THE TOOLS

[Approved Drugs]

■ The Food and Drug Administration (FDA) has approved Novartis Pharmaceuticals Corporation's (East Hanover, N.J.) **Gleevec® (imatinib mesylate)** for treatment of the solid tumor cancer dermatofibrosarcoma protuberans.

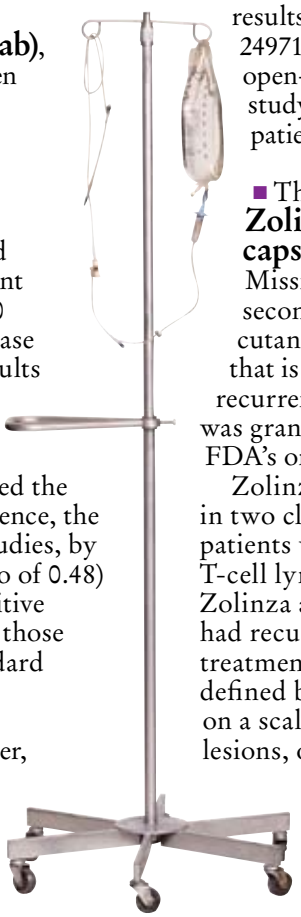
The FDA has also approved the drug for treatment of four blood diseases: 1) relapsed/refractory Philadelphia Chromosome-positive Acute Lymphoblastic Leukemia; 2) certain forms ofmyelodysplastic/ myeloproliferative diseases; 3) hypereosinophilic syndrome/ chronic eosinophilic leukemia; and 4) aggressive systemic mastocytosis.

■ Genentech, Inc. (South San Francisco, Calif.) announced that the FDA has approved **Herceptin® (trastuzumab)**, as part of a treatment regimen containing doxorubicin, cyclophosphamide, and paclitaxel, for the adjuvant treatment of HER2-positive node-positive breast cancer.

FDA approval was based on data from an interim joint analysis of more than 3,500 patients enrolled in two Phase III clinical trials. These results showed that the addition of Herceptin to standard adjuvant therapy significantly reduced the risk of breast cancer recurrence, the primary endpoint of the studies, by 52 percent (or a hazard ratio of 0.48) in women with HER2-positive breast cancer, compared to those patients who received standard adjuvant therapy alone.

■ Sanofi-aventis (Bridgewater, N.J.) announced FDA approval of **Taxotere® (docetaxel) Injection Concentrate** in combination with cisplatin and fluorouracil for the induction treatment of patients with inoperable locally advanced squamous cell carcinoma of the head and neck.

The FDA based its decision on results from the EORTC 24971/TAX 323 Phase III, open-label, randomized study, which enrolled 358 patients.



■ The FDA has approved **Zolinza™ (vorinostate) capsules** (Pantheon, Inc., Mississauga, Ontario) as second-line therapy for cutaneous T-cell lymphoma that is refractory or recurrent. The drug's approval was granted as part of the FDA's orphan drug program.

Zolinza was evaluated in two clinical trials of 107 patients with cutaneous T-cell lymphoma who received Zolinza after their disease had recurred following other treatments. A response, defined by improvements on a scale that scores skin lesions, occurred in 30 percent of patients who received Zolinza and lasted an average of 168 days.

Fast Facts

Top 10 Medical Innovations for 2007

1. Cancer vaccines
2. Designer therapeutics using selective receptor antagonists
3. Neurostimulation for psychiatric disorders
4. Optical coherence tomography
5. Bronchial thermoplasty
6. Ranibizumab (a humanized therapeutic antibody fragment for the treatment of age-related macular degeneration)
7. Endografting
8. Targeted cancer therapies
9. Left Ventricular Assist System.
10. Convection-enhanced delivery of drugs

Source: Cleveland Clinic, Cleveland, Ohio. Available online at: *www.clevelandclinic.org/innovations.*

[Drugs in the News]

■ Mayne Pharma (USA) Inc. (Paramus, N.J.) announced the launch of **Epirubicin Hydrochloride for Injection (lyophilized) 50mg/vial (30mL)**. Epirubicin Hydrochloride for Injection is indicated as a component of adjuvant therapy in patients with evidence of axillary node tumor involvement following resection of primary breast cancer. The company intends to follow up in the near future with the addition of Epirubicin Hydrochloride for Injection (lyophilized) packaged in a 200mg/vial (100mL vial).

■ The monoclonal antibody **MORAb-009** (Morphotex® Inc., Exton, Pa.) has been granted FDA orphan drug designation for the indication of pancreatic cancer. MORAb-009 is an antibody that recognizes mesothelin, a cell surface glycoprotein over-expressed in a number of cancers.

■ Allos Therapeutics, Inc. (Westminster, Colo.) announced that the FDA has granted fast track designation to **PDX (pralatrexate)** for the treatment of patients with T-cell lymphoma. PDX is a novel, small

continued on page 16

PHOTOGRAPH/COMSTOCK

molecule chemotherapeutic agent that inhibits dihdrofolate reductase, a folic acid dependent enzyme involved in the building of DNA and other processes.

■ **RTA 744** (Reata Pharmaceuticals, Inc., Dallas, Tex.) has been granted FDA orphan drug designation for the treatment of malignant gliomas.

RTA 744 is a novel anthracycline derivative that crosses the blood-brain barrier and shows potential for the treatment of primary and metastatic brain cancers. RTA 744 is currently being tested in a Phase I clinical trial in patients with advanced primary brain cancers at three leading U.S. neuro-oncology centers. Advanced clinical trials of this agent in primary brain cancers are planned to begin in 2007.

■ The FDA has granted fast track designation to **STA-4783** (Synta Pharmaceuticals Corp., Lexington, Mass.) for the treatment of metastatic melanoma. STA-4783 is an investigational, novel, small molecule drug candidate that induces a stress response in a wide variety of cancer cell types. The agent performed well in a recent Phase IIb trial in advanced metastatic melanoma where, when combined with paclitaxel, it met a primary endpoint of increasing overall progression-free survival.

■ **Talactoferrin Alfa (talactoferrin or TLF)** (Agennix, Houston, Tex.) has received FDA orphan drug designation for the treatment of renal cell carcinoma. The company's oral formulation of TLF is currently in Phase II clinical development for renal cell carcinoma.

PHOTOGRAPH/PHOTODISC

Agennix also recently received FDA fast track designation for the company's clinical development programs for oral TLF solution in first-line non-small cell lung cancer. The company will seek a special protocol assessment from the FDA for a large pivotal Phase III trial in non-small cell lung cancer, and expects to initiate this trial in the first half of 2007.

■ Wyeth Pharmaceuticals (Madison, N.J.) submitted a new drug application (NDA) to the FDA for **Torisel™ (temsirolimus)**. The company is seeking an indication for the treatment of patients with advanced renal cell carcinoma.

Torisel is an investigational drug that specifically inhibits the mTOR (mammalian target of rapamycin) kinase, a protein that regulates cell proliferation, cell growth, and cell survival. If approved, Torisel would be the first agent in this class indicated for the treatment of a cancer.

■ Exelixis, Inc., (South San Francisco, Calif.) announced submission of an investigational new drug (IND) application to the FDA for **XL281**, a novel anticancer compound designed to potently inhibit the RAS/RAF/MEK/ERK signaling pathway.

Mutational activation of RAS occurs in about 30 percent of all human tumors, including non-small cell lung cancer, pancreatic, and colon cancer. XL281 is a specific inhibitor of RAF kinases, including the mutant form of B-RAF, which is activated in 60 percent of melanomas, 24 to 44 percent of thyroid cancers, and 9 percent of colon cancers.

[Devices in the News]

■ **Intact® Advance** (Intact Medical Corp., Natick, Mass.) has FDA 510(k) clearance for the complete or partial removal of an imaged abnormality. The wand (available in 12mm, 15mm, and 20mm diameter sizes) features a precision cutting blade for positioning the wand within the breast for optimal access to the lesion of interest.

The Intact Advance wand simplifies the Intact® Breast Lesion Excision System by reducing the number of steps for specimen capture and the eliminating the use of skin spreaders for wand insertion.

■ RITA Medical Systems, Inc. (Fremont, Calif.) announced that the company's **Habib 4X Laparoscopic® Resection Device** received 510(k) marketing clearance from the FDA. The device coagulates a surgical resection plane to facilitate a fast dissection with limited blood loss. The Habib 4X Laparoscopic resection device is designed to work on the current RITA RFA platform of 1500X™ Generators.

■ The FDA has granted 510(k) marketing clearance to BioLucent, Inc. (AlisoViejo, Calif.) for its **SAVI™ Applicator**, a multi-catheter, single-entry approach to breast brachytherapy. SAVI combines the tissue-sparing dosimetry of interstitial brachytherapy with the single-entry ease of intracavity brachytherapy. This new hybrid approach is designed to give radiation oncologists and physicists more flexibility in treatment planning.

■ TriPath Imaging, Inc., and Ventana Medical Systems, Inc. (Burlington, N.C., and Tucson, Ariz.), announced FDA 510(k) clearance for the **Ventana Image Analysis System (VIAS™)** when used with tissues stained for p53. P53 is a tumor suppressor biomarker which is employed by pathologists as an adjunct to histopathology and is used to assist with diagnosis and the prognostic assessment of cancer.

In 2005 and 2006, the companies announced 510(k) clearances for VIAS when used with the Ventana Estrogen Receptor (ER), Progesterone Receptor (PR), Ki-67, and HER-2/neu assays.