

BIO WORLD[®] TODAY

FRIDAY
OCTOBER 29, 2004

THE DAILY BIOTECHNOLOGY NEWSPAPER

VOLUME 15, No. 210
PAGE 1 OF 7

Three-Year Data Suggest Broader Provenge Label In Prostate Cancer

By Aaron Lorenzo
Senior Staff Writer

Boosting hopes for a wider label than previously thought, Dendreon Corp. released final three-year follow-up data from a Phase III study of Provenge.

The latest findings from the trial, called D9901, showed a statistically significant survival benefit in all Provenge-treated advanced prostate cancer patients. That bolsters initial data from the study, reported two years ago, which showed a non-statistically significant 43 percent clinical benefit in delaying time to disease progression compared to placebo and delayed the onset of disease-related pain in men with androgen-independent prostate cancer whose cancer had a Gleason score of 7 or less. (See *BioWorld Today*, Aug. 12, 2002.)

"In patients with Gleason scores of 7 or below, which is
See Dendreon, Page 3

Biogen Idec Ends Third Quarter Preparing For Antegren Launch

By Karen Pihl-Carey
Staff Writer

Biogen Idec Inc. ended its third quarter with \$543 million in revenues, slightly lower than analyst estimates, as it nears the one-year anniversary of a merger that made it the world's third-largest biotech company.

The Cambridge, Mass.-based company reported non-GAAP earnings per share of 37 cents and net income of \$132 million, compared with 35 cents and \$123 million for the quarter last year. Analysts' consensus estimate for the quarter was 35 cents.

However, on a GAAP basis net income was \$36.8 million, or 10 cents per share, mostly due to \$112 million in expenses from last year's merger of Biogen Inc. and Idec Pharmaceuticals Inc.

In a conference call Thursday, the company reiterated
See Biogen Idec, Page 4

Invitrogen Buys Nucleic Acid Purifier Firm In UK For \$35M

By Randall Osborne
West Coast Editor

Gaining a method for purifying DNA and other nucleic acids – including a line of kits already on the market – tools company Invitrogen Corp. acquired Kent, UK-based DNA Research Innovations Ltd. for \$35 million in cash and up to \$30 million more in research and development milestones.

Invitrogen's stock (NASDAQ:IVGN) closed Thursday at \$55.93, down 29 cents.

"Nucleic acid purification was an area where our customers had a lot of demand because it's such a critical component to the other downstream processes," said Greg Geissman, public relations manager for Carlsbad, Calif.-based Invitrogen. "Really, this goes back to plugging in those areas where we didn't have a large offering before."

In three steps, privately held DRI's ChargeSwitch Tech-
See Invitrogen, Page 6

Catalyst Biosciences Series A: \$10.3M For Protease Research

By Randall Osborne
West Coast Editor

To move its preclinical "tailor-made" protease programs along, Catalyst Biosciences Inc. raised \$10.3 million in a Series A financing.

"We could be in the clinic in approximately two years, but it's really hard to tie that down," said Ed Madison, vice president of research for South San Francisco-based Catalyst.

With a partner, of course, things could move much more quickly.

"We haven't actively looked [for one] but we're going to start early next year," Madison said.

Founded in 2003, Catalyst has seven full-time employees and plans to increase to about 20 over the next nine months or so. Six or seven proteases – depending on

See Catalyst Biosciences, Page 6

INSIDE: OTHER NEWS TO NOTE (AASTROM RAISES \$10 MILLION)2, 3, 5-7
APPOINTMENTS AND ADVANCEMENTS7



OTHER NEWS TO NOTE

• **aaiPharma Inc.**, of Wilmington, N.C., is amending and extending its pending solicitation of consents from holders of its 11.5 percent senior subordinated notes relating to certain proposed amendments to and waivers of the indenture governing the notes. Under revised terms of the solicitation, all holders of record who submit valid and unrevoked consents prior to 1 p.m. today will receive the consent fee of \$20 in cash per \$1,000 principal amount of notes for which consents have been delivered, subject to the terms and conditions of the solicitation.

• **Aastrom Biosciences Inc.**, of Ann Arbor, Mich., raised \$10 million through a registered direct placement of about 8.3 million of its common shares at \$1.21 apiece. The company also agreed to issue four-year warrants for the institutional investors to purchase up to about 2.1 million more shares at \$1.74 each. The warrants must be held by the investors for at least six months prior to exercise, and if exercised, could generate up to an additional \$3.6 million in proceeds to Aastrom. Rodman & Renshaw served as the exclusive placement agent in the transaction, which is expected to be consummated within the next few days. Separately, the company signed a clinical trial agreement with the Heart and Diabetes Center North Rhine-Westphalia in Bad Oeynhausen, Germany, to evaluate the safety and effect of its Tissue Repair Cells in the regeneration of peripheral vascular tissue to treat lower-limb ischemia in diabetic patients.

• **Alnylam Pharmaceuticals Inc.**, of Cambridge, Mass., and its collaborators at the Mayo Clinic presented at the Society for Neuroscience's 34th annual meeting in San Diego data from cell culture models showing RNA interference-mediated reduction in the expression of alpha-synuclein. The preclinical results showed that the use of small interfering RNAs to target alpha-synuclein gene expression supports the development of RNAi therapeutics to treat Parkinson's disease, Alnylam said.

• **Altana AG**, of Bad Homburg, Germany, said enroll-

ment will take longer than originally anticipated in its Roflumilast Phase III program in the U.S. for chronic obstructive pulmonary disease and asthma. While the product, a phosphodiesterase 4 inhibitor, has been studied in 16 clinical trials, data from those trials will be augmented by 10 additional Phase III trials involving 4,100 patients. Altana said the application for U.S. approval will occur later than the first half of 2005, as originally planned. A marketing authorization application for Roflumilast is under evaluation by European regulatory agencies. In the U.S., the product is being developed with New York-based **Pfizer Inc.**

• **AltaRex Medical Corp.**, of Edmonton, Alberta, scheduled a Dec. 9 shareholder meeting to vote on its proposed acquisition by **ViRexx Medical Corp.**, also of Edmonton. The companies first reported their plans earlier this month. AltaRex is focused on cancer therapies, and ViRexx is developing products for chronic hepatitis B and C infection and selected solid tumors. (See *BioWorld Today*, Oct. 18, 2004.)

• **Amgen Inc.**, of Thousand Oaks, Calif., said Mimpara (cinacalcet) received European approval for the treatment of secondary hyperparathyroidism in chronic kidney disease patients on dialysis, as well as for the treatment of elevated calcium levels in patients with cancer of the parathyroid gland. Clinical trials have shown the product lowers parathyroid hormone, calcium, phosphorus and calcium-phosphorus product levels resulting in a sevenfold increase in patients reaching K/DOQI target levels. The first-in-class oral calcimimetic already is approved in the U.S., where it is called Sensipar. (See *BioWorld Today*, March 10, 2004.)

• **Attenuon LLC**, of San Diego, was awarded a fast-track Phase I/II Small Business Technology Transfer grant from the National Cancer Institute of the National Institutes of Health in Bethesda, Md. Funding for the first year will be \$358,000. Receipt of an additional grant award of \$942,000 for years two and three is contingent on achieving certain research milestones. The study will evaluate derivatives of ATN-161 as agents for positron emission tomography imaging. ATN-161 is a five-amino-acid peptide that has demonstrated anti-angiogenic, anti-metastatic and antitumor activity in tumor models.

BioWORLD® TODAY (ISSN# 1541-0595) is published every business day by the BioWorld® Publishing Group, a division of Thomson BioWorld®, 3525 Piedmont Road, Building Six, Suite 400, Atlanta, GA 30305 U.S.A. Opinions expressed are not necessarily those of this publication. Mention of products or services does not constitute endorsement. BioWORLD® and BioWORLD® TODAY are trademarks of Thomson BioWorld®. Copyright © 2004 Thomson BioWorld®. All Rights Reserved. No part of this publication may be reproduced without the written consent of Thomson BioWorld®. (GST Registration Number R128870672).

ATLANTA NEWSROOM: Managing Editor: **Brady Huggett**.
Senior Staff Writer: **Aaron Lorenzo**.
Staff Writers: **Karen Pihl-Carey, Karen Young**.
Senior Production Editor: **Jill Robbins**.

WEST COAST BUREAU: Editor: **Randall Osborne**.

EAST COAST BUREAU: Science Editor: **Anette Breindl**.

BUSINESS OFFICE: Vice President/Group Publisher: **Donald R. Johnston**.
Marketing Manager: **Chris Walker**. Account Representative: **Bob Sobel**.

DISPLAY ADVERTISING: For ad rates and information, please call **Stephen Vance** at (404) 262-5511 or email him at stephen.vance@thomson.com.

REPRINTS: For photocopy rights or reprints, please call our reprints department at (404) 262-5479.

SUBSCRIBER INFORMATION

Please call **(800) 688-2421** to subscribe or if you have fax transmission problems. Outside U.S. and Canada, call **(404) 262-5476**. Our customer service hours are 8:30 a.m. to 6:00 p.m. EST.

Brady Huggett, **(404) 262-5408**

Aaron Lorenzo, **(404) 262-5460**

Karen Young, **(404) 262-5423**

Fax: **(404) 814-0759**

Randall Osborne, **(415) 384-0872**

Anette Breindl, **(304) 296-1160**

VP/Group Publisher

Donald R. Johnston, **(404) 262-5439**

Internet: <http://www.bioworld.com>

THOMSON



™

Dendreon

Continued from Page 1

about 75 percent of men with late-stage prostate cancer, we had shown a pretty dramatic benefit," President and CEO Mitchell Gold told *BioWorld Today*. "So based on that data that we got back then, we started another pivotal Phase III study that obviously was looking at patients that had the biggest benefit – those with a Gleason score of 7 or below – knowing that we wouldn't get the final survival data from that first study until right now."

Investors immediately took to the news, driving up Dendreon's stock by 23.9 percent. Its shares (NASDAQ:DNDN) gained \$1.90 Thursday to close at \$9.85.

The data stem from a pre-specified, 36-month survival analysis of the double-blinded, placebo-controlled study. It tested the investigational immunotherapy in 127 patients with asymptomatic, metastatic androgen-independent prostate cancer and found a survival benefit in the overall intent-to-treat patient population, defined as all patients randomized in the study regardless of their Gleason score.

"Now we can go after 100 percent of the market," Gold said. "And obviously, survival is a much better endpoint than progression. We're still digesting the news, and certainly it's pretty exciting at the company, but I think it's creating in the clinical community's eyes a fundamental change in the way they're thinking about treating cancer. It's really going to be a paradigm shift in the way that cancer specialists think about using products like Provenge in the clinical setting."

The survival benefit is greater than that observed with any type of treatment in any published Phase III study in late-stage prostate cancer, the company noted. Earlier this year, Seattle-based Dendreon released data showing that patients receiving Provenge had an 89 percent overall increase in survival time compared to placebo.

The company did not release specific numbers from its latest analysis, as the study's principal investigators plan to submit the complete data for presentation at an upcoming scientific meeting and for publication in a peer-reviewed medical journal.

But also among the data were findings that showed the percentage of patients alive in the Provenge-treated group at 36 months to be substantially greater than the percentage of patients who received placebo. The final data also showed a statistically significant survival benefit in the group of patients with Gleason scores of 7 and less. Provenge was well tolerated, with the most common adverse events reported being fever and chills lasting for one to two days.

The company said it has the wherewithal and means to internally push the product into the U.S. market. Earlier this year, it raised \$130.7 million through a public offering to develop a commercial infrastructure for Provenge. (See *BioWorld Today*, Jan. 23, 2004.)

"We've always had a desire, in our partnering discussions, to play a major role in the commercialization of Provenge in the U.S. market," Gold said. "Today's data only strengthen that belief. There's certainly no reason why Dendreon, given its resources, can't commercialize Provenge on its own in the U.S. And if a partner wants to get a share of the U.S. profits, they're going to have to bring a lot to the table."

He said it "makes sense" for the company to consider partners in Europe and Asia.

Dendreon has begun sharing its latest findings with the FDA to determine the data's role in an eventual new drug application. Gold said the regulatory strategy could be more efficient as a result, and envisions an approval sometime in 2006.

The product is being evaluated in a pivotal Phase III trial called D9902B. The double-blind, placebo-controlled study is operating under a special protocol assessment agreement with the FDA, which has designated Provenge a fast-track product, and is enrolling 275 men at 70 sites across the U.S.

Gold declined to forecast the study's completion date, but after beginning in 2002 it was amended, as Gold mentioned, to enroll only advanced hormone-resistant prostate cancer patients with a Gleason score of 7 or less. (See *BioWorld Today*, Dec. 6, 2002.)

"The bigger-picture news for the company, with the Provenge data, is that it really validates our cancer immunotherapy platform," Gold said, adding that another product based on the Antigen Delivery Cassette technology is APC8024. "That's another cancer immunotherapy that targets HER-2/neu for breast cancer patients. It's finished Phase I studies, and we're now about to embark on a large Phase II study."

Dendreon also has produced multiple monoclonal antibody product candidates for oncology. And separate from that program, a cancer collaboration with South San Francisco-based Genentech Inc. is focused on small-molecule inhibitors and monoclonal antibodies for a calcium channel gene called *Trp-p8*. ■

OTHER NEWS TO NOTE

• **Benitec Ltd.**, of St. Lucia, Australia, said it granted **Artemis Pharmaceuticals GmbH**, of Cologne, Germany, a worldwide nonexclusive commercial license to use its ddRNAi technology in Artemis' transgenic mouse and rat model development business. Artemis provides advanced mouse models for basic research and drug discovery. It also is developing methods to genetically modify rats. The license from Benitec is for the life of its ddRNAi patent estate. Benitec will receive an up-front license fee and ongoing royalties.

Biogen Idec

Continued from Page 1

its plans to launch Antegren for multiple sclerosis later this year upon FDA approval, anticipated in late November.

"The acceleration of Antegren has impacted virtually every function in the organization," said William Rohn, the company's chief operating officer. "We spent the summer conducting marketing research and finalizing our strategic plans. The fall has been concentrating on execution of these plans."

Aside from its anticipation of an Antegren launch, the company saw increases in the third quarter for its two key marketed products, Avonex and Rituxan, but a decrease in the sales of Amevive, while Zevalin sales remained somewhat level.

"Avonex grew 16 percent year over year, representing the fourth consecutive quarter of strong double-digit worldwide growth," said James Mullen, the company's CEO.

Avonex, for relapsing forms of MS, had sales of \$346 million, while Rituxan, for certain B-cell non-Hodgkin's lymphomas, brought the company \$160 million, an increase of 19 percent. While U.S. Rituxan sales for the quarter were \$393 million, Biogen Idec shares them with partner Genentech Inc., of South San Francisco, and Biogen Idec also received \$33 million in royalties for sales of Rituxan outside the U.S.

Amevive, the company's treatment for moderate to severe psoriasis, fell from sales of \$12 million in the third quarter of 2003 to \$8 million this year. Jennifer Chao, an analyst with New York-based Deutsche Bank Securities Inc., said "patient penetration continues to be an uphill battle" for Amevive, possibly due to the strong performance of Enbrel, which is developed for psoriasis by Thousand Oaks, Calif.-based Amgen Inc. The competition will intensify, she said, with Centocor Inc.'s Remicade and Genentech's Raptiva.

Biogen Idec's fourth marketed product, its non-Hodgkin's lymphoma radioimmunotherapeutic agent Zevalin, had sales of \$5 million in the third quarter, up from \$4 million last year, but level with other quarters in the past few years. Chao said her firm has "modest expectations" of such therapies "in light of inconveniences in administration and a challenging referrals environment."

Biogen Idec's revenues of \$543 million are a 14 percent increase over this time last year, driven mainly by Avonex and Rituxan sales. Deutsche Bank estimated revenues would be around \$578 million.

When making comparisons to last year, Biogen Idec used adjusted pro-forma figures for 2003, reflecting what the operating performance would have been like had the company been one entity beginning on Jan. 1, 2003. In reality, Biogen and Idec completed their \$13.7 billion merger last November.

With a prescription drug user-fee act (PDUFA) date of Nov. 25, Antegren could be on the market before year's

end. The company anticipates its initial challenges following a launch would be in providing intravenous access to patients and in receiving reimbursement for Antegren.

According to Biogen Idec's collaboration with Dublin, Ireland-based Elan Corp. plc, the companies will receive a 50/50 profit split worldwide for all indications in which Antegren is approved. Chao projects Antegren sales of \$240 million in 2005 and \$440 million in 2006.

"The companies appear to be in a high state of commercial readiness with an MS sales force enhanced by approximately 200 additional sales specialists already hired," Chao stated in a research note. "Focus on IV access and reimbursement challenges continue and are still expected to be key gating factors for Antegren use."

Biogen Idec intends to provide specific 2005 guidance sometime after the launch of Antegren, but Peter Kellogg, the company's chief financial officer and executive vice president of finance, said the company should have a 15 percent revenue growth and a 20 percent earnings-per-share growth through 2007.

In addition to reporting financial results, the company said its board authorized the repurchase of up to 20 million shares of its common stock. The company recently repurchased just more than 6 million shares, completing the 12 million-share repurchase plan authorized by the board in February.

The company also announced Thursday that it has officially opened the new San Diego Research and Corporate Campus, which consists of 125,000 square feet of biotechnology laboratories. The campus features a community laboratory that will offer students, beginning in late summer 2005, laboratory experiences in biotechnology.

With its year-old merger, Biogen Idec is now the third-largest biotech company and has 4,100 employees, four marketed products and 10 candidates in clinical development in the fields of oncology, neurology, dermatology and rheumatology.

The company has three products in Phase III trials: Rituxan for rheumatoid arthritis and chronic lymphocytic leukemia in collaboration with Genentech and F. Hoffmann-La Roche Ltd.; BG-12 for psoriasis in collaboration with Fumapharm AG, of Lucerne, Switzerland; and Antegren for MS and Crohn's disease in collaboration with Elan.

Biogen Idec and Elan submitted the new drug application for Antegren to treat MS in May and followed the NDA with a European regulatory filing in June.

"Overall, we are very excited about the opportunity that Antegren represents," Rohn said. "With the introduction of Antegren, we believe the potential MS market over the next few years will grow to \$6 billion, up from \$4 billion today. Antegren should expand the market and become the No. one therapy for MS."

The company's stock (NASDAQ:BIIB) rose \$1.03 on Thursday to close at \$59.55. ■

OTHER NEWS TO NOTE

• **Cellegy Pharmaceuticals Inc.**, of South San Francisco, said interim Phase II data reported at the Annual Meeting of the International Society for the Study of Women's Sexual Health in Atlanta indicate that Tostrelle testosterone gel is an alternative for treating female sexual dysfunction. Specific results showed that following four-month daily application of the product, patients experienced a 95 percent increase in frequency of satisfactory sexual activity over baseline and a 45 percent increase over the placebo group of menopausal women suffering from sexual dysfunction.

• **Competitive Technologies Inc.**, of Fairfield, Conn., said it is demanding arbitration with **Palatin Technologies Inc.**, of Cranbury, N.J., for material breach of the terms of its license agreement for the exclusive use of Competitive Technologies' sexual dysfunction technology used in the development of Palatin's experimental treatment for male and female sexual dysfunction. The agreement provides Competitive Technologies 20 percent of a full sublicense fee that Palatin receives, such as the recent \$20 million license payment from **King Pharmaceuticals Inc.**, of Bristol, Tenn. Under the license agreement, Competitive Technologies said it is owed \$4 million by Palatin, which was due Oct. 17. Palatin signed the deal with King two months ago. (See *BioWorld Today*, Aug. 16, 2004.)

• **Elite Pharmaceuticals Inc.**, of Northvale, N.J., said its former CEO, members of his family and their affiliates have sold all of their nearly 1.4 million common shares in the company in a private transaction to a group of purchasers. The controlled-release delivery company did not purchase any of the shares.

• **France Biotech** in Paris, that country's biotechnology industry association, and the **Leem Biotechnology Committee**, its pharmaceutical industry association, issued a series of joint recommendations intended to get France's National Research Agency to provide support for two or three bioclusters. They said the country needs to focus on life sciences and bio-nanosciences over the coming decade, among other recommendations.

• **Infacare Pharmaceutical Corp.**, of Neptune, N.J., said the FDA lifted a clinical hold on a study of Stanate, its first-in-class drug for hyperbilirubinemia in infants. Administered by an intramuscular injection, the product is designed to turn off the body's production of bilirubin and allows a baby's normal mechanisms to eliminate the bilirubin from the bloodstream.

• **InterMune Inc.**, of Brisbane, Calif., said findings from investigations of the safety of Actimmune (interferon gamma-Ib) in treating patients with idiopathic pulmonary fibrosis (IPF), the radiologic diagnosis of IPF and the effect

of interferon gamma-Ib on cellular models of lung fibrosis were reported at this week's American College of Chest Physicians meeting in Seattle. Among data reported, one analysis showed that the initiation of treatment with interferon gamma-Ib did not appear to be associated with an excess of serious adverse events, respiratory serious adverse events or death in those with respiratory serious adverse events compared to the cohort of patients receiving long-term treatment. Consistent with findings from published reports of randomized, controlled trials of interferon gamma-Ib in IPF, those data do not suggest an increased risk of acute respiratory decompensation associated with the initiation of interferon gamma-Ib treatment, InterMune said.

• **ISTA Pharmaceuticals Inc.**, of Irvine, Calif., was notified by the FDA that its market exclusivity for Vitrase (hyaluronidase for injection; lyophilized, ovine) was extended from three years to five years for use as a spreading agent to facilitate the dispersion and absorption of other drugs. ISTA's U.S. market exclusivity now extends until May 5, 2009, it said.

• **Lonza Group Ltd.**, of Basel, Switzerland, said its board approved plans to begin the installation of an additional 20,000 L mammalian cell culture bioreactor train within its existing large-scale manufacturing facility in Portsmouth, N.H.

• **MDS Inc.**, of Toronto, said that Wilf Lewitt, executive chairman, will step down effective Sunday, but will continue as a member until the 2005 annual meeting, when he will not stand for re-election. John Mayberry, current board member and lead independent director, will succeed Lewitt as chairman. Mayberry retired as chairman and CEO of Dofasco Inc. in 2003. MDS provides enabling products and services for the development of drugs and the diagnosis and management of disease.

• **MedImmune Inc.**, of Gaithersburg, Md., said FluMist has been included in the federal government's Vaccines for Children program as an alternative to the injectable flu vaccine beginning in the 2005-2006 influenza season. Healthy children ages 5 to 18 who meet the eligibility requirements might receive FluMist at no cost next season.

• **Metaphore Pharmaceuticals Inc.**, of Fort Lee, N.J., an emerging pharmaceutical company developing drugs for the treatment of pain, autoimmune disorders and inflammation, said its board appointed Richard De Schutter chairman. Constantine Anagnostopoulos, the current chairman, will remain a member of the board.

• **Miraculins Inc.**, of Winnipeg, Manitoba, entered an agreement with the Winnipeg Clinic to provide the company access to additional clinical samples from prostate cancer patients. Miraculins noted that the expanded clinical sample base would further support its program to discover and validate protein and peptide biomarkers.

Invitrogen

Continued from Page 1

nology can extract nucleic acids from bacteria, tissues, blood, forensic samples and buccal cells, and works on surfaces such as magnetic beads, microtiter plates, columns and cartridges. CST allows for a quicker process and does away with chaotropes, alcohols and assorted undesirable reagents.

Invitrogen has been working on nucleic acid purification for the past 18 months.

"It wasn't really in anticipation of this deal," Geissman said. "Earlier in the summer, we introduced a nucleic acid purification kit." The DRI deal offers a new technology that Invitrogen hopes to advance. The milestones involve "new product introduction measures" involving products currently in DRI's pipeline, he told *BioWorld Today*.

"We're fairly confident they're milestones that can be achieved," he said.

Invitrogen recently made news with a deal for lead development and optimization with South San Francisco-

based Exelixis Inc., for which the company is providing validated high-throughput screening assays in single live cells. (See *BioWorld Today*, Aug. 13, 2004.)

Also this summer, Invitrogen formed a new wholly owned subsidiary, called Biological Defense Systems Inc., to focus on research and development of vaccines, therapeutics and detection technologies in the anti-terrorism push. Located in Frederick, Md., BDS consolidated the company's biosecurity applications. (See *BioWorld Today*, July 14, 2004.)

"The main thing to take from the DRI acquisition and all of our work in this area is that Invitrogen's main goal is to have an offering along the entire continuum [of drug discovery and development]," Geissman said. "We have to continue to listen to what our customers are saying."

Meanwhile, the DRI buyout is not expected to change what investors have been led to expect.

"As of now, we're not changing our guidance," Geissman said. ■

Catalyst Biosciences

Continued from Page 1

whether you count second-generation products as stand-alones – already are on the market, including Activase (alteplase) tissue-plasminogen activator, also known as T-PA, from Catalyst's South San Francisco neighbor Genentech Inc.

Another is Indianapolis-based Eli Lilly and Co.'s Xigris (activated drotrecogin alfa). Proteases even have a cosmetic application – the wrinkle treatment Botox (botulinum toxin) from Allergan Inc., of Irvine, Calif., is a member of the class.

"There are also some blood-clotting factors," Madison said, noting that has been a major area of focus.

"People have worked on maybe one protease for, say, myocardial infarction, always using it to cleave its natural substrate," he said. "We're viewing proteases as a platform comparable to monoclonal antibodies."

Specifically, the firm's technology couples mutagenesis techniques with proprietary screens to select for proteases from large libraries of variants. The hunt is for proteases that preferentially cleave a unique amino acid sequence. Variants move through the cycle as many times as necessary, and Catalyst can generate proteases with the sought-after specificity in a matter of weeks.

The company has a program in oncology and another in inflammatory bowel disease. The former is an engineered protease and the latter is natural. Madison said the company will work with both.

"Many of them will be engineered, but we're going to have a balanced approach," he said, pointing out that the number of possible candidates is "almost infinite, when you begin to engineer them" for advantage.

"T-PA is a good example," Madison said. "The natural one worked, but you had to give it as a bolus injection followed by infusion." The engineered version (i.e., Activase), allows for a single bolus injection.

He declined to say how long the company can operate on the money gained from the Series A.

"We haven't really disclosed that, and it depends on the ramp-up," he said. "Right now, we could operate for quite a while with seven employees."

Sofinnova Ventures, of San Francisco, led the financing, which also included Burrill and Co., also of San Francisco; RCT Bioventures, of Menlo Park, Calif.; and Novartis Venture Fund in San Diego. ■

OTHER NEWS TO NOTE

- The **Novartis Institutes for BioMedical Research**, the research division of Novartis AG, of Basel, Switzerland, and the Broad Institute of MIT and Harvard University entered a joint project to decipher the genetic causes of Type II diabetes. Called the Broad-Novartis Diabetes Initiative, the public-private collaboration will place all findings freely available online. The initiative includes and builds upon prior collaborative work with researchers at Lund University in Sweden.

- **PharmaMar SA**, of Madrid, Spain, said that Kahalide F, its marine-origin compound, entered Phase II trials in severe psoriasis. KF is undergoing Phase II trials in various tumors: melanoma, non-small-cell lung cancer and hepatocarcinoma. It is one of a family of peptides isolated from the Hawaiian mollusk *Elysia rufescens*.

OTHER NEWS TO NOTE

• **Protein Sciences Corp.**, of Meriden, Conn., received FDA clearance to conduct a Phase II/III proof-of-principle field study of FluBlok, its cell culture influenza vaccine. The trial will be conducted in 18- to 49-year-old subjects and will compare two different doses of FluBlok with a placebo group. Its primary endpoints are safety and establishing a commercial dose; a secondary endpoint is to establish efficacy under field conditions. FluBlok contains antigens that are derived from three strains of the flu virus selected for inclusion in the annual flu vaccine.

• **Regeneron Pharmaceuticals Inc.**, of Tarrytown, N.Y., said it received fast-track designation for its lead product, VEGF Trap, for a specific niche cancer indication. As a result, Regeneron and partner **Sanofi-Aventis Group**, of Paris, plan to initiate a clinical trial in that indication in 2005. The companies are conducting a Phase I trial to test the safety and tolerability of intravenous delivery of the VEGF Trap in advanced cancer patients. The product also is in Phase I trials in eye diseases.

• **Rice University** in Houston received a five-year, \$1.5 million grant from the National Institute of General Medical Sciences, a unit of the National Institutes of Health in Bethesda, Md., to develop a predictive framework for cellular heterogeneity. The project involves fundamental modeling studies in conjunction with a series of experiments on genetically modified strains of *E. coli* bacteria, and its researchers hope it will provide a clearer understanding not only of bacterial pathogenesis but also of other diseases such as cancer.

• **Savient Pharmaceuticals Inc.**, of East Brunswick, N.J., said it will reduce its work force by 9 percent, saving the company \$2.8 million net per year, as part of a restructuring plan to provide the funds needed to advance its product candidates Puricase and Prosaptide. The company previously announced plans to divest its Israeli business operations, including its subsidiary Bio-Technology General Ltd. If an offer is received and approved, the company expects the transaction could complete in the first half of 2005. The cost of the personnel reductions will result in a fourth-quarter charge of about \$1.3 million. Savient is conducting a Phase II study of Puricase in patients with severe refractory gout, and a Phase II study of Prosaptide to treat neuropathic pain associated with HIV/AIDS.

• **Targacept Inc.**, of Winston-Salem, N.C., said research findings reported at the Society for Neuroscience meeting in San Diego showed that TC-2696 produced an analgesic effect and target selectivity in several animal models. In particular, the product showed potency comparable to, or greater than, the commonly used analgesics morphine and indomethacin in models of acute, chronic, inflammatory and neuropathic pain. The compound did not

produce tolerance with repeated administration. TC-2696 did not interact with nicotinic receptors located in the muscles or ganglia, which are associated with nausea, vomiting and cardiovascular toxicity.

• **Tercica Inc.**, of South San Francisco, said it dosed the first patient in a Phase IIIb study investigating the use of recombinant human insulin-like growth factor-I (rhIGF-I) as a therapy for children with short stature caused by primary IGF-I deficiency. The randomized, multicenter trial will enroll about 160 pre-pubertal children with primary IGFD whose height and serum IGF-I levels are more than two standard deviations below normal. It is designed to evaluate rhIGF-I's safety and efficacy in promoting statural growth, and its primary endpoint is change in height standard deviation score over one year. The study is expected to take about two years. Earlier this year, the company reported prior Phase III data and new drug application plans. (See *BioWorld Today*, June 22, 2004.)

• **Vivus Inc.**, of Mountain View, Calif., said Phase II results reported at the annual meeting of the International Society for the Study of Women's Sexual Health in Atlanta detailed the safety and efficacy of Alista (topical alprostadil) for female sexual arousal disorder in premenopausal women. Specifically, the study demonstrated that treatment with Alista significantly increased the number of successful and satisfactory sexual events by 48 percent over placebo ($p < 0.021$) in the 25 women who completed at least six doses each of Alista and placebo. Also, the study showed that 64 percent of Alista doses resulted in satisfactory sexual events ($p < 0.05$ when compared to placebo) in the 36 women who received at least one dose each of placebo and active drug.

APPOINTMENTS AND ADVANCEMENTS

Nucleonics Inc., of Horsham, Pa., formed a clinical advisory board to include Francis Chisari, Jules Dienstag, Thomas London, John McHutchison and Robert Perrillo.

Nuvios Inc., of Cambridge, Mass., appointed Richard Lyttle president and CEO.

OncoGenex Technologies Inc., of Vancouver, British Columbia, appointed Neil Clendenin to its board.

Oragenics Inc., of Alachua, Fla., named Edmund Mickunas vice president of regulatory and clinical affairs.

Osteotech Inc., of Eatontown, N.J., appointed Robert Wynalek senior vice president of sales and marketing, responsible for domestic markets.

Paratek Pharmaceuticals Inc., of Boston, appointed Malcolm Sherman to its board.

Prometheus Laboratories Inc., of San Diego, appointed Michael Allen vice president of sales, Lee McCracken corporate head of business development and Toni Wayne vice president of human resources.