THE CANCER LETTER INTERACTIVE

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PO Box 9905 Washington DC 20016 Telephone 202-362-1809

Amgen Takes Its Case For Aranesp To Lawmakers, Patients, Physicians

Having lost its court battle over Medicare payments for the anemia treatment Aranesp (darbepoetin alfa), Amgen Inc. is pleading its case before lawmakers, patient groups, and professional associations.

Last month, a federal judge ruled that Amgen, based in Thousand Oaks, CA, had no legal standing to challenge a recent decision by the Centers for Medicare & Medicaid Services to cut in half its reimbursement for Aranesp.

The ruling, by Judge Emmet Sullivan of the U.S. District Court for

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In Brief:

Brooks, Heppner Promoted At Karmanos, Richard Rauscher Recruited From Moffitt

BARBARA ANN KARMANOS CANCER INSTITUTE has made the following appointments. **Sam Brooks** has been named interim leader of the breast cancer program. Brooks is a longtime member of the research faculty, the breast cancer program and head of its graduate degree program in cancer biology at Wayne State University. His responsibilities include the overall coordination of the breast cancer program including basic, clinical, translational, behavioral and population-based research, as well as program recruitments and grant applications. Brooks reports to **John Ruckdeschel**, president of the Karmanos Cancer Institute. **Gloria Heppner** is assuming the new role of special assistant to Ruckdeschel and to **John Crissman**, dean of the School of Medicine. One of her chief responsibilities is the establishment of the Institutes for Population Studies, Health Assessment, Administration, Services, & Economics. INPHAASE is a network of research institutes and centers including the Karmanos Cancer Institute Population Science Program, the WSU Institute of Environmental Health Services, Mott Center, Center For Healthcare Effectiveness Research, and several other WSU initiatives to be housed within a single facility. Its goals are to promote synergistic exchanges among researchers and experts from various healthcare disciplines and to create efficient, appropriate, and cost-effective health care delivery in metropolitan Detroit. “Both Gloria and Sam represent the stability of the Institute and two of the reasons for its tremendous contributions to the oncology field over the years,” said Ruckdeschel. Two individuals were recruited to head the information technology division and clinical trials office of the institute. **Richard Rauscher**, manager of

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Battle Over Anemia Agent Moves Outside The Courts

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the District of Columbia, held that a pharmaceutical company has no legal standing to sue CMS over its reimbursement decisions.

"The drug company is clearly not a direct beneficiary of the Medicare Act, and it is not among those eligible for reimbursement of medical expenses under the federal program," Sullivan wrote in his 49-page ruling dated Dec. 26, 2002.

Amgen sued CMS over its decision that Aranesp is "functionally equivalent" to the competing Johnson & Johnson agent Procrit (epoetin alfa). Arguing that the agents are similar, CMS said that they are functionally the same drug, and made Aranesp ineligible for additional reimbursement through the agency's "pass-through" program.

The program pays for drugs and biologics during their first two or three years on the market. Starting Jan.1, Aranesp administered to hospital inpatients under Medicare program is being reimbursed at about half of its earlier price.

As Amgen pursued its case outside the courts, its long-running battle with J&J has spread to involve CMS, NCI, patient groups, trade associations, professional societies, and members of Congress.

Though Aranesp and Procrit account for the largest segment of the oncology market, they have not been compared head-to-head in rigorously designed trials. HHS has requested that NCI compare the agents, but the trials are likely to involve thousands of patients and take months to complete (**The Cancer Letter**, Aug. 2, Dec. 13, 2002).

Amgen's Target: CMS

Amgen has been aggressive in its promotion of Aranesp. Company marketing materials included charts designed to show physicians that the Amgen agent generated greater revenues than the competitor.

J&J struck back, convincing CMS that the starting dose of Aranesp marketed by Amgen was unrealistic and likely to require dose escalation. Reimbursing Aranesp at the price set by Amgen would drain patient and government resources, argued J&J, of New Brunswick, NJ.

After studying the data, CMS determined that the two agents are "functionally equivalent," and that the price of Aranesp is higher than the price of Procrit. The agency cut in half its reimbursement of Aranesp.

The decision affects the outpatient Medicare Part B program, which accounts for about 10 percent of Aranesp sales, industry sources said. However, the impact of the CMS decision may be far-reaching if a similar approach is used to reimburse patients treated in doctors' offices. Private insurers, too, may adopt a similar formula.

As he threw out Amgen's challenge of the CMS rule, Judge Sullivan wrote that the company had no standing to pursue its claims. Though he did not address any of Amgen's claims, Sullivan rejected the argument that the cut in reimbursement would deny patients access to the agent.

"A reduction in hospitals' reimbursement levels for Aranesp in no way precludes hospitals from purchasing the product altogether," he wrote.

"It would be a stretch of the imagination to conclude that the question of whether pharmaceutical companies embark on research and development of new drugs is contingent on the level of reimbursement provided to third parties for those new drugs under the pass-through provisions of the Medicare statute," Sullivan wrote.

The text of the ruling is available at: http://www.dcd.uscourts.gov/02cv2259_122702.pdf.

Storming the Hill?

Before Sullivan's ruling, Amgen attempted unsuccessfully to insert the following mandate into the report of the Senate Appropriations Committee:

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"The Committee understands that concerns have been raised about Medicare reimbursement rules for certain anemia drugs under the Outpatient Prospective Payment Program. The Committee therefore directs the Administrator of the Centers for Medicare and Medicaid Services to conduct a study examining claims data from hospitals and physicians to determine comparable dosage of biologicals used for the treatment of anemia in cancer patients. This study shall be completed and submitted to the [HHS] Secretary and the Committee on Appropriations no later than April 1, 2003."

Had this study been conducted, it would have measured only that physicians prescribe the marketed dose of Aranesp.

The Aranesp dose marketed by Amgen is lower than the FDA-approved dose. According to the package insert, the agent should be used at the 2.25 mcg/kg per week dose. However, Amgen is marketing a lower dose of 200 mcg every other week, regardless of the patient's weight. This works out to be roughly 1.5 mcg/kg/wk, which also happens to be the level where Aranesp costs a little less than Procrit.

Both J&J and CMS regard the starting dose marketed by Amgen as unrealistic. CMS used the 2.25 mcg/kg per week dose in its cost calculations. However, at least until proper clinical trials are conducted to justify the dosage of both agents and to compare the two, participants in this debate have little data to support their arguments.

The study proposed by Amgen would have been less likely to show the impact of dose escalation that may be needed to achieve specific clinical targets.

Also, the study would have fallen far short of the trials planned by NCI. Though HHS has asked the Institute to develop a meaningful conversion ratio that would make it possible to compare Procrit and Aranesp, the Institute is preparing to address a wide range of scientific questions.

The language suggested by Amgen was not inserted into the report of the Senate Appropriations Committee. The report of the House Appropriations Committee has not been published.

Earlier this month, the company took its case to the Senate Finance Committee. A recent letter from the committee to CMS Administrator Thomas Scully raised a procedural question:

"Irrespective of the arguments and rationale for or against functional equivalence, we believe that the CMS decision to implement this policy represents a change from past agency practice," the Finance Committee letter states. "Changes such as this should be made with the opportunity for ample public comment that, in this case, CMS did not provide."

Further, the Finance Committee challenged the accuracy of the CMS calculation of reimbursement for Aranesp.

"That report concludes that physicians are treating patients with [Aranesp] at doses different from those used to determine payment in the OPPS final rule," said the Jan. 16 letter signed by Sens. Max Baucus (D-MT), Charles Grassley (R-IA), John Breaux (D-LA), Orrin Hatch (R-UT), and Edward Kennedy (D-MA).

Defending the marketed dose of Aranesp, last fall, Amgen organized a letter-writing campaign to CMS Administrator Scully.

After filling in the blanks by hand to describe their practices, the doctors signed the form letters stating that they used Aranesp at the marketed dose rather than the higher, FDA-approved, dose.

"We are not using Aranesp at a dose of 2.25 mcg/kg per week, as we believe this dose is excessive and unnecessary to achieve adequate hemoglobin control," the form letter states. "In addition, the ability to dose Aranesp less frequently than Procrit has resulted in time savings for our nursing staff. Most importantly, fewer office visits and less disruption of personal life is a meaningful benefit for our patients and their caregivers. The cost of Aranesp at the dose of 200 mcg every other week is less expensive, compared to Procrit, resulting in savings for CMS as well as our patients."

CMS Rule Affects Other Therapies

"Functional equivalence" is a small part of a broad CMS regulation that was published in Federal Register Nov. 1, 2002, and went into effect Jan. 1.

In another change, CMS reserved the right to deny coverage for some drugs and biologics approved by FDA. Payment may be withheld when an agent "represents a novel, complex, or controversial treatment, may be costly to the Medicare program, may be subject to overutilization or misuse, or received marketing approval based on the use of surrogate endpoints."

The agency also decided to reclassify several agents that had previously qualified for pass-through payments, and decided not to extend such payments to the recently approved Zevalin (ibritumomab tiuxetan) therapy. The agency reclassified Zevalin from drug to "radiopharmaceutical," and made it

ineligible for the pass-through program. Zevalin is sponsored by IDEC Plarmaceuticals Corp. of San Diego.

The Biotechnology Industry Organization has emerged as the premier defender of Amgen's interests.

BIO has asked Congress to pass legislation that would require CMS to maintain pass-through payments for all agents for three years.

"During this time, CMS should be required to reexamine the data and methodology it used to set OPPS payment rate for drugs and biologicals in 2003 and develop a more appropriate system to pay for these technologies," BIO President Carl Feldbaum wrote in a letter to several House and Senate members late last year. The Pharmaceutical Research and Manufacturers of America, a Washington lobby for the drug companies, has taken a similar position.

The American Society of Clinical Oncology, in a letter to Scully, objected to the procedure CMS used in deriving the rules on "functional equivalence," but steered away from the specifics of the debate over Aranesp.

"While ASCO has not analyzed the specific facts of these two drugs, we are very concerned about CMS's emerging practice of developing novel theories to justify cutting payments for drugs," ASCO President Paul Bunn wrote in a letter dated Dec. 10, 2002.

"Many cancer patients depend on access to drug therapies, and it is essential that Medicare reimbursement be adequate to ensure that such access continue to exist," Bunn wrote. "As in the case of CMS's newly announced policy on denying coverage of new drug therapies, CMS should not implement new approaches to reducing payment amounts without thorough discussion and opportunity for public comment."

The National Patient Advocate Foundation went a step beyond ASCO, arguing that Aranesp should be reimbursed at former rates until NCI completes its studies.

"We strongly urge you to set aside the implementation of payment revisions for drug and biological products until the NCI study has been completed and analyzed by the patient and provider communities," the foundation's President and CEO Nancy Davenport-Ennis wrote in a Dec. 14, 2002, letter to HHS Secretary Tommy Thompson.

"By doing so, patients and providers can be assured that 'functional equivalence' is clearly defined in a manner that is scientifically and clinically meaningful, and that reimbursement then is appropriately established to serve the needs of patients and the Medicare program," Davenport-Ennis wrote.

Several patient advocates said they would prefer to address genuine scientific and regulatory questions while avoiding the fray between drug companies.

The questions are profound, advocates say: Can the Medicare system protect itself from being drained by expensive drugs that may be equivalent to less expensive drugs? Would patients be denied access to therapies they need? Would doctors lose their autonomy to prescribe? How would "functional equivalence" of drugs and biologics be determined in a rigorous, scientifically valid manner?

The Cancer Leadership Council, a patient-run gathering of cancer groups that meets in Washington, plans to address these questions, sources said. The CLC's Dec. 16, 2002, letter to Scully voiced objection to the agency's exclusion of some FDA-approved drugs from coverage by Medicare, but contained no reference to "functional equivalence."

FY 2004 Budget:

Bush To Propose Increase For Cancer Screening Program

President Bush will propose a $10 million increase in funding for breast and cervical cancer screening to help low-income and underserved women, HHS Secretary Tommy Thompson said earlier this week.

The proposed increase is for the National Breast and Cervical Cancer Early Detection Program, administered by Centers for Disease Control and Prevention, which provides screening services, including clinical breast examinations, mammograms, pelvic examinations and Pap tests, to underserved women. It also funds post-screening diagnostic services, such as surgical consultation and biopsy, to ensure that women with abnormal results receive timely and adequate referrals.

"Together, breast and cervical cancer take the lives of more than 40,000 American women each year," Thompson said. "These deaths occurred disproportionately among low-income women and women who belong to racial or ethnic minorities. By increasing screening rates for at-risk women, we can save lives."

The President's budget request for HHS for

fiscal year 2004 budget will include an increase of $10 million for this program, bringing the total requested funding to $211 million. The additional funding would allow the program to provide an additional 32,000 procedures, for a total of 562,000 procedures. The increase also will support efforts to increase education and outreach programs for women and health care providers, to improve quality assurance measures for screening and to improve access to screening and follow-up services.

HHS has approved Medicaid plan amendments for 49 states and the District of Columbia that allow their state Medicaid programs to provide health coverage to women without health insurance who are diagnosed with cancer through the free CDC screening program.

The National Breast and Cervical Cancer Early Detection Program was established by the Breast and Cervical Cancer Mortality Prevention Act of 1990. Since its creation, the program has provided more than 3 million screening examinations and diagnosed more than 12,000 breast cancers and 800 invasive cervical cancers. The program operates in all 50 states, the District of Columbia, six U.S. territories and 12 American Indian and Alaska Native organizations.

Budget Increase For FDA Proposed

Bush also will propose a $13 million increase in the budget for the Food and Drug Administration to improve access to low-cost generic drugs, the Administration said.

The proposed increase is part of HHS' fiscal year 2004 budget request and will expand on the department's efforts to improve access to prescription drugs.

"President Bush's proposed budget would speed up generic drug reviews to make safe, effective generic drugs available to consumers who want lower-cost alternatives to popular brand-name drugs," Thompson said. "Prescription drugs play a critical role both in treating illnesses and preventing serious diseases, and we are committed to making them more affordable and accessible for all Americans."

FDA can approve generic drugs for the marketplace as soon as the patent protection on branded drugs expires. The generics' manufacturers must demonstrate to the FDA that their products are therapeutically equivalent to an approved brand-name drug in terms of safety, strength, quality, purity, performance, intended use and other characteristics.

FDA would use the increase to hire about 40 new experts in its generic drugs and related programs. HHS said that with the additional resources, FDA would shorten the average review time by about two months for generic drug applications.

The agency also would begin research to establish additional standards for therapeutic equivalence.

Last October, Bush and Thompson announced a new FDA proposed regulation that would eliminate the current practice that allows manufacturers to repeatedly obtain 30-month stays to block the approval of generic versions of their drugs. The proposed regulation would also prevent manufacturers from blocking generic competition by using certain types of patents that do not reflect real medical innovation.

"The President's budget plan will expand our efforts to provide American consumers with some relief from the high prices that they frequently pay for prescription drugs," Thompson said. "By investing more heavily in generic drug reviews and research, we have the potential to save consumers billions of dollars in prescription drug costs."

Professional Societies:

FASEB Recommends $2.73B Increase For NIH In FY2004

Biomedical research societies have recommended that the Bush Administration propose a fiscal year 2004 budget for NIH that provides an increase of $2.73 billion, or 10 percent, over the $27.3 billion budget the President requested for the agency for the current fiscal year.

The Federation of American Societies for Experimental Biology said the 2-percent increase that the Administration is expected to propose for FY 2004 would cause NIH to cut more than 1,000 research grants.

A 10-percent increase would maintain the funding for research grants and continue the research investment made during the five-year doubling of the NIH budget, FASEB said in its annual life sciences funding recommendations.

"The increases in NIH funding of 14–16% in each of the past five years reflected a broad-based desire to accelerate the rate of biomedical discovery and have resulted in the hoped-for advances in medical science," the FASEB report said. "If this increase in funding is followed by a period of flat funding or

inflationary increases, our historic opportunity to quicken the pace of medical progress will be squandered in as few as five years.

"Will we maintain the accelerated rate of discovery made possible by the recent five-year doubling, or will we let this investment slip through our fingers?…

"The critical investments that have been made in the NIH in recent years have re-energized the scientific community, sparked the development of critical technologies that are essential to research progress, and created a paradigm shift in the way that scientists work together to solve the nation's health problems. We are entering a transitional era in which specific genetic knowledge is becoming critical to the delivery of effective health care. Continued investment in biomedical science will enable us to exploit our understanding of the structure of DNA and the human genome to pursue individually designed and targeted medical treatments and ensure that we are prepared to address the threat of bioterrorism."

According to FASEB, the "three most important priorities at this critical time in NIH history" include:

—**"Assure research momentum.** Funding stability is essential for the success of multiyear research projects, maintaining research teams, continuing investment in research infrastructure and training new scientists. Without funding stability, even the best research teams cannot maintain the pace of discovery.

—**"Support the pipeline of new ideas.** Experience has shown that funding for innovative science is severely curtailed when the success rate for funded proposals falls below a critical threshold. Funding for new directions in research is essential for the United States to address today's challenges. Recent increases in funding have allowed the NIH to fund the innovations in biomedical science that make American research the envy of the world. An increase of at least 10% is needed to continue to support new ideas.

—**"Support the pipeline of new investigators**. Young scientists are the future of the research enterprise and the source of the exciting ideas that will become tomorrow's cures and therapies. Recent increases in NIH budgets have established innovative, new programs to support the transition of new investigators from training to independence. NIH should also expand innovative grant and loan repayment programs to attract young physicians into research careers. NIH funding must be maintained to attract and keep our best and brightest in biomedical research and to assure that our scientific talent is as rich and diverse as our population.

"An increase in the NIH appropriation will make possible the pursuit of interdisciplinary research opportunities that now beckon as a result of our past investment, solidify the gains made, and facilitate training of the next generation of biomedical scientists without compromising funding for the innovative, investigator-initiated projects that are the cornerstone of American science."

FASEB represents 22 biomedical research societies with a combined membership of more than 60,000 scientists. The report, "Federal Funding for Biomedical and Related Life Sciences Research, FY 2004," is available at www.faseb.org.

NCI Programs:

NCI Supports New Guidelines On Cervical Cancer Screening

NCI said it supports new guidelines on cervical cancer screening released last week by the U.S. Preventive Services Task Force.

The new guidelines, similar to ones published by the American Cancer Society last November, are based on a review of recent research advances in cervical cancer screening and detection and in understanding the course of the disease, including the recently discovered role of the human papillomavirus.

"The premiere experts in the field have worked on the guidelines developed by U.S. Preventive Services Task Force and the American Cancer Society," said Peter Greenwald, director of the NCI Division of Cancer Prevention. "The key to continued reductions in deaths from cervical cancer is early detection, and these guidelines will help women and their doctors make informed choices about screening."

Last year, about 4,100 women in the U.S. died from cervical cancer, an estimated 70 percent decline from the mid-20th century, when the Papanicolaou (Pap) test was first introduced as a screening tool.

In recent years, researchers have identified HPV, which is transmitted through sex, as the main cause of cervical cancer. HPV infections are very common, however, while cervical cancer is not. Most HPV infections go away without treatment and do not lead to cervical cancer.

The USPSTF guidelines are available at http://www.ahrq.gov/clinic/3rduspstf/cervcan/cervcanrr.htm.

The American Cancer Society guidelines can be found at http://caonline.amcancersoc.org/cgi/content/short/52/6/342.

NCI's summary points for cervical cancer screening follow:

—Cervical cancer screening should begin approximately three years after a woman begins having sexual intercourse, but no later than at 21 years old.

—Experts recommend waiting approximately three years following the initiation of sexual activity because transient HPV infections and cervical cell changes that are not significant are common and it takes years for a significant abnormality or cancer to develop. Cervical cancer is extremely rare in women under the age of 25.

—Women should have a Pap test at least once every three years.

—Women 65 to 70 years of age who have had at least three normal Pap tests and no abnormal Pap tests in the last 10 years may decide, upon consultation with their healthcare provider, to stop cervical cancer screening.

—Women who have had a total hysterectomy (removal of the uterus and cervix) do not need to undergo cervical cancer screening, unless the surgery was done as a treatment for cervical precancer or cancer.

—Women should seek expert medical advice about when they should begin screening, how often they should be screened, and when they can discontinue cervical screenings, especially if they are at higher than average risk of cervical cancer due to factors such as HIV infection.

Obituary:

Hugh Creech, 92, Chemist And Chemotherapy Pioneer

Hugh Creech, an organic chemist at Fox Chase Cancer Center's Institute for Cancer Research from 1945 to 1976, died of a stroke Jan. 18 at his home in Fort Washington, Pa. He was 92.

Creech was widely recognized for pioneering work on the development and testing of chemotherapy drugs. He also was active in the American Association for Cancer Research, serving for 25 years as secretary-treasurer.

Creech's research on chemotherapy involved the preparation and testing of the immunological effects of carcinogen-protein complexes and the synthesis and testing of potential antitumor agents. He focused especially on one-armed nitrogen-mustard compounds.

Creech and his team synthesized and tested more than 150 related new compounds. In the 1950s and 1960s, Creech's Fox Chase program provided a center for testing compounds from a number of other laboratories as part of a national effort to develop nitrogen mustards as cancer treatment.

Through his studies of numerous agents with antitumor, mutation-causing properties, Creech also paved the way for understanding how drugs kill cancer cells and how mutations can lead to cancer. A new class of mutagens identified at Fox Chase is among the most potent gene-altering agents known.

Born June 27, 1910, in Exeter, Ontario, Canada, Creech earned his B.A. and M.A. at the University of Western Ontario and then his Ph.D. in 1938 from the University of Toronto, where he met and married the former E. Marie Hearne, who died in 1993. After postdoctoral research in chemistry at Harvard University with Louis Fieser from 1938-1941, Creech served on the University of Maryland chemistry faculty until 1945.

When he moved to Philadelphia in 1945 to join Fox Chase, he also lectured part-time in biochemistry at Bryn Mawr College until 1947. That year he became head of the Institute's department of chemotherapy. He was promoted to the rank of senior member of the staff in 1949. In 1957, he became chairman of the new division of chemotherapy and held that position until 1970, when the Institute ended separate research divisions.

After serving as AACR's secretary-treasurer from 1952 to 1977, he was vice president from 1977 to 1978, president from 1978 to 1979 and archivist from 1983 until his death. He also served on the U.S. National Committee of the International Union Against Cancer from 1957 to 1960 and from 1980 to 1984.

Survivors include a son, medical oncologist Richard Creech, of Fort Washington, Pa.; and a daughter, Joan Kraft, of La Mesa, Calif. The family requests that memorial donations be sent AACR, Public Ledger Bldg., 150 S. Independence Mall West, Suite 826, Philadelphia, Pa. 19106-3483, or Fox Chase Cancer Center's Institute for Cancer Research, Office of Institutional Advancement, 7701 Burholme Ave., Philadelphia 19111-2497.

In Brief:

University Of Florida To Build Proton Beam Treatment Center

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technology architecture and information security officer with the H. Lee Moffitt Cancer Center & Research Institute, has joined the Karmanos Cancer Institute as vice president for information technology and biomedical informatics/chief information officer. He is responsible for the strategic direction and all aspects of the information systems of the institute supporting its research and clinical initiatives. **Beth Golden** returns to the institute as director, clinical trials office. She will oversee the clinical trials office, which administers 300 research, treatment, supportive care, and prevention studies. She was clinical research manager at the Beaumont Hospital community clinical oncology program, and manager of the clinical trials office core at University of Michigan Comprehensive Cancer Center. Golden was manager of the Karmanos Cancer Institute clinical trials office from 1988 through 1994. . . . **MARGARET CHESNEY** has been named the first deputy director for National Center for Complementary and Alternative Medicine. Chesney was professor of medicine and epidemiology at the School of Medicine, University of California, San Francisco, where she was co-director of the Center for AIDS Prevention Studies and director of the behavioral medicine and epidemiology core of the UCSF Center for AIDS Research. Most recently, she was also a senior visiting scientist in the NIH Office of Women's Health, in the Office of the Director. . . **UNIVERSITY OF FLORIDA** will begin construction April 1 for the first proton beam cancer treatment facility in the state, said **C. Craig Tisher**, dean of the University of Florida College of Medicine and the director of the project. Jacksonville county officials have approved a $19 million bond issue and expect to approve another that will finance technology and start-up costs totaling $62 million. The funding will supplement $11 million in legislative appropriations earmarked for construction. The facility would become part of the UF Shands Cancer Center. "We're going to have a unique radiation oncology facility, with both conventional radiation therapy and proton beam therapy in the same building," said **Nancy Mendenhall**, chairman of the UF Department of Radiation Oncology.

THE CANCER LETTER

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Business & Regulatory Report

Clinical Trials:

Cell Pathways' Aptosyn To Be Studied In Phase II For Refractory Prostate Cancer

Cell Pathways Inc. (Nasdaq: CLPA) of Horsham, Penn., said the Cancer and Leukemia Group B is sponsoring a phase II combination study of the Cell Pathways investigational drug Aptosyn (exisulind) in hormone-refractory prostate cancer.

The study is investigating the combination of Aptosyn, estramustine, and Taxotere (docetaxel) in approximately 72 patients with evidence of progressive disease following their last change in therapy.

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Deals & Collaborations:

IDEC, Biogen To Co-Develop Three Drugs: LTBR, Anti-Cripto, And Interferon Beta

IDEC Pharmaceuticals Corp. (Nasdaq: IDPH) of San Diego, and **Biogen Inc.** (Nasdaq: BGEN) of Cambridge, Mass., announced plans to co-develop three oncology therapeutics from Biogen's pipeline of early-stage development candidates.

The companies said the collaboration leverages their capabilities in discovery research, development, and manufacturing. By deal would accelerate development of three oncology product candidates:

—An anti-lymphotoxin beta receptor (LTBR) monoclonal antibody. LTBR is a member of the TNF superfamily of cytokines. The activation of LTBR has been demonstrated to inhibit tumor growth in animal models. An agonist antibody against this target has been generated, the companies said.

—An anti-Cripto monoclonal antibody. Cripto is a novel cell surface signaling molecule that is over expressed in a multitude of solid tumors including breast, colon and lung.

—An interferon beta (INF-b) gene delivery product for glioma. The agent is in phase I testing. INF-b gene delivery has exhibited direct and indirect anti-tumor activity and has the potential to treat a broad range of tumors with high unmet medical need.

Lazard Freres & Co. LLC served as an advisor to Biogen in the development of strategic options related to the company's oncology program.

* * *

Corixa Corp. (Nasdaq:CRXA) of Seattle and **GlaxoSmithKline**

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CALGB Plans Phase II Trial Of Cell Pathways' Aptosyn

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"Previous phase II studies of Aptosyn in patients at risk of recurrent prostate cancer demonstrated this drug's ability to significantly suppress the increase in prostate specific antigen post-prostatectomy, suggesting Aptosyn's potential utility in the treatment of prostate cancer," said Robert Towarnicki, Cell Pathways chairman and CEO. "Their action continues to build on the clinical experience with Aptosyn in this important indication, while allowing our company to focus its own resources on completing its phase III study of the combination of Aptosyn plus Taxotere in non-small cell lung cancer."

The CALGB study is a multi-center, open-label phase II trial in patients with HRPC and evidence of progressive disease, who have measurable or non-measurable disease (i.e., bone, CNS lesions, or lesions not directly measurable), plus a PSA level equal to or greater than 5ng/ml, the company said.

Patients will receive oral Aptosyn 250 mg twice daily, oral estramustine 280 mg three times daily on days 1-5 of each 21-day cycle, and intravenous Taxotere on day 2 of each 21-day cycle. In the absence of disease progression or unacceptable toxicity, patients may continue on therapy for as long as their disease responds to treatment, the company said.

The study's endpoints are to determine the time to objective disease progression, the response rate (objective and post-therapy changes in PSA response) and the duration of response (objective and post-therapy changes in PSA).

The study will also examine the overall toxicity of the combination regimen in men with HRPC and estimate their overall survival.

A previous CALGB phase II study of docetaxel and estramustine in men with HRPC achieved a PSA decline of more than 50% in 68% of patients, and approximately 50% had an objective response, the company said. Median time to objective progression was 11 months. Results of a second phase II study with the same combination regimen showed a greater than 50% PSA decline in 71% of patients, and a measurable disease response rate of 47%.

Aptosyn is a selective apoptotic antineoplastic drug (SAAND), a new class of compounds discovered and being developed by Cell Pathways.

* * *

Attenuon LLC, a San Diego-based private pharmaceutical company said it has begun a phase I trial of ATN-161, a cancer treatment derived from a fragment of a human protein.

The phase I trial is expected to enroll up to 36 patients with advanced solid tumors that have not responded to treatments with traditional therapies. The trial will be conducted at Fox Chase Cancer Center.

The agent is based on a discovery by Donna Livant, of the University of Michigan and is designed to work by selectively disrupting cellular signaling processes important to tumor growth and metastasis, the company said.

* * *

The Joint Commission on Accreditation of Healthcare Organizations and the **National Committee for Quality Assurance** have formed the Partnership for Human Research Protection Inc. to offer a new accreditation program that will seek to protect the safety and rights of participants in clinical trials and research programs in public and private hospitals, academic medical centers, and other research facilities in the US and abroad.

The PHRP Accreditation Program will invite organizations to demonstrate their commitment to safeguarding the interests of human research participants through engagement in the new accreditation process. Draft standards for the accreditation program are available for public

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comment at www.ncqa.org. Release of the final standards is planned for April, and accreditation reviews will begin shortly thereafter.

"We need to ensure that the invaluable efforts of researchers are matched with robust processes for protecting the volunteers that make progress possible," said NCQA President Margaret O'Kane. "By applying one set of standards across many different biomedical research settings, NCQA and JCAHO will bring their decades of expertise to bear in ensuring that protection of volunteers is paramount."

"JCAHO and NCQA have long been dedicated to improving the safety and quality of care provided to the public," said Dennis O'Leary, president of JCAHO. "This important initiative represents a major extension of our combined commitment to the public interest."

The PHRP program was designed to create a credible, objective framework for ensuring that processes are in place to inform and protect the thousands of volunteer human subjects who participate in clinical trials and other research activities every year.

"Study participants need to be able to trust the research system," said Paul Gelsinger, vice president of Citizens for Responsible Care and Research. "This joint accreditation program will go a long way toward assuring research participants that they will be well protected and thoroughly informed of any risks."

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OXiGENE Inc. (Nasdaq: OXGN, SSE: OXGN) of Watertown, Mass., said it has begun a phase I/II combination study of Combretastatin A4 Prodrug for advanced cancers of the lung, head & neck, and prostate.

In the 30-patient trial, CA4P will be combined with radiotherapy in a dose-escalating study to be conducted at Mount Vernon Hospital in London, the company said.

The trial protocol has been approved by the U.K. health regulatory authority, the Medicines Control Agency, as well as the Institutional Ethics Committee of the hospital. In the phase I/II trial, researchers plan to use MRI and CAT imaging to measure the impact of CA4P in stemming blood flow to the tumor, the company said.

The trial is designed to assess the safety, short- and long-term toxicity, maximum tolerated dose and tumor response of the combination therapy.

In addition, a 32 patient phase II study of CA4P for rare and often incurable form of thyroid cancer began at the Ireland Cancer Center at University Hospitals of Cleveland, the company said. A phase Ib trial of CA4P is also underway at the University of Pennsylvania Presbyterian Medical Center, where researchers are studying the VTA in combination with a chemotherapy drug called Carboplatin, the company said.

CA4P attacks the vasculature structure of solid tumors and other diseases characterized by the formation of aberrant blood vessels, the company said. The compound triggers a change in the shape of endothelial cells lining the blood vessels of the tumor. This in turn blocks the flow of blood to the tumor, depriving it of oxygen and nutrients.

The compound is a synthetic form of CA4, a natural substance found in the bark of the South African willow tree known as combretum caffrum, the company said. CA4 was identified and isolated in 1987 by G. Robert Pettit, director of the Cancer Research Institute at Arizona State University.

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PSMA Development Co. LLC, a joint venture of **Cytogen Corp.** (Nasdaq:CYTO) of Princeton, NJ, and **Progenics Pharmaceuticals Inc.** (Nasdaq: PGNX) of Tarrytown, NY, said it has begun a phase I trial for a prostate cancer vaccine for prostate-specific membrane antigen.

The vaccine combines the PSMA cancer antigen with an immune stimulant to induce an immune response against prostate cancer cells, the company said. The genetically engineered PSMA vaccine generated immune responses in preclinical animal testing.

"This trial is the first of a series designed to elicit potent and durable immune responses to PSMA," said Howard Scher, chief, genitourinary oncology service, Memorial Sloan-Kettering Cancer Center. "The new vaccine contains a recombinant PSMA protein that mimics the form of PSMA found on the surface of prostate cancer cells. As PSMA is uniquely found on the surface of prostate cancer cells and its expression increases with disease progression, it provides a highly attractive target for cancer immunotherapy."

PSMA Development Co. has produced a synthetic or recombinant soluble human PSMA (rsPSMA) protein in a purified form suitable for clinical testing, the company said. In the study, the rsPSMA protein is combined with a immunological stimulant, or adjuvant, to form the vaccine product

which will be administered in four subcutaneous injections over a period of eight weeks.

The trial is designed to evaluate the safety and immune-stimulating properties of the vaccine for either newly diagnosed or recurrent prostate cancer, the company said.

The joint venture is also pursuing a parallel vaccine development program that utilizes a viral vector to deliver the PSMA gene to the immune system.

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Pro-Pharmaceuticals Inc. (OTCBB: PROH) of Newton, Mass, said it is initiating a phase I trial of the Davanat drug formulation against a broader range of solid tumors.

The trial of the Davamat combination with 5-fluorouracil was approved as an investigational new drug application by FDA last year, the company said. The enhanced formula was shown in pre-clinical studies to improve the anti-cancer effectiveness of the drug, while reducing its toxicity, the company said.

Originally, the study was limited colorectal tumors, the company said. The clinical trial now will evaluate Davanat for safety and efficacy in the treatment of advanced solid tumors refractory to approved therapies.

The revised trial protocol extends to studying recurrent or metastatic solid tumors that are not responding to surgery, radiotherapy or conventional chemotherapy, the company said. Currently, 5-FU is used for different types of solid tumors, such as colorectal, breast and lung cancers.

The Davanat drug upgrade platform capitalizes on the natural property of bio-molecules to seek and attach to the surface of living cells, the company said. Once recognized, the drug combination enters the cell to target cancer cells selectively.

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RxKinetix of Louisville, Colo., said it has begun enrollment in a phase II trial of its proprietary compound, RK-0202 for oral mucositis, a side effect of cancer treatment.

The randomized, double-blind, placebo-controlled study is designed for 100 patients from 15 cancer centers in the US, the company said. The objectives are to test the impact of RK-0202 on the incidence and severity of oral mucositis in patients undergoing radiotherapy for head and neck cancer.

"The study represents a logical outcome of extensive laboratory development as well as a recently-completed phase I trial," said Douglas Peterson of the University of Connecticut Health Center.

Should the results of this trial be positive, RxKinetix said it would begin an additional phase II trial in bone marrow and stem cell transplant patients. RK-0202, based on the RxKinetix ProGelz technology, is comprised of the antioxidant N-acetylcysteine in a polymer matrix, the company said.

Deals & Collaborations:

Corixa, Glaxo To Develop Solid Tumor Vaccines

(Continued from page 1)

Biologicals entered into a cancer vaccine collaboration agreement involving the development of solid tumor vaccines.

Following expiration of the funded research period for the cancer fields under the companies' multi-field vaccine discovery collaboration and license agreement, the new agreement extends the companies' collaborative efforts into vaccine development and potential proof of principle clinical trials.

Under the agreement, Corixa will receive a worldwide exclusive license to develop a vaccine candidate for prostate cancer and a vaccine candidate for breast cancer.

Corixa will be responsible for providing resources and development funding of up to $32 million to complete proof of principle clinical studies over a period of time in excess of five years. This funding will be used to pay for Good Manufacturing Practice grade material, production and clinical trials for prostate and breast vaccine development efforts.

In a related agreement, Corixa will acquire vaccine and antibody development rights to all ovarian cancer antigens, whose discovery resulted from the multi-field agreement, as well as all cancer diagnostic rights and T cell adoptive cancer immunotherapy rights, for all Corixa discovered antigens in breast, prostate, colon and ovarian cancer fields.

In another development, Corixa and **Purdue Pharma L.P.** of Stamford, Conn., said Corixa has licensed to Purdue an antigen for the treatment of a female reproductive tract cancer.

Purdue said is exercising its option to license the Corixa antigen under the terms of a September 2000 agreement whereby both companies agreed to develop therapeutic antibodies directed against

antigens identified by the Corixa discovery programs.

Under the agreement, Corixa would receive a $2.5 million license fee, additional success-based milestones, and royalties on product sales, the company said.

Purdue would pay for development and commercialization of a monoclonal antibody based on the Corixa antigen and would retain worldwide rights with an associated company.

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Diagnostic Products Corp. (NYSE: DP) of Los Angeles said it was granted a license to develop and commercialize diagnostic assays based on two prostate-specific proteins for the screening, detection and monitoring of prostate and other cancers by **Compugen Ltd.** (Nasdaq: CGEN) of Tel Aviv.

The agreement couples the Compugen discoveries of a PSA-linked molecule and an hK2-linked molecule, with the DPC ability and history in developing, manufacturing and marketing diagnostic immunoassay-based products worldwide, the company said.

Under the agreement, DPC obtained the exclusive right to develop and commercialize the Compugen prostate-specific proteins for cancer immunodiagnostics, the company said.

In exchange, Compugen will receive undisclosed milestone payments and royalties based on the commercialization of its intellectual property, including the sales by DPC of any immunoassay-based products.

The two prostate-specific proteins are encoded by alternative mRNA splice variants of the genes for prostate-specific antigen and a related protein, human kallikrein 2, the company said. PSA and human kallikrein 2 are closely related products of human kallikrein genes KLK3 and KLK2.

"Our approach incorporates the power of the most advanced computational technologies into molecular biology, improving the identification of drug targets and diagnostic markers, thereby increasing the probability of success in drug discovery and development," said Mor Amitai, president and CEO of Compugen Ltd.

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ImmunoGen Inc. (Nasdaq:IMGN) of Cambridge, Mass., said it has regained the development and commercialization rights for cantuzumab mertansine (huC242-DM1), an anticancer product candidate.

In 1999, the company licensed these rights to SmithKline Beecham, which later became **GlaxoSmithKline**.

Cantuzumab mertansine has been studied in phase I trials and found to be well tolerated, the company said. Initial evidence of biological activity also has been reported.

ImmunoGen previously announced that GlaxoSmithKline had notified the company that advancement of cantuzumab mertansine into phase II studies was dependent on renegotiation of the product license agreement. Since then, the companies have been in negotiations.

"We have determined that it is not in the best interests of ImmunoGen to enter into a revised agreement with GlaxoSmithKline," said Mitchel Sayare, ImmunoGen Chairman and CEO. "We are excited about the prospects of licensing cantuzumab mertansine to a new marketing partner that would initiate a broad phase II program for this important product candidate."

No payments were made by either company for the return of the product rights to ImmunoGen. ImmunoGen holds the Investigational New Drug application (IND) for cantuzumab mertansine and has rights to all clinical data generated in the phase I studies. The two companies will work together to ensure a smooth transition of all study data.

Cantuzumab mertansine is a Tumor-Activated Prodrug (TAP) compound developed by ImmunoGen. It is composed of the humanized antibody huC242 and the cytotoxic agent DM1.

The huC242 antibody binds specifically to the CanAg antigen present in a number of cancers including colorectal, pancreatic, and gastric cancers as well as certain non-small-cell lung cancers, the company said.

Cantuzumab mertansine is designed to deliver the highly potent cell-killing agent DM1 specifically to cancer cells using the huC242 antibody as a targeting vehicle, the company said.

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Mentor Corp. (Nasdaq:MNTR) of Santa Barbara, Calif., said it has reached a nonexclusive agreement with **Best Medical** of Springfield, Va., to distribute its Palladium-103 brachytherapy seeds for prostate cancer.

Best Medical manufactures and directly distributes Pd-103, I-125, Ir-192, Au-198 and other isotopes and products for the brachytherapy market, the company said.

"Best's patented double wall seed design,

excellent visualization, and 5mm length make it a unique and valuable seed with many clinical benefits," said Christopher Conway, president and CEO of Mentor.

* * *

Morphotek Inc of Exton, Penn., said it has signed a research agreement with **Abgenix Inc.** of Fremont, Calif., to use its proprietary Morphodoma technology for the development of high-titer cell lines for the manufacturing of Abgenix fully human monoclonal antibody product candidates.

Abgenix said it plans to apply the Morphotek technology to enhance titer yields for the manufacture of pre-clinical and, in the future, clinical material. Morphodoma technology is a platform process that can evolve antibody producer cell lines that yield project-specific antibodies with increased antigen binding affinity and specificity, the company said.

The technology also generates sublines with enhanced titer yields that are suitable for scaleable commercial manufacturing.

Under the agreement, Morphotek will receive an upfront research payment and research milestones upon successful achievement of program goals, the company said.

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PBL Therapeutics, of Piscataway, NJ, said it has been awarded $1.38 million from the National Cancer Institute to enable the company to continue commercialization of one of its novel and proprietary technology platforms.

The company will collaborate with the Robert Wood Johnson Medical School and the New Jersey Medical School of the University of Medicine & Dentistry of New Jersey.

PBL Therapeutics is producing the next generation of interferon molecules, ultra interferons, which can be 25 to 30 times more potent than the interferons currently used in therapy.

PBL Therapeutics has also developed its Sustained-Release Protein Delivery technology to deliver interferon directly to tumors and release the drug slowly over time.

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SRI International of Menlo Park, CA, said that together with project collaborators **Memorial Sloan-Kettering Cancer Center** and **Southern Research Institute** it has licensed exclusive worldwide rights to PDX (10-propargyl-10-deazaaminopterin), a proprietary phase II oncology drug, to **Allos Therapeutics Inc.** (Nasdaq:ALTH).

Allos said it plans to expedite clinical development of the agent for non-small cell lung cancer.

Under the agreement, Allos has made an upfront payment, the collaborators said. Allos would also pay future fees based on the achievement of certain development milestones and would pay royalties on future sales.

Allos is responsible for all future development activities and expenses, and is solely responsible for all commercialization activities.

PDX, an inhibitor of dihydrofolate reductase, is an anti-folate with expected superior potency and side effect profile relative to methotrexate and related anti-folates, the collaborators said.

PDX was first synthesized by SRI International medicinal chemists as an improved analog of edatrexate, an earlier anti-folate developed by SRI International and MSKCC. Preclinical development was performed by MSKCC and Southern Research Institute.

All clinical trials have been carried out by the Experimental Therapeutics Center at MSKCC. Significant activity was shown in a completed phase II study of PDX as a single agent in 39 highly pretreated patients with non-small cell lung cancer, the collaborators said.

Clinical trials at MSKCC include single-agent studies in Non-Hodgkin's lymphoma (phase I) and mesothelioma (phase II), and a combination study with docetaxel in non-small cell lung cancer (phase I).

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Variagenics Inc. (Nasdaq:VGNX) of Cambridge, Mass., said it has granted a worldwide license relating to its methylenetetrahydrofolate reductase patent rights to Celera Diagnostics, a joint venture between the **Applied Biosystems Group** (NYSE:ABI) and the **Celera Genomics Group** (NYSE:CRA) of **Applera Corp.**

Under the agreement, Variagenics has granted Celera Diagnostics worldwide non-exclusive rights to commercialize products for the detection of MTHFR polymorphisms for applications including assessment of thromboembolic disease risk (including stroke and myocardial infarction), the company said.

The products would be sold in the form of analyte specific reagents and later as in vitro diagnostic devices, the company said.

Variagenics retains the rights to develop pharmacogenomic applications in oncology and other

disease areas.

The MTHFR patent rights were acquired from McGill University by Variagenics in 1999.

Since then, the company and McGill University have collaborated in the discovery and development of pharmacogenomic markers related to the gene, the company said.

Research studies associate variations in the MTHFR gene with diseases including cancer, the company said.

Product Approvals & Applications:

FDA Approves Gleevec For First-Line CML Treatment

The Food and Drug Administration approved Gleevec (imatinib mesylate, Novartis) for first-line treatment of adult patients with newly diagnosed Philadelphia chromosome-positive (Ph+) chronic myeloid leukemia.

The FDA approval followed a priority review and was based on 12-month data from a large head-to-head study comparing Gleevec with a combination of interferon-alpha and cytosine arabinoside (IFN/Ara-C), a traditional treatment for CML.

In this study, patients treated with Gleevec–given orally at 400 mg per day–were nine times more likely to achieve a complete cytogenetic response compared with those treated with the combination therapy.

Gleevec significantly delayed the time to progression to the more advanced stages of CML. Follow-up in patients for this indication is limited.

"Studies have shown that response rates to Gleevec are higher when therapy is initiated earlier in the course of the disease. This approval allows newly diagnosed patients earlier access to Gleevec when the potential benefits from the drug are greatest," said David Epstein, president, Novartis Oncology.

The 12-month data used to support the approval were from the International Randomized Study of Interferon vs. STI571 (IRIS)–a head-to-head study comparing the efficacy of Gleevec with the combination therapy of IFN, a biologic, and Ara-C, a chemotherapy agent.

Updated 18-month data were presented last month at the annual meeting of the American Society of Hematology.

* * *

Millennium Pharmaceuticals Inc. (Nasdaq: MLNM) of Cambridge, Mass., said it has submitted a new drug application with FDA for marketing approval of Velcade for relapsed and refractory multiple myeloma.

Velcade is designed to block the proteasome, which is an enzyme complex in cells responsible for breaking down a variety of proteins, including many that regulate cell division, the company said.

In preclinical studies, inhibition of the proteasome has been shown to lead to the disruption of cell cycle progression, resulting in cancer cell death, the company said.

In June 2002, the treatment was granted Fast-Track status as having the potential to treat a serious, life-threatening condition and address an unmet medical need, the company said. The NDA was submitted under the provisions of Subpart H—Accelerated Approval of New Drugs for Serious or Life-Threatening Illnesses.

The filing is based on the results of the phase II SUMMIT clinical trial, a multi-center study which included 202 patients with relapsed and refractory multiple myeloma, the company said.

Millennium said it began two phase II trials with Velcade, one for metastatic colorectal cancer and another for advanced non-small cell lung cancer, the company said.

Also, the company said it has an ongoing international, multi-center, phase III (APEX) trial of the drug for multiple myeloma as well as several phase I/II trials for various hematologic and solid tumors.

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Aphton Corp. (Nasdaq:APHT) of Miami said it has received official notification that the Committee for Orphan Medicinal Products has recommended to the European Commission of the European Union that its anti-gastrin immunogen G17DT be granted orphan drug status for both pancreatic cancer and gastric cancer indications.

The documentation has been translated and forwarded to the EC, which acts on behalf of the EU countries, in the languages of English, Dutch, Finnish, French, German, Greek, Italian, Portuguese, Spanish and Swedish. Aphton expects that the recommendations of the COMP will be approved and ratified in a few weeks, the company said.

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CancerVax Corp. of Carlsbad, Calif., said FDA has granted the Company's therapeutic cancer vaccine, Canvaxin, Fast Track designation for the

post-surgical treatment of patients with metastatic melanoma.

Fast Track designation is designed to facilitate the development and expedite the review of new drugs that are intended to treat serious or life-threatening conditions and that demonstrate the potential to address unmet medical needs for those conditions.

The Canvaxin vaccine is being evaluated in two international, randomized, double-blind, placebo-controlled, phase III trials for the post-surgical treatment of patients with Stage III or Stage IV melanoma.

The trials are currently on partial clinical hold for the enrollment of new patients while CancerVax develops information requested by the FDA related to the production, characterization and testing of the Canvaxin vaccine, the company said.

The partial clinical hold on new patient enrollment is not the result of any clinical practice or safety concerns related to Canvaxin. FDA stated that patients in the phase III trials who are already receiving the vaccine are allowed to continue to receive it, the company said.

The Canvaxin vaccine is composed of three allogeneic tumor cell lines that together express over 30 tumor- or melanoma-associated antigens.

Although the vaccine's mechanism of action has not been established, research indicates that the antigens expressed in the vaccine stimulate the body's immune system to produce cancer-fighting T cells and antibodies, the company said.

The polyvalent nature of the vaccine confers a high probability of an antigenic match with individual patients with melanoma and other solid tumors, the company said.

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Cytyc Corp. (Nasdaq: CYTC) of Boxborough, Mass., said it has received an approvable letter from FDA for its ThinPrep Imaging System.

The system uses computer imaging technology to cytotechnologists performing primary cervical cancer screening of ThinPrep Pap Test slides for the presence of atypical cells, cervical neoplasia, including its precursor lesions, and carcinoma, as well as all other cytologic criteria as defined by the Bethesda System 2001, the company said.

In the letter, FDA said the premarket approval application for the ThinPrep Imaging System is approvable subject to the FDA inspection of the Cytycmanufacturing facility, the company said.

The system is an automated imaging and review system for use with ThinPrep Pap Test slides, the company said.

It combines imaging technology to identify microscopic fields of diagnostic interest with automated stage movement of a microscope in order to make an interpretation.

Data from the clinical and clinical support studies submitted to FDA demonstrate that the use of the ThinPrep Imaging System during routine primary screening of ThinPrep Pap Test slides for all cytologic interpretations, as defined by The Bethesda System 2001, is safe and effective for the detection of cervical abnormalities.

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DraxImage Inc., a division of Draxis Health Inc. (TSX: DAX) (Nasdaq:DRAX), has received approval from FDA to market a radiotherapeutic kit for the preparation of Sodium Iodide I-131 Capsules and Oral Solution.

Sodium Iodide I-131 is indicated for the treatment of both thyroid cancer and hyperthyroidism.

"This is the first new formulation of Sodium Iodide I-131 available to the Nuclear Medicine community in over 20 years," said Richard Flanagan, president of DraxImage. "In addition, it is the first such product on the market that allows physicians and radiopharmacists to prepare an FDA approved I-131 gelatin capsule or oral solution, thus allowing both dose and the dosage form to be tailored to meet the specific treatment plan designed for each individual patient."

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Teva Pharmaceutical Industries Ltd. (NASDAQ: TEVA) of Jerusalem said FDA has granted tentative approval for its abbreviated new drug application for carboplatin injection, 50 mg, 150 mg, and 450 mg for cancer. Carboplatin injection is the generic equivalent of the Bristol-Myers Squibb Paraplatin, the company said.

The brand product has annual sales of approximately $ 513 million, the company said.

The U.S. patent, which protects the brand product from generic competition, is scheduled to expire on April 14, 2004, the company said. Market entry by Teva prior to expiration of the patent depends on the successful outcome of the challenge to the validity of that patent.

A District Court decision adverse to Teva on a threshold issue in that challenge is currently on appeal to the U.S. Court of Appeals for the Federal Circuit.

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