

## GMO backlash hits US

Pandering to those opposed to GMOs (genetically modified organisms), Archer-Daniels-Midland Co. (ADM; Decatur, IL), one of the largest soya producers in the US, warned its Midwest grain suppliers in September to start segregating GM crops from traditional crops. The move was prompted by food manufacturers' insistence on guaranteed GM-free crops, a request resulting from high demand for GM-free products from concerned customers in Europe and Asia. About half the soybeans grown in the US are GM, but they are routinely mixed with non-GM soya. Farmers could be dissuaded from growing GM crops altogether next season because segregation, apart from expensive practical requirements such as installation of testing equipment and separate storage bins, would probably lead to a two-level pricing system, with GM crops selling at a discount of 18 cents a bushel. ADM has not stated what thresholds of "contamination" with GM crops would be acceptable in premium-priced "GM-free" crops.

## GenCom: a first for Japan

GenCom, the first collaborative venture in Japan to concentrate on functional genomics, was created by Mitsubishi Chemical (Tokyo), Kyowa Hakko Kogyo (Tokyo), and Yoshitomi Pharmaceuticals (Osaka) in September. The Tokyo-based company will focus on analyzing human gene functions using genomics and proteomics technologies, including protein-protein interaction analysis developed by Mitsubishi Chemical, which has a 67% stake in the company. GenCom will also develop transgenic animals, such as "humanized" mice incorporating genes related to specific diseases, for use in drug development. The company, which will carry out research for pharmaceutical and chemical companies, as well as government and private research institutes, plans to seek funding from the Japan Key Technology Centre (Tokyo), a semiprivate organization investing in small businesses that carry out innovative research with potential for commercial application.

## Sequenom patent and deal

In August, the US Patent and Trademark Office (Washington, DC) granted Sequenom (San Diego, CA and Hamburg, Germany) a patent on technology that should protect Sequenom's methods for rapid sequencing of DNA by mass spectrometry. The patent covers DNA amplification and base-specific termination conducted simultaneously in one reaction vessel. According to the company's president and CEO, Hubert Koster, the invention allows fast and accurate sequencing data from small amounts of template. It will facilitate the industrialization of genetic analysis, he says, by permitting researchers to avoid time-consuming sample preparation and amplification steps. A week before the patent was announced, PerSeptive Biosystems Division of PE Biosystems (Framingham, MA) agreed to supply Sequenom customers with MALDI-TOF mass spectrometers for the high-throughput analysis of its miniaturized DNA arrays.

## Research Collaborations

Company 1	Company 2	\$ Millions	Details
Myriad Genetics (Salt Lake City, UT)	Novartis Agricultural Discovery Institute (La Jolla, CA)	33.5	A two-year genomics collaboration under which Myriad will receive \$33.5 million in upfront payments and research funding. Focus will be on the genetic structure of such cereal crops as rice, wheat, and oats; Myriad and NADI will jointly sell access to the resulting genomic database and share any profits.
Ligand Pharmaceuticals (San Diego, CA)	Parke-Davis (Ann Arbor, MI)	13	A three-year R&D deal focussing on discovery, characterization, design and development of small molecule, orally active, estrogen receptor modulators for the treatment and prevention of such diseases as osteoporosis and cardiovascular disease. Ligand could receive \$13 million in research finding, in addition to milestones and royalties, while PD has rights to resulting products.
Quark Biotech (Pleasanton, CA)	Sankyo (Tokyo, Japan)	*	A research and license agreement aimed at developing therapies for auto-immune diseases. Candidates for drug discovery will be selected from key genes and pathways involved in apoptosis, identified using Quark's gene-discovery technology. Quark will receive R&D funding, milestones, plus royalties; Sankyo will have exclusive marketing rights to resulting products.
GPC (Munich, Germany)	Novalon Pharmaceutical (Durham, NC)	*	A drug-discovery collaboration aimed at developing a new generation of antibiotics based on a novel class of genomics-derived targets. Novalon will identify lead compounds by screening novel antibacterial targets provided and validated by Novalon. The companies will share costs and revenues, developing the program through the pre-clinical stage.
Genzyme General (Cambridge, MA)	Genovo (Sharon Hill, PA)	*	A gene-therapy collaboration employing Genovo's gene therapy patent portfolio and vector manufacturing expertise to develop products for lysosomal storage disorders. Genzyme will make an equity investment in Genovo, which will receive milestones and royalties.
Celera Genomics (Rockville, MD)	Gemini Research (Cambridge, UK)	*	A collaboration combining Celera's computational gene discovery ability with Gemini's clinical genetics experience in the hope of discovering genes and genetic polymorphisms associated with common, chronic, age-related diseases. The companies, which will both nominate traits and loci for research, will jointly license rights to resulting discoveries to third parties for development of therapeutics and diagnostics.

\* Financial details not disclosed