THE TOOLS

Approved Drugs

■ American Pharmaceutical Partners, Inc., and American Bioscience, Inc., (Schaumburg, Ill.) announced that the U.S. Food and Drug Administration (FDA) has approved **Abraxane™ for Injectable Suspension** (paclitaxel protein-bound particles for injectable suspension) (albumin-bound) in metastatic breast cancer. Abraxane is indicated for the treatment of breast cancer after failure of combination chemotherapy for metastatic disease or relapse within six months of adjuvant chemotherapy. Prior therapy should have included an anthracycline unless clinically contraindicated.

Abraxane is first in a new class of "protein-bound particle" drugs made possible by ABI's nanoparticle albumin-bound (nab™) technology.

■ GlaxoSmithKline (Philadelphia, Penna.) announced that the FDA has approved a supplemental Biologics License Application (sBLA) for expanded use of **Bexxar® Therapeutic Regimen** (Tositumomab and Iodine I 131 Tositumomab). The expanded indication will make Bexxar an earlier option for patients with relapsed low-grade or follicular non-Hodgkin's lymphoma. The Bexxar Therapeutic Regimen is now indicated for the treatment of patients with CD 20 antigen expressing relapsed or refractory, low-grade, follicular, or transformed non-Hodgkin's lymphoma, including patients with Rituximab-refractory non-Hodgkin's lymphoma.

■ **Clolar™** (clofarabine) (Genzyme Corp., Cambridge, Mass.) has been granted orphan drug designation by the FDA for adult and pediatric acute lymphoblastic leukemia. The drug is indicated for the treatment of pediatric patients 1 to 21 years old with relapsed or refractory acute lymphoblastic leukemia after at least two prior regimens.

■ The FDA has approved CANADA-QLT, Inc.'s (Vancouver, Canada) **Eligard® 45 mg** (leuprolide acetate for injectable suspension) six-month formulation, for the palliative treatment of advanced prostate cancer. Eligard depot is a member of a class of drugs known as luteinizing hormone-releasing hormone agonists. The drug works by lowering the levels of testosterone in the body, which may result in a reduction of symptoms related to the disease.

■ Amgen Inc., (Thousand Oaks, Calif.) announced FDA approval for **Kepivance™** (palifermin) for severe oral mucositis in cancer patients undergoing bone marrow transplants. Kepivance is a recombinant human keratinocyte growth factor that works at the cellular level to help protect patients with hematologic malignancies undergoing high-dose chemotherapy and/or radiation followed by bone marrow transplant from severe oral mucositis.

■ **TheraCIM hR3**, the EGF receptor monoclonal antibody, (YM BioSciences, Inc., Mississauga, Ontario) has received FDA orphan drug designation for the treatment of glioma. TheraCIM hR3 (nimotuzumab) is a humanized monoclonal antibody that targets the epidermal growth factor receptor (EGFr).

Drugs in the News

■ Schering AG (Berlin, German) has announced that the FDA has issued an approval letter for **Bonefos®** (clodronate), an oral non-amino bisphosphonate intended to reduce the occurrence of bone metastases in the post-surgical (adjuvant) treatment of breast cancer patients.

■ The FDA has given fast track designation to **HuMax™-CD20** (Genmab A/S, Copenhagen, Denmark) for chronic lymphocytic leukemia (CLL) for patients who have failed fludarabine therapy. This patient group includes those who are refractory to available treatment. HuMax-CD20 is currently in two Phase I/II studies to treat CLL and non-Hodgkin's lymphoma.

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Fast Facts

Health Plan Enrollment Among Covered Workers, By Plan Type

Year	Conventional Health Plans	Health Maintenance Organizations (HMOs)	Preferred Provider Organization (PPO)	Point-of-Service (POS)
1988	73%	16%	11%	0%
1993	46%	21%	28%	7%
1996	27%	31%	28%	14%
1998	14%	27%	35%	24%
1999	9%	28%	38%	25%
2000	8%	29%	42%	21%
2001	7%	24%	46%	23%
2002	4%	27%	52%	18%
2003	5%	24%	54%	17%
2004	5%	25%	55%	15%

Source: Gabel, et al. *Health Affairs*, September/October 2004, Vol. 23, Issue 5, pp. 200-209.

THE TOOLS

■ Myriad Genetics, Inc. (Salt Lake City, Utah) has submitted an Investigational New Drug (IND) application to the FDA to begin a Phase I clinical study with its pro-apoptotic cancer drug candidate, **MPC-6827**. The study is designed to evaluate the safety and pharmacokinetic profile of MPC-6827 in patients with advanced solid tumors, in an escalating dose regimen.

Myriad Genetics has also submitted an IND application to the FDA to begin a Phase I human clinical trial with **MPC-2130** (previously referred to as MPI-176716), a broad-acting inducer of apoptosis in cancer cells.

The Phase I clinical trial is designed to evaluate the safety and pharmacokinetic profile of MPC-2130 in patients with advanced metastatic tumors or blood cancers, as well as refractory cancer that has progressed despite previous chemotherapy. In preclinical studies MPC-2130 demonstrated significant cancer cell killing activity in ovarian cancer, prostate cancer, Burkitt's lymphoma, and T-cell lymphoma.

■ Procyon Biopharma, Inc. (Montreal, Canada) has filed an IND application with the FDA in order to initiate a pilot trial followed by a North American Phase IIb clinical trial, with **PCK3145**, its anti-metastatic prostate cancer drug.

■ The FDA has given fast track designation to **Phenoxodiol** (Novegen, Sydney, Australia). The anti-cancer, investigational drug is intended for use in patients with hormone-refractory prostate cancer. Phenoxodiol in intravenous form was granted fast track status by the FDA in November 2004 for its intended use in patients with ovarian cancer.

■ Tapestry Pharmaceuticals, Inc. (Boulder, Colo.) has submitted an IND application to the FDA for its novel taxane, **TPI 287**. In preclinical testing TPI 287 demonstrated the ability to inhibit tumor cell growth in a number of in vitro cell lines and has shown superior inhibition to tumor burden in certain animal xenograft models when tested against standard comparative agents.

The Phase I study of TPI 287 is designed to evaluate the safety and pharmacokinetic profile of the compound in patients with recurrent and/or refractory cancer in a carefully controlled dose-escalating regimen.

■ The FDA has accepted Millennium Pharmaceuticals, Inc.'s (Cambridge, Mass.) supplemental new drug (sNDA) application for **Velcade®** (bortezomib) and also granted Velcade priority review designation for the treatment of patients with multiple myeloma who have received at least one prior therapy.

The sNDA submission was based primarily on the results of the Phase III APEX confirmatory study that compared Velcade to high-dose dexamethasone. The APEX trial was halted one year early after an independent data monitoring committee concluded the findings of a pre-specified interim analysis showed a statistically significant improvement in time-to-disease progression in favor of Velcade.

■ Abbott (Abbott Park, Ill.) has submitted an NDA for its oral agent **Xinlay™** (atrasentan). The company is seeking approval of Xinlay for the treatment of metastatic hormone-refractory prostate cancer. Xinlay is an investigational, oral, once-daily, non-hormonal, non-chemotherapy, anticancer agent that belongs to a class of compounds known as selective endothelin-A receptor antagonists (SERA™). Xinlay is currently being studied in several stages of prostate cancer, and is being evaluated in combination trials with approved treatments for prostate cancer.

■ Exelixis, Inc. (South San Francisco, Calif.) has submitted an IND for **XL880**, a novel, orally administered small molecule for the treatment of cancer. In pre-clinical studies, XL880 demonstrated potent inhibition of the Met and VEGFR2 (KDR) receptor tyrosine kinases which play synergistic roles in promoting tumor growth and angiogenesis. Pending FDA clearance, Elelixis intends to initiate a Phase I clinical trial in the first quarter of 2005.

Products and Devices in the News

■ Applied Imaging Corp. (San Jose, Calif.) announced that the FDA has granted 510(k) clearance to market an automated application for Chromosome X and Chromosome Y analysis in bone marrow transplant patients. The company's **CytoVision® System** will use this application to enumerate tests that are important indicators in evaluating the viability of opposite-sex bone marrow transplants.

■ FDA clearance has been granted to Fischer Imaging Corporation's (Chicago, Ill.) **MammoTest Breast Biopsy System**. A platform for interstitial breast brachytherapy, the system offers a less invasive, four-day alternative to traditional six-week external beam radiation therapy.

Interstitial brachytherapy involves precise, X-ray-guided insertion of catheters to irradiate and control malignant tumors in the breast using the MammoTest digital imaging system.

■ The FDA has approved **Mucotrol,™** an oral gel wafer, (Belcher Pharmaceuticals, Inc., Largo, Fla.) for the management of oral mucositis/stomatitis. The FDA granted 510(k) approval for the marketing of Mucotrol as a medical device. Approximately 300,000 cancer patients in the U.S. suffer from mucositis associated with cancer treatments.

■ Abbott's **UroVysion™ DNA probe assay** (Abbott Laboratories, Abbott Park, Ill.) has received FDA approval for use as an aid in the initial diagnosis of bladder cancer in patients with hematuria suspected of having bladder cancer. With this approval, UroVysion represents the first gene-based test available for both diagnosis and monitoring of bladder cancer reoccurrence. The test is designed to detect genetic changes in bladder cells in urine specimens using a proprietary technology known as fluorescence in situ hybridization or FISH.