

Industry - Biobased Innovations in Manufacturing

Global BioEconomy Summit

19 April 2018

Karl-Heinz Maurer, AB Enzymes GmbH

What is the IWBio?

- Industry driven network
- 19 small, medium and large enterprises with research activity in biotech
- Operating in the agricultural, feed, food pharma, consumer goods industries as well as scientific technology providers

Members



Bayer



B•R•A•I•N



evoXXX



eppendorf



Evolution of the IWBio network

- 2005 Initiative to build an industry network for microbial Genome Research
- 2006 Foundation of the Industrieverbund Mikrobielle Genomforschung (IMG)
- 2006 Funding of industry driven research by BMBF
- 2007 Established as an association according to German law
- 2010 Change of name to „IWBio“ (Industry Network for White Biotech)
- since 2007 Initiation of research initiatives and several innovation alliances (2013)
- 2014 Change of site and secretariat to Berlin
- 2017 Review of the Strategy of the network („Industrial Experts in Biotechnology“)

Bioeconomy from the IWBio point of view

Bioeconomy is characterized by:

- No geographical borders – but regulations, IP and tax systems on country level
- Big scale (big investment)
- New partnerships required – high investment (both on research and capex)
- Knowledge based approaches - research required on all levels from identifying principles to the application research in new fields
- New approaches that include significant risks of failure

As a consequence we deal with a complex set-up of partners:

- Big companies with big targets dealing with raw materials in large scale
- Technology Providers
- Engineering Companies
- Toll Manufacturers and Service Providers

The interest and the need for such complex consortia is based on the need to

- Be part of a new wave combining sustainability with economy
- Be successful in first run / Do it right first time
- Reduce and mitigate the risks involved in such an endeavour

Funding „Innovation Initiative Industrial Biotechnology“

Started in 2011 by the German Ministry for Education and Research (BMBF)

- With the target to biologize the chemical industry and to allow technology transfer and industry oriented commercialization
- In the form of strategic alliances of several partner companies (3-6 companies) to allow „critical mass“ and to promote the including of SMEs
- alliances can be vertical (supplier, manufacturer, end user) or horizontal (along a process chain)
- Coordinated by one company

Criteria:

- Complementarity of expertise, increased value by alliance, synergies
- Economic relevance and potential – ecological consequences
- Level of innovation
- Contribution to Sustainability

Funding „Innovation Initiative Industrial Biotechnology“







Targets:

- Evaluation of economic and ecological potentials
- Exploitation of new Businesses for Industrial Biotech
- Standardization
- Increasing visibility
- Mobilisation of private capital
- Improving education and training
- Promote new partnerships and form of collaboration
- Evaluate knowledge based bioeconomy for new applications/ventures
- Facilitate the exploitation of biotechnology
- Stay on the level of precompetitive research to justify the funding

IWBio Approach to this Initiative

- Catalyze the formation of innovation alliances
- Identify fields / topics for alliances
- Support the identification of partners to form alliances
- Evaluate the proposals of alliances for strengths and weaknesses – qualification for funding
- Use research alliances as the test case for new approaches to bioeconomy

Status of Strategic Innovation Alliances

Name	Coordinator	Start	Dur [y]	Vol [M€]	Key partners (Industry)	Focus
NatLifE2020	 BRAIN AG	02/13	9	30	BRAIN, AnalytiCon, AB Enzymes, Phyton Biotech, Henkel u.a.	Sustainable and bioactive ingredients for food and cosmetics
ZeroCarbFB	 Emscher- genossenschaft	07/13	9	48	Emscher, BRAIN, Bioeton, Fuchs Schmierstoffe, Südzucker u.a.	Development of microorganisms/ enzymes to utilize waste streams
FuPol	 evoxx technologies GmbH	05/13	5	8	evoxx (formerly evocatal), AB Enzymes, SIKA, Henkel, Coats u.a.	Exploitation and use of proteins in emerging biotechnological appl.
WiPro	 Sartorius Lab Instruments GmbH & Co.KG	Mid- 2014	6	20	Sartorius, Chr. Hansen, Bitburger, Calrsberg, Rentschler, Merz, Clariant	Novel strategies to improve complex biotechnological production proc.
TeFuProt	ANiMOX GmbH	09/14	6	9	ANiMOX, Biolink, Bunge, Clariant, Fuchs Schmierst., HPX Polymers u.a.	Novel technofunctional proteins from agricultural residues
GOBI	 OranoBalance GmbH	12/15	6	9	Organobalance, Evonik Nutrition & Care, Bionorica	Utilization of microorganisms & their products for health, pharma and feed
protPSI	 PreSens Precision Sensing GmbH	End of 2017	N/A	N/A	PreSens Precision Sensing u.a.	Utilization of special characteristics of proteins under pressure
Funktionsopt Biotenside	Dalli-Werke GmbH	N/A	N/A	N/A	Dalli-Werke u.a.	Function-optimized biosurfactants on basis of locally available raw matl.

UfIB – Measures to support the implementation



UfIB established a powerful cross-alliance network

- Qualification program for young scientists supported by the German Federal Ministry for Education and Research (BMBF)
- Provides funding and improved structures to promote PhDs/doctorates
- Offers a supplementary program with workshops and summer schools

UfIB has been initiated in the second half of 2017

- First wave of applications (7) are currently under evaluated by experts and the Project Management Organization Jülich (PtJ)
- Topics for the second wave have just been published

Future

- Bioeconomy is not usually based on public funding (public visibility)
- But the innovation alliances have significantly contributed to see bioeconomy in a new light
- Private funding gets visibility and publicity only after media releases of partners or individual companies
- Expectation is that we will see relevant announcements in the near future