

Twenty Five Year's Biotechnology in China

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General Picture

1, Twenty five year's development of biotechnology in China might be divided in to four stages:

1975-1980: Preparative stage both in thinking and organization. In 1980 a development program for biotech was outlined by State Commission of Science and Technology (SCST). Progress was quite slow, because infrastructure, facilities and material supply should be recovered.

1980-1985: Initial stage: SCST supported three studies on engineered subunit vaccines: Hepatitis B, Foot and Mouth Disease and Bacterial acute diarrhea.

1986-1995: Regular, stable development stage: Biotech. listed as one priority both in "Five-year plan" and "863-longterm program" together with NSF become 3 main channels to get grants. The investment was about 300 million RMB/5years. 2000-5000 scientists and technicians were engaged in this field.

1996-2000: stage of industrialization and strengthening basic research: More than one dozen of engineered drugs, Vaccines and a group of transgenic plants either in field test or in popularization were approved. Almost all products are copying the Western version. The only way-out is to strengthen basic research, so several programs to support the outstanding scientists and to attract oversea Chinese scientists were programs put forward.

2. Research projects Summarized from 1986-2000 try to present an overview of what we have done and what are doing both in basic and applied research. And particularly introduce several recent gratifying and encouraging achievements: Human genome, Biochip, transgenic rice-resistant to Xoo and high content of lysine and protein in transgenic maize.

Industrialization and Commercialization

1. Recombinant DNA-based medicines: more than 200 companies involved in engineered pharmaceuticals production are ready to be listed, among those >50co. have get their formal production lieiences or trial production lieiences, only 10 are qualified getting GMP certificate. Two tables show you the drugs, Vaccines and diagnostic kits approved to be market available, their indications and revenue situation.

2. Agbiotech: Present three tables:

- (1) Transgenic plants: including the gene transferred, traits modified and current status.
- (2) Tissue culture and plant micro propagation in large scale: Three periods might be divided, 1970's, 1980's and 1990's, in each period include what kinds of plants were micropropagated, purpose and the approximative quantity of products sold per year.
- (3) Anther and Protoplast culture in crop breeding.

Introduction to Chinese Society of Biotechnology

----A. National, nongovernmental academic organization established in June 1993. under the leadership of Chinese Association of Science and Technology(CAST)

----It possess 1,200 individual members and 150 group members. The present 80 council members and 30 standing members were selected by the Second National Member's representatives Congress in 1977.

----The Aims:

*Exchange information of research, development and industrilization.

*Promote transformation of research achievements into productivity, to be a bridge between research, enterprise and financial circle.

*Organize policy and strategic symposium to offer policy-makers counsels and advises.

*Organizing training courses or symposium on modern techniques, new field, patent knowledge and biosafety, etc.