other data from the medical device manufacturer. Q Inside Safety Technology also provides an extra level of protection to the patient in the event of a recall or other safety event.

Motiva’s SilkSurface PLUS implants provide a soft, gliding printed nano-surface that reduces complications related to traditional textures while reducing capsular contracture rates. Motiva’s VelvetSurface PLUS implants provide a printed micro-surface that promotes a more secure fit in the breast pocket.

“We continue to advance the safety and exclusivity of our entire breast implant portfolio to answer the demands from both physicians and patients alike,” said Juan José Chacón-Quirós, CEO of Establishment Labs. “Including VeriTeQ’s Q Inside Safety Technology in Motiva’s SilkSurface PLUS and VelvetSurface PLUS implants emphasizes our primary focus of providing best-in-class products for the protection of the patient.”

REVERSE’S UNO GETS CE MARK FOR INTRACRANIAL USE

Reverse Medical (Irvine, California) reported the initial clinical use of their UNO Neurovascular Embolization System for intracranial use. The device has been granted CE mark approval to obstruct blood flow in the Neurovasculature.

Marco Leonardi at Università di Bologna, Italy performed the initial UNO System clinical case. “The UNO represents a unique device, specifically designed for rapid vessel sacrifice, reducing the time otherwise necessary for multiple coil deployments. I can see the UNO becoming a useful tool in my practice. Microcatheter deliverability is excellent within tortuous anatomy, and re-sheathability offers me confidence in placement accuracy,” said Leonardi.

The company will continue to confirm superior clinical device performance from the UNO System and begin commercialization in Europe this year through a network of expert regional distributors.

Reverse Medical is a device company focused on expanding a technology driven pipeline of endovascular treatments for a broad spectrum of peripheral and neurovascular disorders and disease.

Ambient
Continued from page 4

Pickering, MD, a founding clinical team member for Ambient Clinical Analytics.

Ambient Clinical Analytic offers two scientifically validated solutions. The first is the patented Septic Shock Sniffer and the second is the patent pending Ventilator-Induced Lung Injury (VILI) Sniffer. The solutions were developed by founding clinical team members Vitaly Herasevich MD, PhD, and Ognjen Gajic MD.

Vern Smith, MD, and Andy Boggust, MD, founding clinical team members, said, “The fast-paced environment of emergency rooms requires the ability to rapidly assess the needs of patients, the severity of their illnesses, assign staff, and determine next steps. The intent of the YES Board was to make all of those things available at a glance without moving in and out of different applications, allowing for improved patient satisfaction and the ability to deliver care at a lower institutional cost.”
new model in specialty pharmaceuticals leadership, with size and scale, a balanced offering of strong brands and generics, a focus on strategic, lower-risk drug development, and - most important - the ability to drive sustainable organic growth,” said Paul Bisaro, chairman/CEO of Actavis. “Bolstered by one of the deepest and most diversified product portfolios in the industry with an exceptionally strong pipeline, this transaction creates a powerful engine for generating long-term, double-digit revenue and earnings growth.”

He added that the combination of Actavis and Forest is expected to yield double-digit accretion to non-GAAP earnings in 2015 and 2016, with significant annual free cash flow generation of greater than $4 billion in 2015. Bisaro also noted that the combination has the potential to realize nearly $1 billion in operating and tax synergies over the first three years of the transaction, before any manufacturing synergies or revenue synergies, while the company plans to continue to invest more than $1 billion a year in R&D.

“Today we create a new kind of specialty pharmaceutical company, and one that’s really grounded in something different, a generic DNA,” Bisaro said during a conference call to discuss the proposed acquisition on Tuesday. “It will be focused on continuing to provide high-quality products efficiently and cost-effectively, including an important array of specialty branded products, a world wide portfolio of generic products, OTC products, and ultimately biosimilar products to our global customer base.”

The deal is subject to approval by shareholders of both companies. and regulatory agency approval, but Bisaro says the companies don’t foresee regulatory approval being a problem. He said the transaction is expected to close mid-year 2014.

“We’ve got a lot of work to do ahead of us, we’ve got a lot of integration work, we’ve got to capture the value of this transaction, but I believe that we have the people in place on both sides of the organization that can do that,” Bisaro said.

On a pro forma combined basis for full year 2014, the combined company will have about a $2 billion CNS franchise; gastroenterology and women’s health franchises valued at roughly $1 billion each; a cardiovascular franchise that generates about $500 million; and urology and dermatology/established brand franchises approaching $500 million a year in sales each.

“This compelling combination gives us more optionality to drive future growth and sustainable shareholder value data to our expanded geographic and therapeutic presence, ability to drive new product flow through R&D, strong balance sheet and consistent cash flow,” said Brent Saunders, president/CEO of Forest Laboratories. “The terms of the agreement provide Forest shareholders with cash and the opportunity to participate in the future growth of our newer, stronger combined company.”

The combined company will be lead by Bisaro. The integration of the two companies will be lead by the Actavis and Forest senior management teams, with integration planning expected to begin immediately. Three members of the Forest board will be named to the Actavis board following the close.

In the proposed transaction, shareholders of Forest will receive 0.3306 shares of ACT common stock and $26.04 in cash for each share of Forest. The transaction will include an election mechanism for Forest shareholders to elect all-stock or all-cash consideration, subject to proration in accordance with the terms of the merger agreement. The stock component of the consideration is expected to represent a tax-free exchange. Forest shareholders are expected to own about 35% of the combined company on a pro forma basis.

Greenhill & Co. is serving as financial advisor to Actavis, and Latham & Watkins is serving as Actavis’ legal advisor. J.P. Morgan is serving as financial advisor to Forest, and Wachtell, Lipton, Rosen & Katz is serving as Forest’s legal advisor.

Actavis currently has bridge loan commitments from BoF Merrill Lynch and Mizuho Bank pending execution of its final financing plans.

According to Actavis and Forest, the combined company will create blockbuster product franchises in the CNS, gastroenterology, women’s health, urology and cardiovascular therapeutic categories. The company will have emerging and sustainable portfolios in infectious disease, respiratory, cystic fibrosis and dermatology therapeutic categories.

“Forest is a great fit with Actavis due to our strong legacy in branded specialty and primary care pharmaceuticals with a best in class commercial team, a top-notch drug development organization and a long history of successful partnerships. The acquisition builds on our blockbuster line call strategy in CNS and GI and dramatically extends our reach beyond the U.S. market,” added Saunders. “By joining forces with Actavis, we become more relevant to key physicians and customers through blockbuster franchises in CNS, Women’s Health, GI and Urology, as well as Actavis’ global generics business.”

The combined company will have investment in new product development in excess of $1 billion on an annual basis.

The combination of Actavis and Forest will add more than a half dozen near- and mid-term R&D products to Actavis’ robust development portfolio.

Five Forest products are at the NDA stage of development, including treatments for Alzheimer’s disease, cardiovascular disease, infectious disease, as well as Schizophrenia and bipolar disorders and treatments for COPD.

“In addition to being financially and commercially compelling, this transaction fundamentally transforms Actavis, positioning it for a new and even more exciting future,” Bisaro said. “In five short years, my management team has transformed Watson, and now Actavis, from a U.S. generics company to a leader on the global specialty pharmaceutical stage. Brent and his team, in a short period, have made dramatic progress in rejuvenating Forest into a leader in North American brands."
Dublin) has introduced the HydroFinity hydrophilic guidewire for use in catheter placement and other procedures to treat vascular diseases. The HydroFinity guidewire is designed for easy navigation through the anatomy. It offers exceptional coating durability and lubricity, 1:1 torque response, predictable prolapse and kink resistance. For convenience and cost efficiency, a torque device is included with every wire. “The HydroFinity guidewire handled tortuous anatomy and performed quite well in heavily calcified lesions as well as chronic total occlusions,” said Carlos Mena, MD, department of cardiovascular medicine at Yale University, and medical director vascular medicine at Yale-New Haven Hospital. “It performed as well as the leading wire.”

Integrity Life Sciences (Tampa, Florida) reported FDA clearance for a new medical device for the treatment of spine and disc related conditions. Integrity’s initial FDA clearance was issued for the Integrity Spinal Care System (ISCS), a non-surgical medical device that applies therapeutic distraction forces to a patient’s spinal column to alleviate low back and neck pain for a broad range of spinal disorders. The newest version of the ISCS will directly and exclusively target the low back region, or lumbar spine. Integrity’s medical devices are non-surgical spinal decompression therapy systems engineered to provide pain relief for compressive and degenerative conditions of the spine. Specifically, conditions that may be treated include: neck pain and back pain associated with herniated discs, protruding discs, degenerative disc disease, posterior facet syndrome, and sciatica. It achieves these effects through decompression of intervertebral discs, that is, unloading due to distraction and positioning.

JustRight Surgical (Boulder, Colorado), a micro-laparoscopic medical device company devoted to miniaturizing surgical instrumentation, received FDA clearance for its JustRight 5 mm stapler. The stapler will be used by surgeons in pediatric and general surgery where access is limited and visibility is reduced. Just Right says some features of the JustRight 5 mm Stapler, include: nine times smaller than existing stapling instruments; security of the gold standard “B” staple formation; flexibility in stapler placement with 5 mm shaft diameter; and optimal jaw length for maneuverability into small spaces.

Medtronic (Minneapolis) has begun distribution of i-port Advance as part of a continued focus to provide meaningful therapy management solutions for people with diabetes. i-port Advance can be used for people on insulin injection therapy who want to administer insulin conveniently while eliminating the need to puncture the skin with each dose of medication. i-port Advance injection port is cleared by the FDA and indicated for patients who administer multiple daily subcutaneous injections of physician prescribed medications, including insulin. i-port Advance provides a way for people with diabetes to administer insulin, especially those on injection therapy who have needle-related bruising and scarring, pain and discomfort, or who experience anxiety from injecting their diabetes medications. i-port stands for injection port and it is a three-day-wear device that people with diabetes inject into instead of injecting directly into the skin. Because the device may remain in place for up to 72 hours, i-port Advance accommodates multiple drug injections without the discomfort of additional needle sticks.

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a consistently fast and responsive user experience for on-the-fly image access. Nil also introduces support for the recently approved RESTful DICOM web services (WADO-RS, QIDO-RS, and STOW-RS). These services provide efficient protocols to connect medical devices utilizing the Web, and are expected to play a major role in DICOM communications for the next several years. With the ability to stream either from existing DICOM or through the new DICOM RESTful services, Nil viewers continue to expand connectivity options.

Symphony Analytics (Mountain View, California) reported Health SymMetrics, a new framework designed to enable hospital administrators and clinicians the ability to gain in-depth views of hospital operations to address clinical outcomes, revenue cycle optimization and operating efficiencies. The company will reveal the framework at the HIMSS meeting.

Symphony noted that with the healthcare data revolution fully underway, health systems and health plans are increasingly looking for ways to harness analytics to drive patient care and improve the bottom line. These organizations are sitting on tons of data and, faced with increasing regulatory pressures and margin compression, there is a growing demand for adopting smart analytics tools and frameworks that allow for doing more with less, the firm said.

Health SymMetrics is a cloud-based framework that can analyze multiple clinical and operational areas, delivering users the insights they need to improve patient outcomes as well as financial returns. Focusing on targeted intervention and population health management strategies, Symphony Analytics’ Health SymMetrics framework enables clients the ability to identify areas where efficiencies can be improved – a key element in reaching fiscal goals while advancing quality of care.

“We’ve seen an incredible transformation in healthcare in the recent years due to regulation, advancements in technology and abundance of data, and with that comes certain challenges for healthcare organizations,” said Paddy Padmanabhan, SVP and global practice leader, healthcare at Symphony Analytics. “As a cloud-based service, the Health SymMetrics framework allows us to provide cutting-edge data analytics in a way that’s flexible, cost-effective and easy-to-deploy. It helps our clients rapidly gain actionable insights that are critical for survival and growth in today’s market.”
Proton beam therapy brings medical tourism to U.S. . . . Americans might think medical tourism is when U.S. citizens go overseas for treatment, but a recent story in the International Medical Travel Journal suggests that door opens both ways. The article states that the University of Florida Proton Therapy Institute (Jacksonville, Florida) has inked an agreement with the Norway Health Authority to treat Norwegian citizens who have been diagnosed with tumors in the skull, the brain, and the nasal and sinus cavities. The story notes that Norway has no medical centers that offer proton therapy, and that Norwegian patients are keen on a treatment that minimizes risk of damage to vision, hearing and brain function. UF Proton Therapy Institute is said to have a similar arrangement with the United Kingdom’s National Health Service, which the statement notes “has referred 200 children and adults for proton therapy . . . since 2010.” Nancy Mendenhall of UF Proton Therapy Institute said, “it is significant for both the advancement of proton therapy and our institution to be selected by our colleagues in Norway to care for their patients. It signifies acceptance of proton therapy as the gold standard of care for many kinds of cancer and it recognizes our medical expertise caring for patients who have cancers that in some cases are one in a million,” she stated.

Research shows link between bladder, breast cancers . . . Similarities between two different forms of cancer are not always obvious, but a recent statement by University of North Carolina Health Care (Chapel Hill, North Carolina) indicates that a comprehensive genetic analysis of invasive bladder cancer tumors disclosed that this cancer type “shares genetic similarities with two forms of breast cancer.” The analysis of more than 260 bladder cancer tumors, which appears in the online edition of the Proceedings of the National Academy of Sciences, made clear that the invasive form of bladder cancer falls into two distinct genetic types, basal-like and luminal, which turn out to be “highly similar to the basal and luminal subtypes of breast cancer” that were first disclosed by Charles Perou, PhD, a professor of molecular oncology at UNC Lineberger. The study also hinted at the reason women diagnosed with bladder cancer have generally worse outcomes compared to men, which the statement chalked up to the fact that women were more commonly diagnosed with the deadlier basal-like tumors, although the statement acknowledges that this finding has to be assessed via further research to confirm the idea. This development might spell out a better prospect for bladder cancer patients because if these bladder cancer subtypes do indeed share genetic signaling pathways with breast cancer, the identification of these genetic subtypes might nudge the development of more effective treatments.

Lead author Jeffrey Damrauer, who is still a graduate student at UNC, remarked, “currently there are no approved targeted therapies for bladder cancer,” but he stated that he and his colleagues hope that identification of these subtypes “will aid in the discovery of targetable pathways that will advance bladder cancer treatment.”

Paper argues for cost consideration in cancer care . . . The Centers for Medicare & Medicaid Services is not statutorily forbidden from considering cost in deciding coverage, but more or less recent case law makes it politically impossible for the agency to do so. However, the movement toward getting doctors and patients to do the job received another boost via a paper appearing in the Feb. 14 edition of Lancet Oncology. A statement by Johns Hopkins Medicine (Baltimore) explains that the Lancet Oncology paper identifies “three major sources of high cancer costs” and argues that oncologists “can likely reduce them without harm to patients” by means of changes in routine clinical practice for end-of-life care along with changes in medical imaging and drug pricing. The statement notes that one of the drivers of increasing cancer care costs is an aging population, which is helping to push a projected increase in cancer care costs of 40% by 2020. The paper is said to assert that PET scans and other imaging procedures “are often used to detect cancer recurrence in patients after initial treatments, but studies show that cure rates are just as good when recurrences are found through other examinations.” As for end-of-life care, the statement claims, “better decision-making and planning could reap large cost savings by reducing hospitalizations in the last month of life,” but also that Medicare data indicate that 60% of poor-prognosis cancer patients “are admitted to a hospital in the last month of life, and 30% percent die there.” The authors make the case that hospice care improves survival rather than by the cost of development.

Paper argues ‘misfearing’ drives irrational views of cancer . . . There is no novelty in asserting that the fear of cancer overwhelms the fact that heart disease still kills more women over the age of 40 than all cancers combined, but Lisa Rosenbaum, MD, of the University of Pennsylvania (Philadelphia) tackles the subject in a recent edition of the New England Journal of Medicine in an effort to untangle the identity and cultural underpinnings of this disparity. Rosenbaum relates the story of a patient who indicated she knew that heart disease
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was a more conspicuous killer of women, but who nonetheless held that breast cancer is the more lethal condition. Rosenbaum remarked that her patient’s appreciation of risk “was clearly less about fact than about feeling,” and posed the question of whether more data would “really address those feelings.” She hints at the disparate fear of flying compared to that of automotive transportation despite the dramatically safer per-mile metrics for flying by pointing out, “the big, the dramatic, and the memorable occupy far more of our worry budget than the things that kill with far greater frequency.” However, Rosenbaum noted that an intervening force in attempts to deal with these and other fear factors is something “we rarely associate with our individual health perceptions: our commitment to our cultural groups.” She adds that the human desire “to belong to something bigger than ourselves is as fundamental to our nature as our desire for individual success,” but points out also that psychologists for at least a century have “emphasized that maintaining our group identities drives us unconsciously throughout life.” This feature of the psychological landscape “has particular implications for our health because it shapes the information we seek – and our willingness to accept it,” Rosenbaum remarks. She makes reference to the 2009 recommendation by the U.S. Preventive Services Task Force regarding screening mammography for women younger than 50 years of age, which sparked tremendous political blowback, adding that despite that those recommendations “were based on an unbiased review of decades’ worth of data, a public outcry ensued.” A poll conducted later that year disclosed that 84% of women 35 to 49 years of age “planned to ignore” the USPSTF recommendation. Rosenbaum poses the question of whether “pink ribbons and Races for the Cure [have] so permeated our culture that the resulting female solidarity lends mammography a sacred status.” She concludes her essay with the observation that an individual’s understanding of their own risk for any disease “must be anchored in facts,” but observes, “if we want our facts to translate into better health, we may need to start talking more about our feelings.”

Small non-coding RNAs a sign of danger . . .

Small non-coding RNAs have had a reputation for offering little more than ribonucleic noise due to a lack of observed correlation with a particular function, but recent developments emerging from the Cancer Genome Atlas project seem to suggest that some small non-coding RNAs are harbingers of cancer. A recent statement by the European Molecular Biology Organization (EMBO; Heidelberg, Germany) declares that differences in levels of specific types of non-coding RNAs “can be used to distinguish between cancerous and non-cancerous tissues,” but also can help classify cancer patients “into subgroups of individuals that have different survival outcomes.” The statement explains that scientists were able to distinguish between the different small non-coding RNAs found near the transcriptional start sites of genes in healthy individuals compared to patients with breast invasive carcinoma. After mapping the non-coding RNA molecules to specific locations on the DNA sequence, the researchers sought any correlations between the strongly expressed non-coding RNAs and the disease status of the patients whose tissues provided the samples. After checking expression of the small RNAs from healthy controls against samples from patients diagnosed with breast cancer, the scientists discovered that the test “efficiently predicted the correct disease status for the samples in the new study group.” Athanasios Zovoilis, PhD, the lead author, remarked that the predictive power of small, non-coding RNAs is “restricted to only a subset of the many small non-coding RNAs found near transcription start sites of the genes,” but he also observed that the RNA locations “are highly enriched” with islands of cytosine and guanine proteins. The statement also notes that the presence of RNAs in these islands “may implicate their involvement with DNA methylation processes and the onset of disease but additional experiments are needed to explore and prove this link.”

NIH releases several cancer-related inventions . . .

The National Institutes of Health has listed a number of inventions in the Federal Register in the month of February, including a process for identifying highly tumor-reactive T cells from peripheral blood samples. The notice states that the related tumor reactivity is based on two T cell surface markers, programmed cell death protein-1 (PD-1; CD279), and T cell Ig- and mucin-domain-containing molecule-3 (TIM-3). NIH indicates that the process calls for these cells to be selected and then “expanded to large quantities,” whereupon the resulting pool of cells is re-infused “via an adoptive cell transfer ... regimen.” The agency notes that this approach is more economical than relying on tumor resection to provide the raw material, and provides a mechanism for providing the cell transfer material for cancers that present no resectable lesion. Among the competitive advantages of this technology is that it eliminates the need to screen T cells for autologous tumor recognition characteristics. This early-stage invention is accompanied by in-vitro data and is the subject of both U.S. and international patent applications. For information on licensing opportunities, contact NIH’s Whitney Hastings (301-451-7337; hastingw@mail.nih.gov).