

Edible vaccine success

ProdiGene (College Station, TX) announced in February that its patented edible vaccine confers protection against the common transmissible gastrointestinal virus in pigs. The vaccine, produced from maize genetically modified to express antigens of the virus, is the first of its kind to demonstrate efficacy against a viral pathogen in animal trials and is expected to be commercially available for pigs in two to three years after going through the same US Department of Agriculture approval processes as traditional vaccines. Demand in agribusiness is expected to be high, says Joe Jilka, vice president of product development at ProdiGene. "Because of the perceived cost savings and labor savings, by having it in a pellet or ground meal, it will be a system that is widely adopted." The transgenic maize would be grown under rigorously controlled conditions and only used for the express purpose of vaccine production," says Jilka. KS

Elan buys Liposome

Irish drug company Elan Corp. (Dublin) has announced that it is buying biopharmaceutical company Liposome (Princeton, NJ) in a \$575 million stock swap. Liposome, which will operate as a wholly-owned subsidiary, is

focused on liposomal formulations for improved delivery of drugs, particularly therapeutics for cancer and related conditions, and the merger marks Elan's attempt to move into the oncology market. Elan is currently developing products in neurology, pain management, and advance drug-delivery systems. Donal Geaney, Elan's chair and CEO, says Liposome was attractive because of its experienced sales force, manufacturing capability, pipeline—which includes lipid derivatives of anticancer drug paclitaxel—and Abelcet, a lipid-based formulation of amphotericin B for treatment of systemic fungal infections—a profitable product already on the market. Last September, the US Food and Drug Administration rejected Liposome's request for a New Drug Application for Evacet, its liposomal formulation of doxorubicin for treatment of metastatic breast cancer, causing the company's share price to fall nearly 50% to \$8.44. Elan says it may make an additional payment of up to \$98 million to Liposome shareholders if Evacet is approved for marketing in the European Union. JG

Call for food safety body

John Krebs, chair designate of the new UK Food Standards Agency (*Nat. Biotechnol.* 17, 945), has called for the creation of an international advisory panel to address all

sides of the GM food debate, including the safety and regulation of exports, economic development, and environmental and ethical questions. Krebs made the suggestion while chairing a conference entitled "GM Food Safety: Facts, Uncertainties, and Assessment" held in Edinburgh, UK, between 28 February and 1 March. Issues discussed at the conference, which was run by the Organization for Economic Cooperation and Development, could fall within the remit of such a panel: For instance, Anne MacKenzie of the United Nations food standard body Codex Alimentarius pointed out that currently "there is no harmonization of international regulatory systems for products produced by biotechnology," suggesting an international body could help establish an open, transparent safety-assessment process. And Gordon Conway, president of the Rockefeller Foundation, pointed out that in the developing world, "public plant breeders are trapped in the patent system," adding that "the answer lies in public-private collaboration." An international panel might consider the risk-benefit ratios of GM food in places other than industrialized areas, perhaps recommending waiving of intellectual property rights in developing countries. Krebs will make his recommendation to world leaders at the G8 summit in Japan in July. SL

Research collaborations

Company 1	Company 2	\$	Details
Millennium Pharmaceuticals (Cambridge, MA)	Abgenix (Fremont, CA)	100	Under the deal, Millennium will have access to Abgenix's XenoMouse technology for the creation of fully human antibodies. Abgenix will receive an undisclosed upfront payment and potential future payments that could reach \$100 million. In exchange, Millennium will receive an undisclosed number of commercial licenses with no further fees required.
MediGene (Martinsried, Germany)	Aventis Pharma (Frankfurt, Germany)	34	A strategic alliance to develop MediGene's malignant melanoma vaccine, which is based on transduction of melanoma cells with genes that encode immune-stimulatory molecules. Under the agreement, both companies will be involved in preclinical development and phase I/II clinical trials. Aventis will be responsible for manufacturing in exchange for license rights in 37 countries.
CryoLife (Kennesaw, GA)	Viragen (Plantation, FL)	*	An agreement to study site-specific delivery and activation of Viragen's anticancer proteins using CryoLife's light-activation technology. Under the research protocol, Viragen's proteins will be delivered to tumor targets using monoclonal antibodies and will be activated and released from the antibodies using CryoLife's reversible enzyme inhibitor technology.
Genset (Paris, France)	Abbott Laboratories (Abbott Park, IL)	*	A collaborative research agreement to discover genes associated with bipolar disorder and Type II diabetes. The collaboration will focus on candidate regions associated with the diseases. Abbott will receive a license to develop and commercialize products based on the genes identified, and Genset will receive an upfront payment, research funding, milestone payments, and royalties.
Progenics Pharmaceuticals (Tarrytown, NY)	Genzyme Transgenics (Framingham, MA)	*	The companies are extending a current alliance to develop a transgenic source of supply for PRO 542, Progenics' HIV product. In exchange for fees and milestone payments, Genzyme will develop transgenic goats that produce PRO 542 in their milk.

*Financial details not disclosed