

## JAPAN ROUNDUP

The Ministry of Agriculture, Forestry and Fisheries has developed what it calls the world's first binary vector, expected to add momentum to recombinant DNA technology's application to plants. It is based on the Ti plasmid of *Agrobacterium*, divided into two parts, one of which carries a target gene. R&D has also produced five other advances including "fertilized eggs using immature ovarian eggs," "enzymes that synthesize cyclodextrin based on DNA-recombinant tech," "pearl culture utilizing cultured cells" and "high-efficiency production of reverse transcriptase utilizing yeast," according to *Japan Chemical Week*.

In a cooperative first, The Ministry of Agriculture, Forestry, and Fisheries and Mitsubishi Chemical Industries, Ltd., reached an agreement in principle to try to improve rice, using cell fusion to develop disease-resistant, high-yielding rice.

The Ministry of Agriculture, Forestry and Fisheries also plans to set up a High Technology Development Room within the Research Division of

the Fisheries Agency to promote biotech for fisheries.

LKB Produkter AB, the Swedish science-instruments manufacturer, has established a subsidiary in Tokyo and plans to broaden its market by establishing bases in Osaka and Nagoya. LKB produces "Ultrachrom GTi," a new liquid chromatography system.

Activity is increasing in production of hematopoietic factors like erythropoietin (EPO), colony-stimulating factor (CSF), granulocyte macrophage-stimulating factor (GM-CSF), megakaryocyte colony-stimulating factor (MEG-CSF), interleukin-3 (IL-3), and dolichol. Only EPO is now on the market, produced by Toyobo (Osaka) and purified by a monoclonal antibody technique developed by Snow Brand Milk Products (Tokyo). Toyo Jozo (Shizuoka-Ken), the Hayashibara Biochemical Institute (Okayama-Ken), and Kirin (Tokyo) have also begun producing reagent-scale quantities of the substance. Chugai Pharmaceutical (Tokyo) is marketing GM-CSF ex-

tracted from thyroid carcinoma cells. Toray Industries (Tokyo) is taking the rDNA route to GM-CSF. These hematopoietic factors may be used to treat conditions ranging from hereditary anemia to granulocyte decreases from radiotherapy.

Resahl Kosan Co. of Tokyo has developed an additive—composed of anaerobic microbes, enzymes, and minute amounts of amino acids—which protects fish against disease and normalizes the environment's oxygen, carbon dioxide, and ethylene supply.

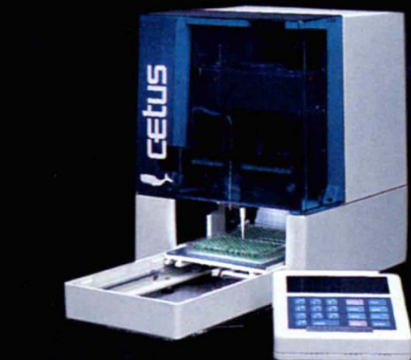
During the coming fiscal year, The Japanese Patent Office will establish a national depository for cultures of proprietary microorganisms.

Kubota, Ltd., the cast-iron maker, will begin selling lactic acid bacilli in powdered form for use as a food additive. To be manufactured by Biofermin Pharmaceutical Co. (Kobe City), the bacilli could have initial sales of about 100 million yen (\$393,000) next fiscal year.

# Sideways.

So if you've been waiting for an automated pipetting system that can do it all for you, then be sure to investigate the Cetus Pro/Pette WELL-TO-WELL system with the "XY" module. Call us toll-free at 800-CETUS CO (in California call 800-23-CETUS) and arrange for a demonstration.

It's the best direction any lab can take.



**cetus**

Cetus Corporation  
1400 53rd Street  
Emeryville, CA 94608

© 1985 Cetus Corporation. Patent Pending.

Write in No. 88 on Reader Service Card