BioEconomy and the Capital Market

Enabling the Biologisation of Industries

Dr Martin Langer
EVP BRAIN AG

Berlin, April 19, 2018
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„Prediction is very difficult, especially about the future.“

Niels Bohr, 1885-1962
Innovation and financing in Biotech-Industries (1)

Key figures of Biotech companies in USA and Germany

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Source: EY German Biotech Report April, 2018

- In Germany, raising money via Venture Capital is an (increasing) issue
Innovation and financing in Biotech-Industries (2)

Comparison of capital raised via IPOs in €m and number of IPOs

- Tech companies get higher valuations in the USA compared to Europe
- 2017: in USA in mean 80 €m raised per IPO vs. 33 €m in EU (similar trend in all years)

Source: BIOCOM AG IPO Report, 2018
Innovation and financing in Biotech-Industries (3)

Fields of activity of European listed companies

- ~9% of the European listed companies are active in the BioEconomy field
- 199 European listed companies (~85%) are active in the pharma-biotech field

Source: BIOCOM AG IPO Report, 2018
4P-Success factors for growing a „hockey stick“ business

Products
- **Market:** position yourself in a growth market
- **Uniqueness:** do not go for “me too” products
- **Novelty:** go for the disruptive products

Patents and People
- **Why you?** define your unique selling propositions
- **Intellectual Property:** build up a strong IP position on products and processes
- **Team play:** you better have a trustful and “smart” team (Tech and Management)

Performance
- **Reliability:** identify the success stories from your past and tell how and where to grow
- **Delivery:** be realistic - under promise and over deliver
- **Fairness:** you always meet twice

Source: Bobby Martin, The Hockey Stick Principles
BioEconomy is a fast growing field

- Growing BioEconomy sales in industry (CAGR 11% in last 15 y)

Source: German Bioeconomy-Council, December 2016, Roland Berger; Grandviewresearch (2016), adapted
Exchange rate 1 € = 1,18 US $; (as of September 29, 2017)
Welcome to BRAIN!
Key facts

- **European leader in BioEconomy**
  - Founded in 1993
  - 8 companies in BRAIN Group
  - >300 staff employed in BRAIN Group
  - Products: Enzymes, Microorganisms, BioActives

- **Three unique selling propositions**
  - Comprehensive BioArchive of natural solutions
    (Result of >450 man years)
  - Unique combination of technological expertise and BioArchive (>350 patents)
  - Successful track-record of delivering B2B products
The BRAIN BioArchive
Proprietary BRAIN BioArchive

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BRAIN’s solutions - validated by a broad customer universe

- In more than 100 collaborations BRAIN provided all-natural ingredient solutions
### Three phases in BRAIN corporate development

#### Phase 1 - Private
**Growth: profit & loans**

- **1993 - 2007**
  - Four founders
  - **Starting capital: 150 T€**
  - Profitable R&D collaboration business
  - No VC included
  - Profit and loans invested in growth
  - Number of employees reflect growth (linear)
  - In 2007, BRAIN employed **60 people**

#### Phase 2 - VC
**Growth: profit & VC**

- **2008 - 2015**
  - Profitable R&D business
  - **VC was raised** for own developments in selected growth fields
  - **Organic and inorganic growth** (first M&As) along the value chain
  - In 2015, **230 people** were employed in the BRAIN Group

#### Phase 3 - Public
**Growth: profit & proceeds**

- **2016 - today**
  - Public company
  - IPO on Feb. 09, 2016
  - First BioEconomy share listed at Frankfurt/M
  - **Capital increase** (10%; 28 m) in Sept. 2017
  - First M&A after IPO in March 2018
  - By the end of March ‘18 **305 people** are working in the BRAIN Group
BRAIN at the capital market

IPO BRAIN AG on February 09, 2016
- Primary shares
- No exit-IPO
- Total issue volume of € 32.5m

Capital increase on September 07, 2017
- Capital increase of up to 10% of new shares
- Net proceeds for BRAIN of € 28 m

Facts and figures
- Current number of shares: 18,055,782
- >6,000 Shareholders
- Market Capitalisation: ~ € 400 m (April 17, 2018)
Research - Development - Production: Examples from the BRAIN pipeline
BioEconomy business examples from BRAIN

Microorganisms
- Market: Green Mining
- Product: Metal binding strains being used in BioXtractor
- Program: ZeroCarbFP
- Support: Bundesministerium für Bildung und Forschung

BioActive compounds
- Market: Sugar replacement
- Product: natural sweetener
- Program: DOLCE
- Support: ROQUETTE & DOLCE Partnership

Enzymes
- Market: Speciality Enzymes
- Products: various
- Program: M&A of Biocatalysts
- Support: BRAIN
Increasing the business along the value chain through the acquisition of the majority stake of Biocatalysts Ltd by BRAIN.
BRAIN Group members along the enzyme value chain

Discovery
- Market Research & Feasibility
- Enzyme Discovery & Host Selection

Development
- Process Development
- Fermentation Scale-up

Production & Marketing
- Regulatory QA/QC
- Manufacturing
- Marketing Sales Distribution

BRAIN Group
How to finance your BioEconomy innovation business?

**Business**

- **Reliability**: is key
- **Difference**: thinking “out of the box” will help
- **Teamplay**: is crucial
- **Honesty**: is the driver

**Finance**

- **Cash**: BioEconomy needs a strong seed financing community (VC and PE)
- **Chance**: BioEconomy “valley of death” smaller compared to pharma biotech
- **Acceptance**: let us work on more IPOs to grow the BioEconomy business
- **Timing**: time is absolutely right now! Let us step ahead together!
Thank you for your interest.

BRAIN Aktiengesellschaft
Darmstädter Straße 34-36
64673 Zwingenberg

+49 (0) 6251-9331-0
www.brain-biotech.de

Your Contact:
Dr. Martin Langer
ml@brain-biotech.de