Biotech in Denmark: trends and challenges

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DANSKBIOTEK

Current affiliations

DANSK BIOTEK – an organisation for danish biotech companies

- Founded in 1987
- 106 members
- Big, small and associated members
- Working to improve framework for biotek in Denmark and make Denmark the best place on earth to do biotech!

DANSKBIOTEK

NOVO NORDISK FONDENS **GYMNASIELÆRERPRIS**

Birgit Sandermann Justesen, Nærum Gymnasium, og Frank Grønlund Jørgensen, Tørring Gymnasium (i midten), blev i 2014 de første modtagere af Novo Nordisk Fondens Gymnasielærerpris.

INSPIRERENDE UNDERVISNING

Novo Nordisk Fondens Gymnasielærerpris er målrettet gymnasielærere, som underviser i biologi, kemi og bioteknologi.

Prisen har til formål at sætte fokus på det høje faglige niveau i den biologiske naturvidenskabelige undervisning i gymnasierne samt at anerkende de gymnasielærere, som har ydet et markant bidrag til den biologiske naturvidenskabelige undervisning.

Prisen er på DKK 50.000. Der uddeles årligt to priser; en øst for Storebælt og vest for Storebælt.

Prisen er indstiftet af DANSK BIOTEK (Foreningen af Bioteknologiske industrier i Danmark) og Novo Nordisk Fonden. Indstilling af kandidater til prisen foretages af landets gymnasierektorer. Blandt de indstillede udvælges prisvinderne af et særligt bedømmelsesudvalg nedsat af DANSK BIOTEK.

Bedømmelsesudvalget består af:

- Formand: Martin Bonde, CEO, Epitherapeutics, og formand for DANSK BIOTEK
- Povl Krogsgaard-Larsen, professor, ph.d., Dr.pharm., Det Sundhedsvidenskabelige Fakultet, Institut for Lægemiddeldesign og Farmakologi, Københavns Universitet
- Rektor Jannik Johansen, Frederiksberg Gymnasium
- Søren Møller, Managing Investment Director, Novo Seeds.

100

Novo Nordisk Fonden bevilger årligt i alt DKK 100.000 til uddelinger af to gymnasielærerpriser.

UDDELT SIDEN:

2014

UDDELES AF:

Et bedømmelsesudvalg nedsat af DANSK BIOTEK, der en brancheorganisation for danske virksomheder, hvis kerneområde er bioteknologi anvendt inden for lægemiddeludvikling og industriel bioteknologi.
http://www.danskbiotek.dk/

YDERLIGERE INFO:

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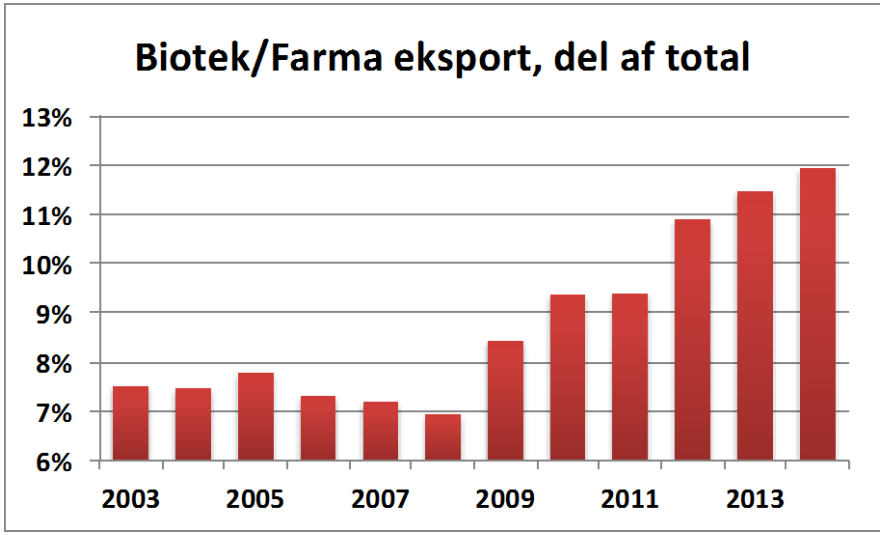
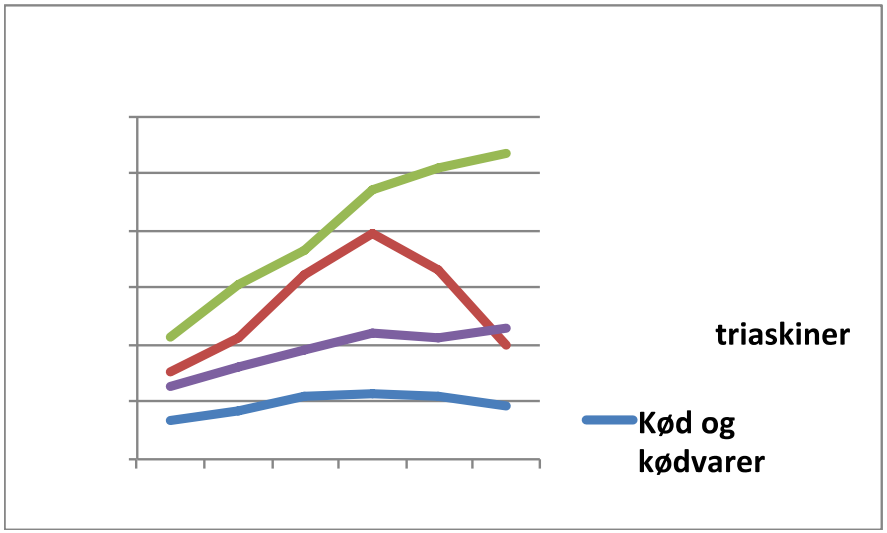
Lægemidler er idag landets største eksportartikel

- De industrier, der idag vokser stærkest (omsætning, ansættelser, eksport), er baseret på avanceret viden og teknologi. Disse inkluderer biotek og farmaceutisk udvikling/produktion.

- Biotek/farma eksport fra Danmark har gennem de sidste 5 år i gennemsnit vokset ca. 12% p.a., og i 2014 repræsenterede denne eksport ca. 74 mia. kr, eller ca. 12% af den samlede eksport.





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Key pharma companies

novo nordisk®

1922

Lundbeck

1915

LEO

1923

ALK ABELLÓ

1908

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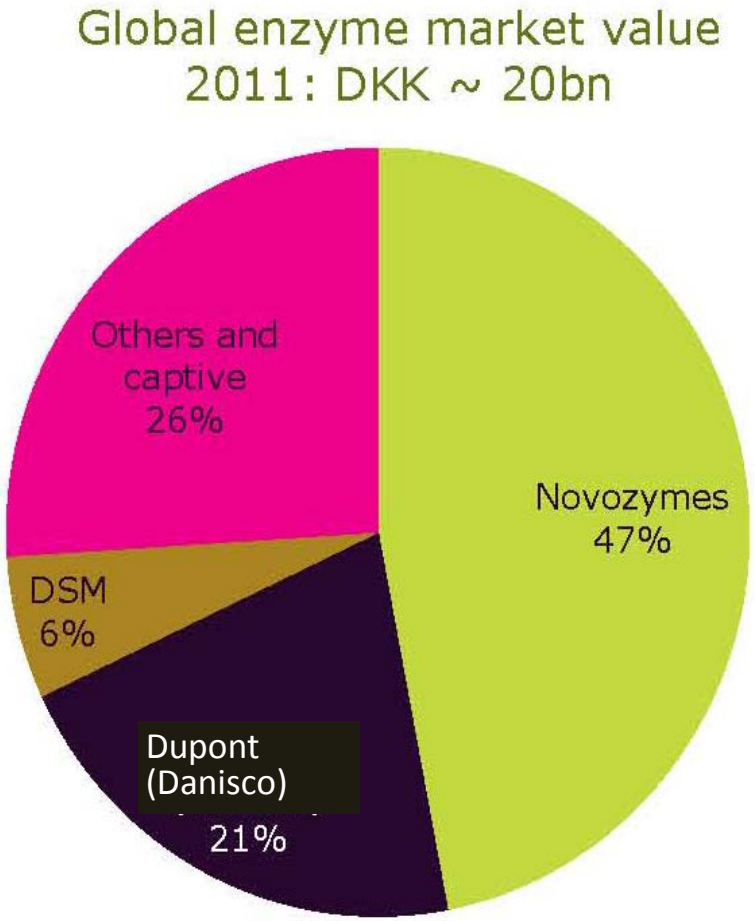
Biologics for pharmaceutical use is an absolute stronghold in Denmark

Denmark is #1 in enzymes for industrial use



Source: Novozymes, Estimate 2012

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Strong VC environment in Denmark

novo

Sunstone Capital

LUNDBECKFOND VENTURES

Novo Seeds

LUNDBECKFOND EMERGE

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Newer biotech companies

BAVARIAN NORDIC

symphogen

ORPHAZYME

Globalisering is here to stay – a challange and an opportunity!

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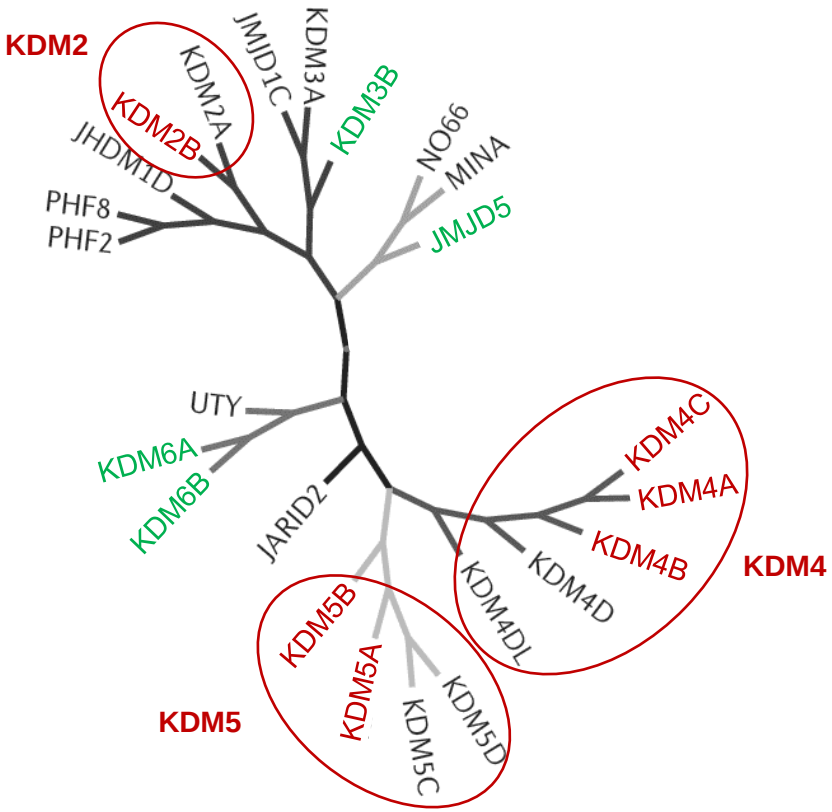
The value chain is eroding

- **2004**: 16 wet-lab chemists (PhDs, other) in Copenhagen, ”standard biology” in-house

- **2015**: Out-sourcing of all wet-lab chemistry, all ”standard biology”

i) Scientist from China has worked in the west for 10+ years
ii) better patent enforcement in China
iii) better english
iv) better internet

World class academic research forms the basis for building world leading epigenetics company (2009-2015)



Oncogene

Tumour suppressor gene

Modified from: Arrowsmith et al. Nat. Rev. Drug. Discov. 2012

Learning to outsource was not trivial, but key to success

What should be outsourced?

When should we outsource?

To whom should we outsource?

How to deal with ”small biotech challenges”?

Σ Hang on to only what you really, really have to – outsource the rest ASAP!

Gilead acquires Epitherapeutics for DKK 444 mill on May 6, 2015

GILEAD
Advancing Therapeutics.
Improving Lives.

EpiTherapeutics

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For Immediate Release

GILEAD SCIENCES ACQUIRES EPITHERAPEUTICS

-- Deal Adds Small Molecule Inhibitors against Targets Involved in Epigenetic Regulation --

Foster City, CA and Copenhagen, Denmark, May 6, 2015 – Gilead Sciences, Inc. (Nasdaq: GILD) and EpiTherapeutics ApS, a privately-held Danish company, announced the signing of a definitive agreement pursuant to which Gilead has acquired EpiTherapeutics for $65 million, subject to certain purchase price adjustments, to be financed through available cash on hand.

EpiTherapeutics has generated a library of first-in-class, selective small molecule inhibitors of epigenetic regulation of gene transcription, in particular histone demethylases. The company's lead pre-clinical compounds are being studied for the treatment of certain cancers.

"Epigenetics is a promising area of research and the EpiTherapeutics team is a recognized scientific leader in this field," said Norbert Bischofberger, PhD, Gilead's Executive Vice President, Research and Development and Chief Scientific Officer. "This therapeutic class represents a strategic fit with our existing research portfolio, including the potential for novel combination approaches. We look forward to working with colleagues from EpiTherapeutics to advance these programs toward clinical development in diseases with significant unmet medical need."

"EpiTherapeutics has done groundbreaking work in a new therapeutic class of small molecule inhibitors with broad implications across various disease states," said Martin Bonde, PhD, EpiTherapeutics' Chief Executive Officer. "We are confident that with Gilead's acquisition of the company, our discoveries will have the best chance to be developed into therapies that will benefit patients."

Investors in EpiTherapeutics are NOVO Seeds, SEED Capital, Lundbeckfond Emerge, MS Ventures and Astellas Venture. Back Bay Life Science Advisors of Boston advised EpiTherapeutics on the transaction.

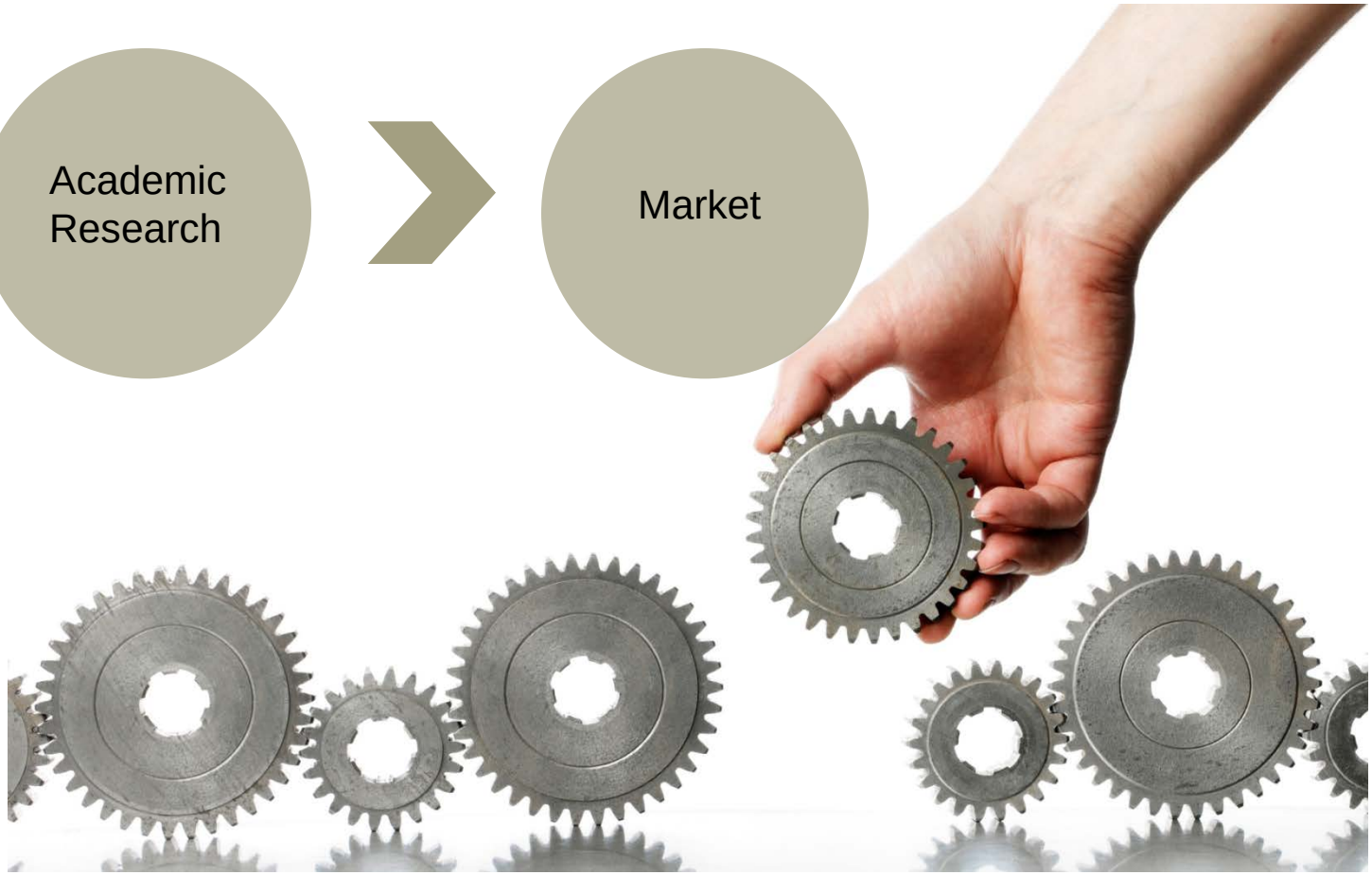
About EpiTherapeutics
EpiTherapeutics is developing novel innovative cancer drugs based on epigenetics, a therapeutic area researched by renowned scientist Professor Kristian Helin and his group at Biotech Research & Innovation Centre (BRIC) at University of Copenhagen. EpiTherapeutics' development programs are focused on enzymes involved in the regulation of transcription in cancer. For more information, please visit: www.epitherapeutics.com.

- more -

Key to growth and wealth is commercialization of innovative research

Academic Research

Market



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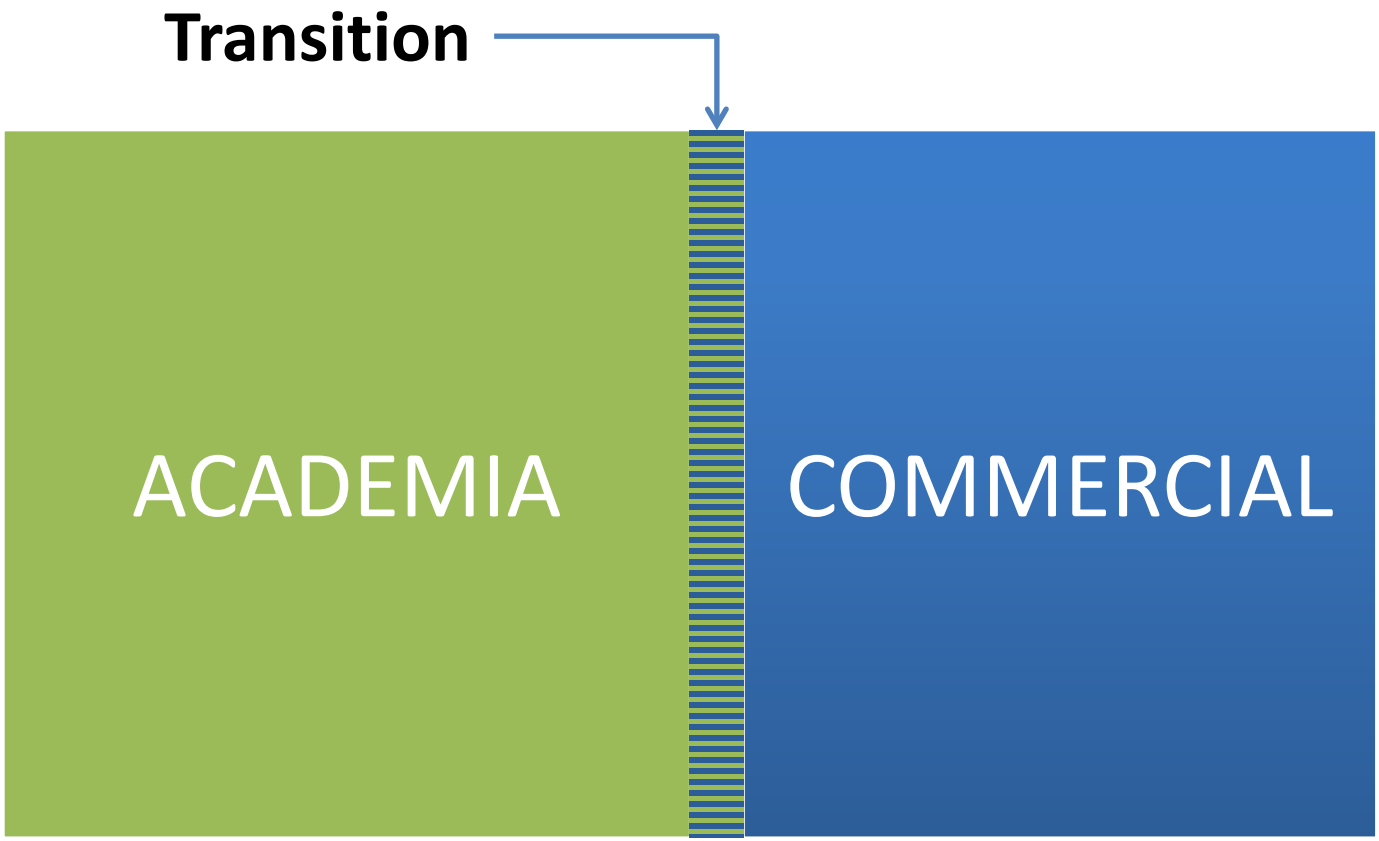
Understanding science and business is key to successful commercialization of research



Conclusions

- Danish biotech has strong and old traditions with biotechnology
- Both pharma and white/green biotech contributes significantly to creation of wealth in Denmark.
- Pharma industry is the largest export industry and growing 12% per year – biological engineering is a cornerstone
- Out-sourcing is becoming increasingly important – what, who and when will be key to success in biotech companies
- Commercialization of academic research and the skill set needed is key to continued success of biotech in Denmark

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