

## JAPAN ROUNDUP

Mitsui Toatsu Chemicals (Toyko) has regenerated rice plants from "naked somatic cells" of adult rice protoplasts. In the new process, somatic cells chosen for regeneration are treated with pectinase and cellulase, enzymes which dissolve cell walls. The protoplasts are then cultured in a special medium in which cell division takes place and calluses form. In a month, calluses differentiate and the eight-leaved rice plants reach heights of about 25 centimeters.

Suntory Ltd. (Osaka) and Biogen (Geneva) have developed a human tumor necrosis factor (TNF)-producing bacterium. The new bacterium may yield twice the TNF as other recombinant bacteria. Suntory, which will produce and sell TNF in Japan and Southeast Asia, plans to begin clinical tests this year on its gamma-interferon and TNF.

Sumitomo Pharmaceutical (Osaka) has commissioned Biogen to evaluate the design of its mass production

method to make recombinant granulocyte macrophage-colony stimulating factor (GM-CSF), an immunity-enhancing agent.

Maruzen Oil Biochemical Co. has developed 13 types of monoclonal antibody using cell fusion and other biotech methods. The products will be used as reagents for research before being marketed for applications such as early diagnosis and cancer cures.

Toyo Menka Kaishi, a large Japanese trading company, has signed a sole-agent contract with Cogent Ltd. (U.K.) under which Toyo Menka will act as liaison for Cogent in its licensing of recombinant DNA technology. This includes medicinal products such as tissue plasminogen activators, pro-urokinase, and vaccines.

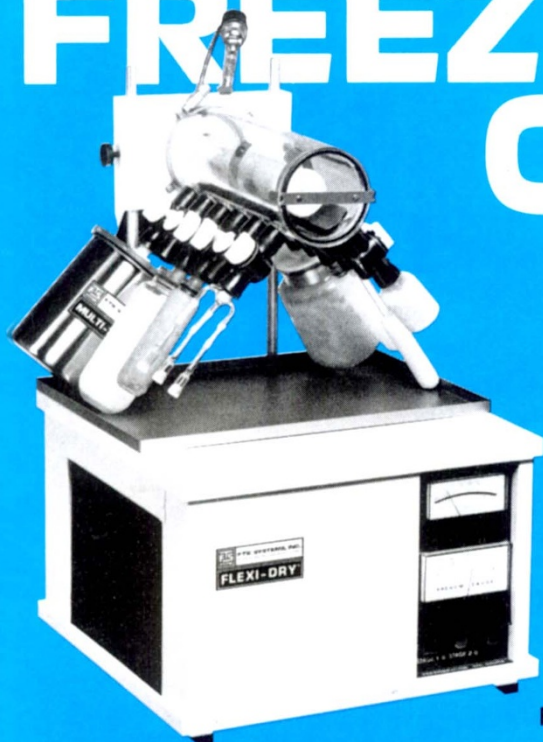
Genetics Institute (Boston, MA) established a Japanese branch office, Genetics Institute Inc. of Japan. Genetics Institute is commercializing human antihemophilic factor VIII,

erythropoietin, tissue plasminogen activator, and colony-stimulating factor. The Japanese branch will aim to expand Japanese business activities by promoting licensing, joint ventures, and other arrangements with Japanese companies and research organizations.

The newly formed Association for the Promotion of Advanced Technology on Pharmaceuticals, which includes 120 member companies, hopes to promote productive relationships between manufacturers, government and academia. E. Omura, senior managing director of Takeda Chemical Industries, Ltd. (Osaka), was appointed chairman of the association.

Kyowa Hakko Kogyo (Tokyo) has completed the first phase of expansion and reconstruction of its biological laboratory at its Tsuchiura factory (Ibaraki Prefecture), where it is conducting its tenth year of research on tissue culture and gene recombination.

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