



PRESS HANDOUT

ABIC 2004 Cologne: Plants as Drug Factories

Pharmaceutical plant proteins as weapons against AIDS, rabies, diabetes and tuberculosis

The method known as "molecular farming" is a new approach which has aroused great hopes of lower-cost diagnosis and treatment for many diseases. The term refers to a branch of green biotechnology opening up the use of plants as biological factories. Plants in which protein biosynthesis functions in much the same way as in human beings and mammals, are used as "biological factories" to produce pharmaceuticals. The current methods used to generate actives of this kind include genetic modification of human cells and microorganisms. These techniques are labour intensive, expensive and often only produce relatively small amounts. Pharmaceuticals which are at present held back by production bottlenecks or high costs could be made accessible by molecular farming.

For this reason, the European Commission has awarded €12 million to a research consortium in 11 European countries and South Africa, with a view to production and clinical testing of vaccines and medicines for the treatment of major diseases such as AIDS, rabies, diabetes and tuberculosis.

According to a statement by the scientific coordinator of the consortium, **Professor Dr. Julian Ma** of St. George's Hospital Medical School in London, *"The potential of this approach is enormous. Plants are inexpensive to grow, and if we were to engineer them to contain a gene for a pharmaceutical product, they could produce large quantities of drugs or vaccines at low cost."*

While the production of pharmaceuticals in other genetically modified systems is well-established and documented, there are no precedents for the same production process in plants. As **Prof. Dr. Rainer Fischer** from the Fraunhofer Institute of Molecular Biology and Applied Ecology (IME) has said: *"One of the biggest hurdles for the researchers will be to decide on the crop that will produce the medicines and vaccines. Possible candidates include maize and tobacco plants, which could be cultivated by pharmaceutical companies in greenhouses or on special fields."*

At the **ABIC 2004 in Cologne**, Professor Dr. Julian Ma and Prof. Dr. Rainer Fischer will be speaking during the plenary talks on Monday, 13 September 2004, on **"Plants as Green Factories"**.

In this year of innovations, Germany will be acting for the first time as host country to one of the world's major conferences and trade fairs on plant biotechnology, to be held under the motto *"AgBiotech goes Europe"*.

Investors, industrial managers, scientists and policy makers from all over the world will come together in 2004 for an intensive exchange of experience with a view to giving new momentum to the development of agricultural biotechnology.

The ABIC forum was set up in 1996 to discuss the results of research and development and facilitate joint ventures between research institutes and industrial partners. Until this year the conference was held once every two years in Canada. Host country for 2006 will be Australia. The organisation of ABIC 2004, for the first time outside Canada, was entrusted to Phytowelt GmbH in Nettetal.

„ABIC goes Europe“ , Agricultural Biotechnology International Conference for the first time in Europe, Cologne, 12 - 15 September 2004

For further information on ABIC 2004: <http://www.abic2004.org>

The registration form for the ABIC 2004 can be obtained from:
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