Lion catches Trega

Bioinformatics company Lion Biosciences (Heidelberg, Germany) is to buy *in silico* biology company Trega Biosciences (San Diego, CA) in an all-share deal valued at $35 million, allowing Lion to offer a suite of software that spans the entire drug discovery process by April 2001. Lion already offers "i-biology"—software that can integrate the genomics, proteomics, and chemical library databases to speed selection of disease targets and identification of lead drugs (*Nat. Biotechnol.* **17**, 742, 2000). Trega's iDEA software can be used to simulate the absorption, distribution, metabolism, and excretion (ADME) profiles of potential drugs, weeding out those unsuitable to make drugs. Sam Williams, biotech analyst at Banc Boston Robertson Stephens (London), estimates that iDEA will contribute a total of around $15 million in revenue, almost doubling Lion's turnover. Williams says the software will also be put to use for Lion's own drug development initiatives; the company expects to start clinical trials on nuclear receptor-based candidates within the next two to three years. Lion paid a hefty equivalent of $1.35 per share against Trega's price of around 70 cents, but Lion's share price rose $6 on the announcement to $77 per share, and Trega's increased 23% to 84 cents. *LF*

USDA organic rules

US Department of Agriculture (USDA; Washington, DC) officials late last year adopted long-debated rules and standards for producing and labeling organic foods, to take effect this month. Among other practices, the rules specifically prohibit the use of genetic engineering methods in the production of foods eligible for the organic label—a decision made following more than 275,000 comments from the public urging USDA to prohibit GM organisms from receiving an "organic" classification (*Nat. Biotechnol.* **17**, 217, 2000). In announcing the finalized rules, former Secretary of Agriculture Dan Glickman was careful to delineate how consumers should regard the new organic label, calling it "a marketing tool. . .not a statement about food safety." The value of this marketing tool is difficult to overstate, in that the organic sector of the food and agriculture industry is already churning out some $6 billion per year and still growing. *JF*

Patent update

On 5 January, the US Patent and Trademark Office (USPTO; Washington, DC) finally released revised guidelines concerning the "utility" and "written description" requirements for gene-based patents. As outlined in the December 1999 interim guidelines (*Nat. Biotechnol.* **18**, 921, 2000), patent applicants are now required to show specific, credible, and substantial utility for gene sequences. Notably, isolated genes, isolated DNA, and expressed sequence tags (ESTs) can be patented if sufficient utility is described, and the DNA patent claim scope need not be limited to disclosed uses; *in silico* homology-based assertions of utility will be decided upon a case-by-case basis. *TK*

Research collaborations

Company 1	Company 2	$ (million)	Details
Vertex Pharmaceuticals (Cambridge, MA)	Serono SA (Geneva Switzerland)	95	An agreement to discover and develop caspase inhibitors to treat neurological and inflammatory diseases. Vertex will receive $5 million for prior research and up to $90 million more in funding and milestone payments. The companies will share development costs.
Monsanto (St. Louis, MO)	Rosetta Inpharmatics (Kirkland, WA)	15	A three-year collaboration for the development of improved cereal crops, such as corn, wheat, and rice. Rosetta will receive $15 million to create a large database of gene expression profiles, and could receive royalties from any resulting products.
Abgenix (Fremont, CA)	Dyax Corp (Cambridge, MA)	*	This joint effort will combine Abgenix's XenoMouse technology with Dyax's proprietary phage display technology to create libraries of human antibody sequences, which will then be used to generate novel antibody sequences for multiple types of therapeutic targets. Each company will use generated antibodies for in-house research.
Mermaid Pharmaceuticals (Hamburg, Germany)	Gene Tools (Corvallis, OR)	*	An exclusive research alliance to probe the biological roles and potential medical uses of zebrafish genes. Gene Tools will provide tens of thousands of antisense oligomers for Mermaid to high-throughput screen for discovery and validation of disease-relevant drug targets, therapeutic proteins, and diagnostic markers.
ArQule (Woburn, MA)	ACADIA Pharmaceuticals (San Diego, CA)	*	A deal to combine ACADIA's functional genomics platform with ArQule's drug discovery program to discover novel small-molecule drug candidates directed at individual G-protein coupled receptor (GPCR) targets. The companies will share resulting IP and revenues from the commercialization of joint drug discovery programs.
Millennium Pharmaceuticals (Cambridge, MA)	Roche Diagnostics (Basel, Switzerland)	*	A three-year alliance to develop diagnostics for rheumatoid arthritis. In return for discovering proteins that will allow for patient-specific definition and prognosis of the disease, Millennium will receive a licensing fee, research funding, milestone payments, and royalties.

*Financial details not disclosed. *AB*