

Summary of the Roundtable on Industrial Biotechnology in Slovakia

16 June, Bratislava

INTRODUCTION	3
ROUNDTABLE ON INDUSTRIAL BIOTECHNOLOGY IN SLOVAKIA	4
SWOT ANALYSIS OF (INDUSTRIAL) BIOTECHNOLOGY IN SLOVAKIA	8
FOLLOW-UP	9
ANNEXES	10

Introduction

The roundtable on industrial biotechnology in Slovakia took place on 16 June 2008 in Bratislava (Hotel Danube). The event was initiated by EuropaBio in the framework of the European Technology Platform on Sustainable Chemistry - "SusChem".

The roundtable has been locally organised by Prof. Milan Polakovič from the Slovak University of Technology and member of the Slovak Association for Industrial Biotechnology.

Participants to the roundtable were representatives from academia, enterprises, development agencies and ministries/government bodies with an interest in the field of biotechnology (see Annexes).

Roundtable on industrial biotechnology in Slovakia

- Milan Polakovič (Slovak University of Technology and Slovak Association for Industrial biotechnology) opened the roundtable with a short presentation of the objectives and the programme. He also introduced the participants.
- Pavol Holík (Government office of the Slovak Republic representative of Vice-prime minister Dušan Čaplovič). Mr. Holík said that he would report the results of the roundtable to the Vice-prime minister.
In his speech, the minister recognised the importance of biotechnology and said that the Slovak Republic has much to do in this sector. He noted that biotechnology is an important economic factor that can be used to further develop Slovakian economy. He stressed the importance of bioproducts in our daily life and the importance of bioproducts for the future. He particularly noted that those products can help in mitigating climate change and in turning society lifestyle to a more sustainable way. The Vice-prime minister also pointed out the problematic of the access to raw material. He said that science can contribute to development and innovation but that social aspects have to be taken into account. Finally, he said that the Government would welcome all recommendations coming out of the roundtable.
- Dirk Carrez (EuropaBio) presented the Technology Platform on Sustainable Chemistry (SusChem) and the Strategic Research Agenda for Industrial Biotechnology.
SusChem objectives are to boost sustainable chemistry, industrial biotechnology and chemical engineering research, development and innovation in Europe. More specifically, the Industrial Biotechnology section ensures a coherent policy framework and the most effective use of R&D resources. It guarantees that biotechnology is properly integrated in the chemical industry.
He presented the impact of industrial biotechnology on the knowledge based-bioeconomy and its potential (notably environmental). He said that white biotech and biobased products are clearly on the rise and that it will represent 10% of chemicals sales by 2010. He presented the opportunities that industrial biotech represents for Europe.
The strategic research agenda that has been developed by SusChem looks into the future impact of Industrial Biotechnology and lays out the major research areas which must be addressed to move from a flourishing set of scientific disciplines to a major contributor to a future knowledge-based economy. It focuses in particular on the research needed to underpin three broad topics: biomass, bio-processes and bio-products, including bio-energy.
Finally, he presented the different initiatives that exist in industrial biotech research: ERA-IB and KBBE-NET saying that critical mass and leadership are needed to create a true knowledge based bioeconomy.
- Maurice Lex (DG Research, European Commission) presented biotechnology and the Knowledge-Based Bio-Economy (KBBE) in the 7th Framework Programme for Research and Development. More specifically, he presented
 - A general picture of FP7 as well as KBBE thematic that are covered by FP7.
 - The major trends/challenges affecting bio-economy today
 - A first draft of the 3rd call that will probably be presented officially on 3 September 2008 (cf. presentation of the European Commission).
 - The different platforms and networks related to biotechnology in EuropeFinally, he concluded saying that success will depend on coordination and mobilisation of all actors.

- Marta Cimbáková (Ministry of Education) presented the National Concept of Science and Technology Policy of the Slovak Republic. The National Science and Technology Policy laid down Slovakian long term objectives in terms of R&D by 2015. It also selected 12 priority themes of which one is biotechnology

The strategy aims notably at:

- Achieving a synergic effect in R&D support from various sources: coupled investment from public and private bodies.
- Ensuring effective R&D infrastructures notably by making better use of structural funds for R&D which represent a large opportunity to upgrade R&D infrastructures.
- Ensuring qualified R&D human resources: young generation leaves to other countries. There is a need to attract people and create specific conditions for high level people. The support to mobility of human resources (not only in Slovakia but also among EU countries) is an other important point.
- Focusing the support from public sources towards research leading to subsequent further utilisation, notably by encouraging cooperation between public and private research
- Improving competitiveness of Slovakian production and services
- Encouraging network and cooperation of Slovak researchers with their EU and world counterparts.
- Developing R&D cooperation at national and regional level

She also noted that the S&T strategy aims at increasing the direct R&D support to 1,8% of GDP in 2015 and encouraging private investment into R&D (2/3 of overall expenditures in 2015 should come from private sources). Finally, she stressed that the strategy should help in increasing the participation of Slovakian actors in FP7.

- Marian Horváth (Ministry of Economy) presented the Slovak strategy supporting innovation that has been adopted by the Ministry of Economy. This strategy covers the period 2007-2013.

The Innovation plan is based on 3 priorities: the legislative framework, human resources and innovative tools (direct and indirect) supporting innovation.

Then, he presented the 13 activities of the Innovation plan for the period 2008-2010. These activities are:

- | | |
|---|--|
| <input type="checkbox"/> Creation of regional innovation centres | <input type="checkbox"/> Tenders competition for the innovative act of the year |
| <input type="checkbox"/> Structural Funds programme for support of innovations and technology transfer | <input type="checkbox"/> Joint proposal with Minister of education about the adaptation of Universities and high school to the requirement of the practice |
| <input type="checkbox"/> Structural Funds program for support of innovations in enterprises | <input type="checkbox"/> Implementation of a Life-long learning system |
| <input type="checkbox"/> Project of national information structure | <input type="checkbox"/> Project of innovation (non-financial) vouchers for the purchase of R&D results by enterprises |
| <input type="checkbox"/> Interreg IV programme for regional cooperation with EU and EEA countries | <input type="checkbox"/> Programme of Innovation stimuli for increase of private sector investment into implementation of R&D results |
| <input type="checkbox"/> Financial engineering instrument - increase of financing and investment into innovations from public resources | <input type="checkbox"/> Programme for improvement of Patent/IP protection |
| | <input type="checkbox"/> Administrative and technical assistance in preparation of Structural Fund projects |

- Peter Mravec (Ministry of Education) presented the Structural funds Operational Programme (OP) for Research and Development. This OP aims to modernise and increase the efficiency of the system of support to research and development and improve the quality of infrastructures so that they contribute to the growth of competitiveness of the economy. 1,422 billion euros are available on the period 2007-2013 for this OP.

- Miroslav Havlík (Evonik & Slovak Association for Industrial Biotechnology) presented expectations and objectives of Slovakia in the field of industrial biotechnology. His presentation reflected the work that the Association undertook for the government while writing a background on industrial biotechnology in Slovakia.

He compared several times the situation between the EU, the US and Japan as well as the situation between the EU and the Slovak Republic. His conclusions were that in term of biotech R&D, R&D in general, innovation and support, the EU is behind the US and Slovakia is behind the EU average.

He insisted on student qualifications, stressing that “grade is one thing” but “what they are able to do” is another one. He noted the importance of green pressure (REACH etc.) for the development of industrial biotechnology.

Finally, he deplored that each ministry in Slovakia is supporting biotechnology by various means, announcements etc. but that there is a lack of homogeneity and no coordinated strategy.

- Vladimír Jakubec (National Agency for Development of Small and Medium Enterprises) presented the Slovakian support to SMEs. The Agency was established in 1993 in the framework of the PHARE programme. It coordinates activities, including financial ones, at the international, state, regional and local levels in order to support the development of SMEs. The Agency:
 - identifies and analysis barriers of the business development in order to propose reforms
 - prepares proposals for governmental policies that are important for SMEs
 - manages projects and programmes that support SMEs
 - participates in the set up of loan and guarantee systems for the establishment, stimulation and development of SMEs in collaboration with other financial institutions
 - secures the execution of support programmes for SMEs, the building of incubators and connections with existing information networks

Concrete examples are available in the presentation (SK).

- Dirk Carrez (EuropaBio) presented the Policy Agenda for Industrial Biotechnology developed by EuropaBio and the Lead Market Initiative that was adopted by the European Commission in December 2007.

Firstly, he presented the commitment of some European companies for industrial biotechnology (DSM, Evonik, Novozymes, Biohub, etc.). He explained this commitment by the advantages that bring industrial biotechnology (increase of the labour productivity, decrease of pollutants and less use of energy...). Then he presented the technical and non-technical barriers and drivers for industrial biotechnology in Europe.

The Policy Agenda developed by SusChem aims to:

- establish a coherent European Policy Agenda for the Knowledge Based Bioeconomy (KBBE)
- stimulate and support innovation in plant science and industrial biotechnology
- promote production and use of bio-based products and processes
- create awareness amongst all stakeholders
- improve investment in IB SME's

He also stressed that cooperation is needed between all actors (research, agriculture, enterprises, environment...) and at all levels (local, regional, national, european...) to ensure a coherent, consistent and certain framework supporting bioproducts and industrial biotechnology.

The Lead Market Initiative (LMI) was adopted in December 2007 by the European Commission. It selected 6 areas where the Commission intends to place Europe as leader. One of the six is dedicated to bio-products. The LMI for bioproducts supports bio-based products ("green materials") and rural development ("biorefineries"), aims at turning industrial production to a more sustainable way and builds on key European strength: excellent biotechnology research base; strong chemical and enzyme industries; availability of biological resources; strong political support for advanced concepts of sustainable production.

Finally, he presented the different approaches that are used to support industrial biotechnology market development in EU Member States and stressed the key issues for Member States to ensure the development of the market (translation and implementation of EU policy into Member States policy; development of national strategies and action plans in Member States; stimulate innovation in EU and MS & setting up national Technology Platforms in Member States).

SWOT analysis of (industrial) biotechnology in Slovakia

Strengths

- Very strong academia / research in biotech
- Good level of scientists
- Organised (association)
- Dialogue with the government (background document about IB)

Weaknesses

- Lack of communication campaign
- R&D funding / R&D from private sector
- Human resources (qualification & immigration)
- Infrastructures (not up to date)
- Homogeneity of policies (between different ministries) / No operative strategy for IB at government level
- Lack of understanding of biotech specificities by decision makers
- Lack of awareness about IB potential (Gov. Level, industry, citizens)

Opportunities

- The government wants to make sure that plants are open to all (at least to public researchers) (cf. Marta Cimbakova)
- Structural funds
- Brand new S&T action plan
- State aid scheme rules
- Innovation policy (Slovak strategy supporting innovation & National Agency for SMEs)

Threats

- Seeds funding / risk capital / death valley between R&D and Access to market
- Patent system (costly)



Follow-up

Industrial biotech actors are already gathered in the Slovak Association for Industrial Biotechnology. Several high level government representatives took part at the meeting and will analyse how to give more political support to (industrial) biotech.

Annexes

Programme

8:30 registration

9:00 Mass-media briefing:

Ambitions of industrial biotechnology: to give Slovakia a new dimension

9:30 Welcome address of vice-prime minister of Slovak Republic **Dušan Čaplovič** (Pavol Holík, general director of the Section on European policy and knowledge-based society of the Office of Government SR)

9:45 Morning session: Research and development

- Industrial Biotechnology: Strategic research agenda for sustainable chemistry (**Dirk Carrez**, director of EuropaBio for public policy and industrial biotechnology)
- Biotechnology in the 7th Framework program of research and development (**Maurice Lex**, representative of DG Research)
- Industrial Biotechnology and KBBE/European knowledge-based bio-economy (**Maurice Lex**, representative of DG Research)
- National strategy of scientific and technological policy (**Marta Cimbáková**, director of the Department of strategy and analyses of the Section of science and technology of Ministry of Education SR)
- Discussion

12:00 Lunch break

13:30 Afternoon session: Policy and financing

- Support of innovations in the conditions of the Ministry of Economy (**Marian Horváth**, state advisor of the Department of industry and innovations of the Ministry of Economy SR)
- Operational program Research a development (**Peter Mravec**, director of Department for operational program research a development, Ministry of Education SR)
- Industrial Biotechnology: expectations and objectives (**Miroslav Havlík**, CEO Evonik Fermas Slovenská Ľupča)
- Programs for small and medium-size enterprises (**Vladimír Jakubec**, director for international relations of National agency for development of small and medium-size enterprises)
- Society Agenda/ Lead Market Initiative (**Dirk Carrez**, EuropaBio for public policy and industrial biotechnology)
- Discussion

Participants

Nr.	Surname	Name	Institution
1	Carrez	Dirk	Public Policy & Industrial Biotech Director EuropaBio
2	Peeters	Antoine	EuropaBio
3	Lex	Maurice	DG Research, European Commission
4	Holík	Pavol	General Director of the Knowledge Society Department Section of European Policy and Knowledge Society Government Office of the Slovak Republic
5	Morávek	Štefan	General State Advisor for Knowledge Society Department Section of European Policy and Knowledge Society Government Office of the Slovak Republic
6	Havlík	Miroslav	President of the Slovak Association for Industrial Biotechnology
7	Polakovič	Milan	Slovak Association for Industrial Biotechnology
8	Čertík	Milan	Slovak Association for Industrial Biotechnology
9	Minárik	Martin	Slovak Association for Industrial Biotechnology
10	Sitkey	Vladimír	Slovak Association for Industrial Biotechnology
11	Šajbidor	Ján	Faculty of Chemical and Food Industry, Slovak Technical University Bratislava
12	Cimbáková	Marta	Director of Department of National and European Support in Science and Research, Ministry of Education of Slovak Republic
13	Mravec	Peter	Director, Section Operational programme Research and Development, Ministry of Education of Slovak Republic
14	Horváth	Marián	Industry and Innovation Department, Ministry of Economy of Slovak Republic
15	Jakubec	Vladimír	National Agency for Development of Small and Medium Enterprises
16	Balog	Miroslav	Slovak Innovation and Energy Agency, Department of Innovation Management
17	Stredánská	Marián	Structural Funds, Operational Programme Region Bratislava, Ministry of Construction and Regional Development of Slovak Republic
18	Virčík	Mário	Director, Section of International Affairs, Ministrz of Finance of Slovak Republic
19	Šimúth	Tomáš	Section of R&D, Ministry of Agriculture
20	Turňa	Ján	Knowledge-Based BioEconomy KBBE and Head of the Department of Molecular Biology, Faculty of Sciences, Comenius University
21	Timko	Jozef	Director of Institute of Molecular Biology, Slovak Academy of Sciences
22	Čániová	Eva	Director, Communication House - Public Relations
23	Vršanský	Andrej	Director, EuroFund Consulting, International consulting company on Structural Funds
24	Oberhauser	Anton	Communication House - Public Relations