



INDUSTRIAL BIOTECHNOLOGY IN TURKEY

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INTRODUCTION

With its huge potential in the agricultural sector, Turkey could become a major industrial biotechnology actor. White biotech could represent a major economic growth opportunity for the country. Several innovative companies are today active in Turkey but mainly in the biopharma sector and industrial biotechnology is still very limited even though the country has a very long tradition in the fermentation sector. Today Turkey is producing 20% of the world baker's yeast and new development opportunities are present in the bioenergy sector and on a smaller scale in the chemical industry and bioremediation. The current process of the establishment of a national technology platform for knowledge-based bioeconomy will certainly help to further develop and coordinate industrial biotechnology in Turkey.

I. RESEARCH AND INNOVATION

Modern industrial biotechnology is a relatively new discipline, with major areas of knowledge still to be explored. Public support to research as well as the establishment of pilot and demonstration facilities to scale-up individual processes will therefore help in the development of a European bio-based economy.

A. Public research funding

No information.

B. Pilot and demonstration plants

i. pilot plants

a) **Open to all**

Ege

Ege University Department of Bioengineering Pilot Plant	
General, products, feedstocks	The pilot plant was established in 2006.
Services	Production and separation facilities available up to 100 litres. Contracted research is carried out based on requests from industry.
Financing	EU funding and FP6 project Aegean Centre of Excellence for Bioengineering and Biotechnology – BIOACE.
Contact	

b) **Partly restricted**

c) **Restricted**

ii. demonstration plants

No information.

a) **Open to all**

b) **Partly restricted**

c) **Restricted**

II. POLICY

Public authorities can promote the quick take-up of industrial biotechnology innovations by implementing a number of “instruments” or policy initiatives. This can be the improvement of the regulatory framework; the integration of specification for bio-based products in public procurement; the establishment of standardisation, labelling and certification schemes to overcome perceived uncertainty about product properties and weak market transparency; the development of financial instruments and supports to increase investments into research, technology development and innovation as well as the elaboration of communication and information campaign to communicate the benefits of bio-based products to users.

A. Policies and regulations

No information.

B. Public procurement

No information.

C. Standardisation, labelling and certification

Some activities have started towards labelling and standardisation but no wide-spread practice². The awareness is increasing in industry.

D. Access to finance

No information.

E. Communication

Ege University has been the coordinating institution in one of the Innovation Relay Centres in Turkey (IRC-EGE) and is a part of the Enterprise Europe Network as of 2008.

Industrial biotechnology actors are currently in the process of establishing a national technology platform for the knowledge-based bio-economy (KBBE). The objectives of the platform will be:

- to provide a place interaction among the stakeholders of bioeconomy initially in Istanbul, Ankara and Izmir.
- to focus primarily on the biotechnology applications in agriculture, food, chemicals, energy and environment.
- to develop strategies for rapid growth of the KBBE.

² A workshop was held in Ankara with the initiation of EU General Secretariat in Ankara between March 22-23, 2007 on Eco-labeling