IN THE NEWS/

LILLY AND SHAMAN TEAM UP

Eli Lilly (Indianapolis, IN) and **Shaman Pharmaceuticals** (San Carlos, CA) will jointly develop antifungal drugs drawn from the knowledge of native healers. Lilly will make a $4-million equity investment in Shaman and will fund a four-year renewable research-and-development collaboration for an option to obtain exclusive worldwide marketing rights to certain identified antifungal products. Shaman will identify, isolate, and provide initial screening for certain plant extracts. Lilly will further investigate resulting compounds and then develop them.

•**SmithKline Beecham** (SB, Philadelphia, PA) and **Idec Pharmaceuticals** (La Jolla, CA) have entered into a product development and marketing agreement to commercialize therapeutic products based on "primatized" anti-CD4 antibodies, with the initial application rheumatoid arthritis. Primatized antibodies are derived from human and monkey antibodies and are structurally similar to human antibodies. Idec will receive milestone payments that could reach over $30 million, as well as royalties on sales of potential products. Idec will be responsible for preclinical development, initial supplies of clinical-grade antibody, and early clinical studies. SB will carry out later stage development efforts.

•**Ono Pharmaceutical** (Osaka) has purchased 500,000 shares of **Telios Pharmaceuticals** (San Diego, CA) common stock at $10 a share. The investment represents the exercise of a right granted to Ono under an agreement entered into by Telios and Ono in August 1990. The companies are collaborating on the development of Decorin, which treats fibrotic diseases, and OcuNex, which treats corneal damage associated with severe dry eye.

•**Nichimen**, a major Japanese trading company, has made a strategic investment of $1 million in **SciClone Pharmaceuticals** (San Mateo, CA), purchasing 73,800 shares of restricted common stock at a premium price of $13.55 a share. Nichimen provides services to SciClone that support its ongoing relationships with Japanese pharmaceutical companies.

•**Bio-Imaging Technologies** (BIT, W. Trenton, NJ) has signed new project contracts—with a combined value of over $500,000—with **Warner-Lambert** (Morris Plains, NJ) and with **Cytogen** (Princeton, NJ). BIT uses advanced medical-image processing technology to accelerate the clinical development and regulatory review of new drugs and medical devices. Warner-Lambert selected BIT to assist in the preparation of clinical data summaries in relation to a future regulatory submission. Cytogen selected BIT to assist in an image-processing project to support one of its clinical-development programs.

•**Exogene** (Monrovia, CA) announced the extension of a research agreement with **SmithKline Beecham** (SB) for a second year. The research program has been investigating the utility of Exogene's hemoglobin technology to improve the manufacture of certain SB products. Exogene's proprietary technology includes a bacterial hemoglobin to enhance cell growth and improve the manufacture of products from cultured cells.

•**Organogenesis** (Canton, MA) announced that funding due from **Eli Lilly** under an agreement for the development of Graftartery, a product designed as a replacement for human arteries, has been deferred as of October 31. Lilly has funded about $16.2 million since the inception of the program and is obligated to fund an additional $2.1 million if certain milestones are achieved. Organogenesis said that the product has been modified based upon results from preclinical evaluation, resulting in a delay in the achievement of the milestone regarding animal trials to demonstrate extended graft patency.

•**Hoffmann-La Roche** (Nutley, NJ) and **Roche Molecular Systems**, a wholly owned subsidiary of Roche, have filed suit against **Promega** (Madison, WI), alleging breach of a license agreement regarding the manufacture and sale of nTaq polymerase, a purified thermostable enzyme widely used in biotech research. Roche claims that Promega has violated the terms of a July 1990 license agreement with **Cetus** (Emeryville, CA) through which Cetus allowed Promega to make and sell nTaq polymerase for applications other than nucleic-acid amplification technologies, including PCR. Roche acquired rights to Cetus's nTaq polymerase and PCR technolgy last year.

•**Velos Group** (Bethesda, MD) is suing **Centocor** (Malvern, PA) for $115.2 million in damages for allegedly breaching a 1987 licensing agreement. Velos charged that Centocor's recent $100-million alliance with **Eli Lilly** violated provisions of its licensing pact with Centocor. Velos developed some of the antibodies and technology used by Centocor in developing Centoxin, its sepsis product.

•**Pharmos** (New York) announced that it has completed its $65-million merger of **Pharmatec**, a firm developing a unique carrier technology for the delivery of drugs to the brain. Pharmatec will issue 13.4 million shares of a new class of convertible common stock to Pharmos shareholders, in exchange for all of the 17.5 million issued and outstanding shares of Pharmos stock. Pharmos will focus on the development and commercialization of ophthalmic and central-nervous-system drugs.

Pharmos has also completed its acquisition of **Xenon Vision**, a research-based pharmaceutical company with several patented drugs to treat ophthalmic disorders. Pharmos will acquire all of the outstanding equity securities of Xenon, while Xenon shareholders will receive 2 million shares of Pharmos common stock.

•**Genzyme** (Cambridge, MA) and **IG Laboratories**, its majority-owned genetic-testing subsidiary, announced the completion of the $40-million acquisition by Genzyme of **Vivigen** (Santa Fe, NM), a genetic-testing lab. Vivigen shareholders will receive .374 shares of Genzyme common stock for each share of Vivigen common stock outstanding. Vivigen will become a wholly owned subsidiary of Genzyme and will be managed by IG Labs.

•**DNX** (Princeton, NJ) has signed a letter of intent to acquire for $10 million all of the oustanding shares of **Hazleton-France** (Lyon, France), a preclinical-testing company. DNX plans to combine the company with its subsidiary **Pharmakon Research International** (Waverly, PA), also a preclinical-testing firm. Hazleton-France, known for its continuous-infusion therapy techniques, was profitable last year on sales of $15 million.

•**MedImmune** (Gaithersburg, MD) has signed a letter of intent with **Connaught Laboratories** (Swiftwater, PA) to repurchase for $4.5 million all product rights to CytoGam, a polyclonal-antibody product developed by MedImmune and indicated for prevention of primary cytomegalovirus (CMV) disease associated with kidney transplantation. Med-

Immune has filed an application for CytoGam for an expanded indication for prevention of CMV disease in all solid organ transplants, and the company is currently conducting phase I trials of CytoGam for prevention of CMV disease in AIDS patients.

•For $1.3 million, **Life Technologies** (Gaithersburg, MD) has acquired exclusive rights to sell **Telios Pharmaceuticals**' extracellular-matrix research reagents for research purposes, but not for any diagnostic or therapeutic use. Telios's sales of research products for the nine months ended September 30 were $817,000.

•**Univax Biologics** (Rockville, MD) and **Rh Pharmaceuticals** (Winnipeg, Manitoba) have concluded an agreement that provides Univax with exclusive marketing rights for Rh Pharmaceuticals' WinRho SD in the U.S. WinRho SD is a new formulation of WinRho, a product currently sold in Canada to treat idiopathic thrombocytopenic purpura (ITP), an autoimmune disease that sharply reduces the number of platelets. Rh Pharmaceuticals has completed phase III trials of WinRho SD involving 300 adults and children with classical and AIDS-related ITP in the U.S., and Univax is assisting Rh Pharmaceuticals in the preparation of an application for regulatory approval of WinRho SD in the U.S.

The agreement also provides that Rh Pharmaceuticals will have manufacturing rights to certain Univax products currently in development, as well as exclusive marketing rights in Canada for any of Univax's products manufactured at its Canadian facility. Both firms will commit $500,000 for expansion and hyperimmune-immunoglobulin process development at Rh Pharmaceuticals' facility.

•**CoCensys** (Irvine, CA) has teamed with **Acea Pharmaceuticals** as part of a strategic plan to acquire "associate" companies that will complement CoCensys's product portfolio for the treatment of neurological and emotional disorders. Acea, which will receive 2 million shares of CoCensys's common stock, has granted CoCensys an option to acquire it within the next two years. Acea is developing proprietary compounds that target a newly discovered glycine receptor located on an excitatory receptor in the central nervous system (CNS) known as the NMDA-receptor calcium-channel complex. The compounds could have potential in regulating critical CNS functions responsible for the onset of several neurological diseases, including stroke-induced neural damage and grand mal epilepsy.

•**Interneuron Pharmaceuticals** (Lexington, MA) and **Veryfine Products** (Westford, MA) will jointly develop and market Interneuron's "muscle fatigue" sports drink. Interneuron will receive reimbursement of future development expenses and royalties on sales of the drink, while Veryfine will make and sell the product. The drink contains choline, which the body uses to make acetylcholine. Depletion of acetylcholine is thought to contribute to muscle fatigue during strenous exercise.

•**Immunomedics** (Morris Plains, NJ) announced that **NeoRx** (Seattle, WA) has dismissed its claim for breach of contract originally filed as part of a complaint by NeoRx. The claim was based on a 1988 license agreement under which Immunomedics granted NeoRx a non-exclusive license under Immunomedics' patents for NeoRx's melanoma-antibody-based imaging product. The patent infringement claim, which NeoRx has not dismissed, alleges infringement by certain of Immunomedics's imaging and therapeutic agents of NeoRx's "Radionuclide Antibody Coupling" patent.

•**BioTechnica International** (Overland Park, KS) has completed three transactions. It has reached agreement with **ABI Alfalfa** to sell Americas Alfalfa Brand alfalfa. BioTechnica believes that ABI's commitment to advanced technology and breeding techniques will guarantee that BioTechnica maintains a leading alfalfa product line for the future.

BioTechnica also acquired **Scott Seed** (New Albany, IN), a company that compliments its existing five seed divisions, both in product line and geographically. BioTechnica, furthermore, acquired the Tekamah, NE, corn and soybean production facility from **Agripro Biosciences**. BioTechnica's aim is to build a strong Midwestern U.S. distribution system for sale of seed and agricultural products to farmers.

•**Calgene** (Davis, CA) and **Stevens Industries**, a department of **Cargill**, announced an agreement for Stevens to process specialty canola for Calgene in southern Georgia. Processing of the canola crop will begin next summer. The agreement furthers Calgene's program to commercialize value-added oils and oleochemical products.

REGULATORY

Schering-Plough (Madison, NJ) and **Sandoz Pharma** (Basel, Switzerland) will co-market Leucomax granulocyte macrophage-colony stimulating factor in the U.K. The U.K. is the first European Community (EC) country to approve the product since it was recommended for approval in September by the EC's Committee for Proprietary Medicinal Products. The U.K. has approved Leucomax in hospitals for chemotherapy-induced neutropenia in cancer patients, to accelerate recovery after autologous bone-marrow transplantation, and to combat ganciclovir-induced neutropenia in AIDS patients with cytomegalovirus retinitis.

•**Vestar**'s (San Dimas, CA) AmBisome, a liposomal formulation of amphotericin B, has received full marketing approval in Germany to treat systemic fungal infections. AmBisome also has full marketing approval in the U.K., Sweden, and Ireland and is sold on a compassionate-use basis in many other countries worldwide. Currently, annualized sales of AmBisome exceed $25 million.

•**Ares-Serono Group** (Geneva, Switzerland) reported the first human birth obtained after infertility treatment with Gonal-F, the company's recombinant-human follicle stimulating hormone. The mother of the twin babies suffered from primary tubal infertility and was given Gonal-F during a phase III trial designed to assess the efficacy of Gonal-F in stimulating ovarian follicular development in women undergoing *in-vitro* fertilization and embryo transfer. To date, more than 20 pregnancies have been obtained in Europe during this trial.

•**HEM Pharmaceuticals** (Philadelphia, PA) will begin a phase II/III study of Ampligen, an RNA therapeutic, for the treatment of chronic fatigue syndrome. The study will be a randomized, double-blind, placebo-controlled trial at about 10 medical centers, involving over 200 patients. Ampligen is believed to act both by switching on enzymes that are critical to anti-viral defense mechanisms and by regulating the level of immune-system modulators.

•**Sphinx Pharmaceuticals** (Durham, NC) has initiated a phase II trial of Kynac ointment for the treatment of psoriasis. Administered topically, Kynac is designed to inhibit the activity of a family of intracellular enzymes known collectively as protein kinase C. These enzymes have been demonstrated to mediate key cellular functions involved in psoriasis, including inflammation and cell proliferation. The phase II study is a double-blind, controlled study that will evaluate 30 psoriasis patients who will be randomized and followed for six weeks.

•**Cor Therapeutics** (S. San Francisco, CA) has initiated phase II trials of Integrelin for the prevention of abrupt closure following angioplasty in patients undergoing coronary angioplasty. Also, Cor's ongoing phase II trial of Integrelin in patients undergoing treatment for unstable angina has expanded to include more than 10 clinical study sites nationwide.

•**Univax Biologics** reports that its mucoid exopolysaccharide (MEP) vaccine is capable of eliciting opsonic antibodies in healthy volunteers that react against mucoid strains of *Pseudomonas aeruginosa* that frequently colonize patients with cystic fibrosis (CF). Ultimately, Univax

plans to vaccinate non-CF volunteers who will donate plasma from which MEP antibodies will be extracted. These antibodies will be administered to CF patients in an attempt to eradicate *Pseudomonas* from their lungs.

•**LifeCell** (The Woodlands, TX) reported that AlloDerm, its processed dermal skin tissue, applied to a full-thickness burn wound had become vascularized and supported the growth of host fibroblasts, the cells necessary for wound closure. LifeCell also announced plans to expand the clinical evaluations of AlloDerm to three additional burn centers. AlloDerm evaluations are currently underway at three burn centers.

•**BioSurface Technology** (Cambridge, MA) presented results demonstrating the potential of its Acticel wound-healing dressing to promote healing in deep partial-thickness burn injuries. Acticel—a laboratory-produced human epidermal tissue grown from donor skin—is intended to serve as a temporary "living bandage." Data indicated that the average healing time observed using Acticel was 43 percent faster than the healing time observed with a standard wound-healing product called Biobrane. Also, healing time with Acticel was comparable to that observed using conventional skin grafts.

•**Quadra Logic Technologies** (Vancouver, B.C.) has begun a clinical trial in Canada of its light-activated drug, benzoporphyrin derivative (BPD), for treatment of non-melanoma skin cancer. Patients will be injected intravenously with BPD, which accumulates in cancerous cells. The cancer is then exposed to light from a medical laser to activate the drug. The trial will complement a trial already underway in the U.S.

•**Agouron Pharmaceuticals** (San Diego, CA) has commenced a phase I trial of its anti-tumor agent, AG-337. The compound is a small synthetic-chemical compound designed to inactivate thymidylate synthase, an enzyme required for the rapid proliferation of cancer cells.

•**Oxigene** (New York) has filed an investigational new drug (IND) application with the **Food and Drug Administration** (FDA, Bethesda, MD) for a novel formulation of metoclopramide to enhance the efficacy of conventional treatments for squamous-cell lung carcinoma and glioblastoma. The metoclopramide formulation improves the effectiveness of chemotherapy and radiation therapy by inhibiting a cancer cell's ability to repair its DNA and continue to proliferate. In an ongoing pilot study in Sweden, Oxigene's metoclopramide formulation was found to double one-year survival rates in patients with squamous-cell lung cancinoma.

•**Genta** (San Diego, CA) filed an IND with FDA to test a new topical corticosteroid formulation for the treatment of eczema and atopic dermatitis. The formulation, designated G-203, is a patented single-use wipe with fluocinonide, the leading corticosteroid used to treat mild inflammation. The wipe enables patients to apply the corticosteroid without touching the drug, thereby reducing secondary bacterial infections.

•**BioCryst Pharmaceuticals** (Birmingham, AL) has filed an IND with FDA for the clinical evaluation of BCX-34 for the treatment of cutaneous T-cell lymphoma. BCX-34 is an inhibitor of the enzyme purine nucleoside phosphorylase.

•**MedClone** (Los Angeles, CA) has filed a request for orphan drug designation with FDA for MAb 3E10, an anti-idiotype vaccine to treat nephritis associated with systemic lupus erythematosus. MedClone plans to start clinical trials with lupus patients using MAb 3E10 this month.

– B.J. Spalding