

Profile of National Technology Platform

1.

Logo	TP name	Contact person (coordinator)
BNTP	National Technology Platform on Biotechnology	Ernő Duda Jr.

2. Coordinating institution (name, address, contact):

Hungarian Biotechnology Association

Address: H-6722 Szeged, Béke u. 5/a

Postal address: H-6726 Szeged, Közép fasor 52. III. floor

Phone number: 00 36 62 312 559

Fax: 00 36 62 420 617

<http://www.hungarianbiotech.org>

info@hungarianbiotech.org

3. Technical objectives:

The main objective of the National Technology Platform on Biotechnology is to achieve Hungary's long term growth and competitiveness through the strengthening of the domestic biotech industry. By creating a **framework for the various stakeholders in the field of biotechnology**, led by industry, we intend to:

- develop and reinforce a clear vision, as well as (re)define the research and development priorities and action plans in the medium to long term, and follow up the advances;
- foster public-private partnerships, and by mobilizing decision makers, provide the necessary background for their effective functioning;
- improve and shape the public understanding and social acceptance of biotechnology-based goods and applications;
- contribute to the education of the future generation of biotechnology managers and researchers in accordance with the expectations of the industry;
- orient the Hungarian research policy to better meet the needs of industry;
- create partnerships with the European Technology Platforms and promote the participation of Hungarian companies in FP7 calls.

4. Relevance to national economy:

In 2005 the Hungarian government accepted and started to implement the proposed actions in the Hungarian Biotechnology Strategy, which clearly shows that the decision-makers recognized the role of the biotech industry in the sustainability of Hungary's economic growth. The innovative development of the life-science companies and the prosperity of the biotech sector – along with four other **priority sectors** – has a significant importance because

- It can contribute to the creation of well-paid and high-quality jobs
- It affects numerous market segments and it comprises the R&D activities, production and services
- It facilitates the growth of other industrial sectors, e.g. ICT, electronics, optics
- It contributes to civil welfare through its products and services

All in all, it can be claimed that the biotechnology industry bears a great potential for smaller countries with respect to economic growth and with adequate governmental support and measures – tax incentives, support of R&D activities, establishment of bioincubators etc. – it can boost the economic development as the aging society and the lengthening life span also act as „pulling forces” for biotechnology.

5. Sectors within the TP:

Biotechnology became a cross-border discipline by applying cutting-edge technologies such as genomics, nanotechnology, ICT etc. Therefore, it became an integral part of various domains of **medicine, industry and environmental protection, and agriculture and the food industry**. Moreover, it contributes to the growth of priority sectors such as ICT, electronics and optics. The development of both the sector and the discipline has a great impact not only on human health conditions but on sustainable development and on food safety as well.

6. Manifestation of results of TP*:

New, added-value products and services	Yes
New business models	Yes
New advanced industrial/economic engineering	Yes
New emerging science and technologies	Yes
Transformation of existing R&D and education infrastructure to support world-class R&D activity	Yes

* Yes/No

Others:

7. Research and Development activities:

At national level:

Numerous projects gained national support in the field of biotechnology, for example:

- HIKC05/DermaVir/VTC: Immunotherapeutic products
- GVOP-3.1.1.-2004-05-0243/3.0, GVOP-3.1.1-2004-05-0329/3.0, NAP_BIO_06-FLUDRUG: Molecular diagnostic and therapeutic methods in various inflammatory and tumorous diseases
- GVOP-3.1.1-2004-05-0368/3.0, NKFP-1A/0020/2002, NKFP1-00010/2005: Drug development and diagnostic developments based on signal transduction
- NKFP1-00012/2005: Nanoformulations – molecular encapsulation and drug development
- RHL-KKK: Rational drug-design
- HB-KKK: Regenerative medicine (e.g. organ implantation with stem-cells, and its development with gene therapy and transplant immunology methods)
- NAP_BIO_06: Plant and animal biotechnology and bioenergy production
- XTTPSRT1: Therapeutic and toxic applications of membrane transporter technologies
- MeTox: in silico predictability of metabolism and toxicity
- NKFP-1A/057/2004: The mixed application of the traditional biochemistry-biopharmacology methods and the latest in vitro (e.g. siRNS), in vivo (pl. transgenic PIBF mouse) and in silico approaches (applied mathematic modeling) in developing new molecular therapeutic methods
- NAP_BIO_06: The co-application of the molecular and the traditional plant breeding
- Damec_09: Renewable energy practice for the sustainable development of the agriculture

At international level:

Numerous biotechnology projects gained support in FP6, for example:

- DermaVir: Immunotherapeutic Products (EU FP6 Marie Curie Chair, EUREKA)
- FP6-CRAFT- COOP-508141: Molecular diagnostic and therapeutic applications
- INTHER, LIINTOP: The development of novel gene therapeutic approaches
- MEMTRANS: In vitro membrane transporter models
- BIOSIM: Biosimulation as a novel drug-development tool
- BIOEXPLOIT: Co-application of molecular (marker selection) and traditional plant breeding methods
- HEALTHGRAIN: the examination of the interaction of the genetic variability of the nutritive substances in the grain essential for healthy diet and the genotype x environment

Have the TP got Strategic Research Plan?*

The Hungarian Biotechnology Strategy was prepared and implemented in 2004/2005. The strategy contains the bottlenecks hindering the development of the biotech sector and outlines the measures to be taken to overcome the difficulties the industry faces. The monitoring of the strategy and the actions and their supplementation with the specifications of the sub-domains form the basic milestones of the BNTP project.

8. Stakeholders:

a) Enterprises/companies

1. Industrial:

- Astrid Research Ltd.
- Biomi Ltd.
- Bio-Science Ltd.
- Biostatin Ltd.
- BioTalentum Ltd.
- Chemistry Logic Ltd.
- ComErgen
- ComInnex
- CycloLab Ltd.
- DRC Ltd.
- Genetic Immunity Ltd.
- GenoID Ltd.
- KPS Orvosi Biotechnológiai és Egészségügyi Szolgáltató Ltd.
- mdurance
- PharmaHungary 2000
- Soft Flow Hungary Ltd.
- SOLVO Biotechnology
- TargetEx Ltd.
- ThalesNanotechnology
- CEVA-Phylaxia
- CHINOIN
- Richter Gedeon Inc.
- sanofi-aventis Private Co. Ltd.

2. Others:

- DANUBIA Ltd.
- DSS Consulting
- CONVINCIVE Consulting
- L&MARK Ltd.
- Pronovix
- Szecskay Attorneys at Law

b) Universities:

- Budapest Technical College, John von Neumann Faculty of Informatics
- University of Debrecen
- Eötvös Lóránd University
- Semmelweis University – Semmelweis Innovations Ltd.

<ul style="list-style-type: none"> ▪ University of Szeged ▪ University of Szeged, Faculty of Sciences, Department of Biotechnology ▪ University of Pécs <p>c) Professional Organisations (associations, councils)</p> <ul style="list-style-type: none"> ▪ Hungarian Biogas Association ▪ Hungarian Association of IT companies ▪ Society of Hungarian Oncologists <p>d) Academic research centers:</p> <ul style="list-style-type: none"> ▪ Agricultural Research Institute of the Hungarian Academy of Sciences ▪ Institute of Experimental Medicine of the Hungarian Academy of Sciences ▪ Biological Research Centre of the Hungarian Academy of Sciences ▪ Computer and Automation Research Institute – Hungarian Academy of Sciences <p>e) Research and/or innovation centers:</p> <ul style="list-style-type: none"> ▪ The Cereal Research Non-Profit Company ▪ Bay Zoltán Foundation for Applied Research – Bay-GEN (Institute for Plant Genomics and Human Biotechnology), Bay-Nano (nanomedicine), Bay-Bio (biotechnology) <p>f) Policy agencies (national/regional):</p> <ul style="list-style-type: none"> ▪ Hungarian Investment and Trade Development Agency (ITDH) ▪ Hungarian Patent Office <p>g) Financial institutions: -</p> <p>h) Others:</p> <p><i>Young scientist/ entrepreneur associations, foundations:</i></p> <ul style="list-style-type: none"> ▪ Forum of Young Scientists Foundation ▪ Főiskolás és Egyetemista Vállalkozók Országos Szövetsége ▪ TÉT Foundation <p><i>Innovative companies, incubator houses, science parks:</i></p> <ul style="list-style-type: none"> ▪ ValDeal Innovation ▪ European Innovation Centre Ltd. ▪ BIOPOLISZ Innovation Services Ltd. ▪ Biotechnology Innovation Base <p><i>Media:</i></p> <ul style="list-style-type: none"> ▪ Napi Gazdaság
--

9. Geographical localization (map, localization of participants):

Nationwide

10. Interaction with other Hungarian and foreign TPs:

There is a strong outline of potential collaboration with the following **national technology platforms** (NTP): Pharmapolis NTP, Genomics NTP, 'Food for Life' National Technology Platform, Software and Services Platform.

EuropaBio serves as a junction to access/join other relevant **European Technology Platforms** (e.g. Innovative Medicines Initiative, NanoMedicine ETP, Industrial Biotech for Sustainable Development ETP, Food for Life ETP).

11. Interactions with national programs/funds:

NKTH's National Technology Platform call

12. Funding instruments:

The Hungarian Biotechnology Association, as a non-profit organization, undertakes the establishment and operation of the National Technology Platform on Biotechnology by utilizing its infrastructural background and database and the experience it has gained during its coordination related activities so far. The support NKTH could provide by the means of this call could substantially facilitate the efficient implementation and launch of the BNTP. Furthermore, in the long run, it can help biotechnology become a driving force behind the economy by the strategic collaboration of the stakeholders of the sector. However, during its actual operation one of the main duties BNTP would have is to map out and involve other funding resources as well.