

# Biotechnology as an example of public-private partnering at University of Copenhagen

by

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1993-2002

Head of Department of Molecular  
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2002-2006

Prorector

University of Copenhagen

2006-2008

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# Outline

- Why Biotechnology
- Strategy for Biotechnology at the University of Copenhagen
- Copenhagen Biocenter
  - Planning and building
  - Present status
- Legislation – Strategy - Infrastructure
  - Government
  - University of Copenhagen
- Conclusion

# Why Biotechnology?

- Beer, Pharma and Industrial enzymes.
- Long tradition for cooperation between academia and industry in these areas. **Education & Research**
- Danish Pharma Industry: Export 2009 approx. DKK 42 billion.
- Substantial private funding for basic research
- EU-programmes for funding biotech and medical research
- Special public DK-programmes for funding of infrastructures, research and innovation.
  - Danish Council for Strategic Research
  - Danish Council for Technology and Innovation
  - Danish Research Training Committee (Industrial PhD)

# Private Foundations

- The Novo Nordisk Foundation  
[www.novonordiskfonden.dk](http://www.novonordiskfonden.dk)
  - Granting 2008: DKK 194 millions
    - 2007: KU DKK 600 million Centre for Protein Research
    - 2010: KU DKK 885 million Centre for Basic Metabolic R.
- The Lundbeck Foundation [www.lundbeckfonden.dk](http://www.lundbeckfonden.dk)
  - Granting 2008: DKK 328 millions
- The Carlsberg Foundation [www.carlsbergfondet.dk](http://www.carlsbergfondet.dk)
  - Granting 2008: DKK 176 millions

# Strategy for Biotechnology University of Copenhagen

- 1994-96: KU Rector/Senat selects biotechnology as one of three interfaculty, strategic research and educational areas. Formulation of strategies based on quality assessment.
- 1997: KU report "Strategi for forskning og undervisning i Bioteknologi 1996-2002"
- 1997 : DKK 470 million for building biotec. center

# BioCenter in Copenhagen

## Idea 1996

- To build a public funded BioCentre based on the co-operation between university groups, research and hospital units and industry. And in addition as part of the centre a privately financed and operated biotech science park.
- Vision: To create a strong cross-disciplinary environment that will encourage the rapid development of new ideas from basic research to utilisation and commercialisation.
- Partners: KU-Fac. of Science, KU-Fac. of Health Sciences. H:S Finsen Lab. & Bartholin Inst.
- Science Parks: Symbion A/S?
- Research topics: Molecular biology and molecular biomedical research. (cancer biology)

# Biocenter

- 1997-2000: Negotiations with ministries about the building, and the new unit "BRIC" (Biotech Research & Innovation Centre)
- 2000-2004: Final agreements and contracts about the building and the organisation of BRIC.



# BRIC

## Planning 1998-2003

Biotech Research & Innovation Centre (BRIC) was finally established in 2003 by the Danish Ministry of Science, Technology and Innovation to form an elite centre in biomedical research. In 2005 it became formally a part of KU

BRIC's aims are to:

- perform interdisciplinary, cutting-edge research
- establish a strong research education programme
- attract funding and new research projects
- ensure that research results are used for the development of commercial products
- promote exchange of ideas within the Danish biotech research community

# Biocenter

- 2004-2007: Foundation-stone laying. The construction process.
- 2007 : Inauguration of Copenhagen Biocenter
- 2009: Inauguration Copenhagen Bioscience Park - COBIS

# Copenhagen Biocenter [www.biocenter.ku.dk](http://www.biocenter.ku.dk)

30,600 sq.m. – Building expenses DKK 672 millions.

KHR Arkitekter – Novo Nordisk Engineering – Carl Bro A/S



# Department of Biology in 2009

[www.bio.ku.dk](http://www.bio.ku.dk)

- The Department of Biology is a part of the Faculty of Science. It is organised in 12 sections and 7 centres. Staff: about 400 employees.
- **Sektions at the Biocenter:**
  - Biomolecular Sciences
  - Cell and Developmental Biology
  - Functional Genomics
  - Bioinformatics
  - Total number of persons at the four sections: Staff: 173 - PhD Students: 99 – MSc Stud.: 73

# BRIC in 2009

[www.bric.dk](http://www.bric.dk)

- BRIC is a centre of excellence for biomedical research. The scientists in the centre focus on understanding the molecular mechanisms leading to various diseases, including cancer, CNS-related diseases and metabolic diseases
- 16 research groups
- Staff: 125 – PhD-stud.: 47 – MSc-stud.: 27

# The Finsen Laboratory in 2009

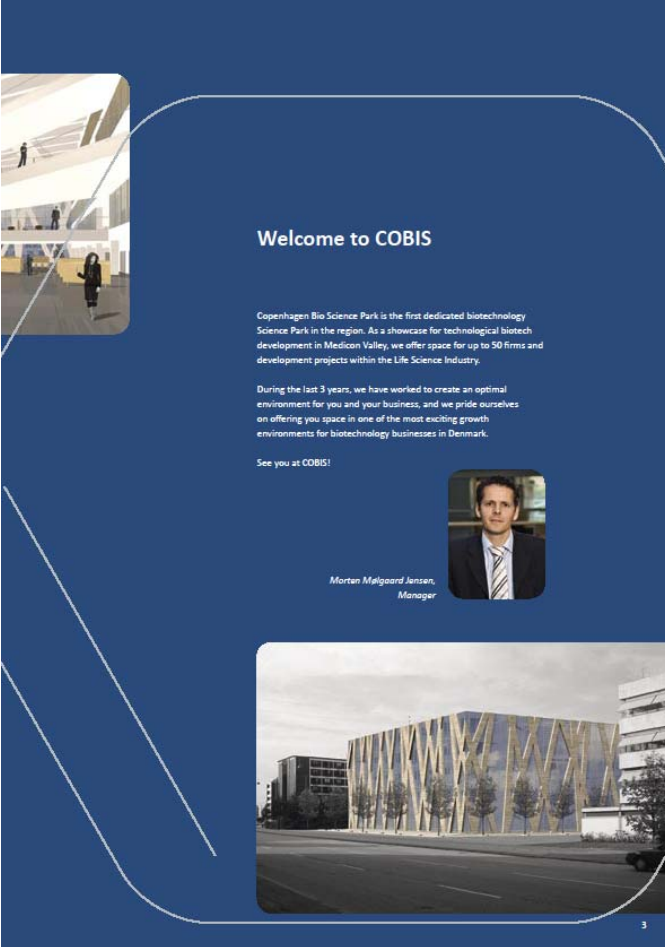
[www.finsenlab.dk](http://www.finsenlab.dk)

- The Finsen Laboratory is a cancer research unit at Rigshospitalet, Copenhagen University Hospital. The aim of the laboratory is to perform basic cancer research and to move the scientific results forward to the clinic. The projects are focused on cancer invasion and metastasis. The research is carried out in a close collaboration between senior researchers, postdocs, PhD- and graduate students and technicians.
- Staff: Scientists 23 – techn/adm. 17. Students 10

# COBIS

Copenhagen Bio Science Park [www.cobis.dk](http://www.cobis.dk)

- COBIS is home to a powerful mix of organizations. Start-ups, mid-size companies and tech trans professionals, to stimulate conversations and connections, investment and innovation. As a showcase for technological biotech development in Medicon Valley, we offer space for companies and development projects within the Life Science Industry.



Welcome to COBIS

Copenhagen Bio Science Park is the first dedicated biotechnology Science Park in the region. As a showcase for technological biotech development in Medicon Valley, we offer space for up to 50 firms and development projects within the Life Science Industry.

During the last 3 years, we have worked to create an optimal environment for you and your business, and we pride ourselves on offering you space in one of the most exciting growth environments for biotechnology businesses in Denmark.

See you at COBIS!

Marten Malgaard Jensen,  
Manager

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# Legislation

- 2001: New Government - "Fra forskning til faktura" – (From research to Invoice).
- 1999/09 Act on inventions at public research institutions.
- 2003/08 The University Act.
- 2004 Bill for an Act on Technology Transfer, etc. at Public Research Institutions



# University of Copenhagen Biotech. Infrastructure and memberships

- 1997 Øresund University [www.oresund.org](http://www.oresund.org)
  - & 1997/2002 Øresund Science Region
  - 1997 Medicon Valley Academy – fundet by EU Interreg II and from 2000 financed by corporate membership.
- 2007 Medicon Valley Alliance [www.mva.org](http://www.mva.org)
- 2007 University of Copenhagen [www.ku.dk](http://www.ku.dk) with 8 Faculties after a merger between:
  - the University of Copenhagen
  - the Royal Veterinary and Agricultural University
  - The Danish University of Pharmaceutical Sciences

# University of Copenhagen

## support for cooperation and transfer

- 2008: "Destination 2012. Strategy for the University of Copenhagen". [www.ku.dk](http://www.ku.dk)
- Research & Innovation (University Division )
  - The Tech Transfer Unit [www.erhverv.ku.dk](http://www.erhverv.ku.dk)
  - The EU office - [www.eu.ku.dk](http://www.eu.ku.dk)
- Biopeople [www.biopeople.dk](http://www.biopeople.dk) (merger BioLogue & Biosys)
- Danish Pharma Consortium
- Science Parks:
  - Symbion - [www.symbion.dk](http://www.symbion.dk)
  - COBIS - [www.cobis.dk](http://www.cobis.dk)

# University Industry Partnering

## The partners and their input

- **Basic research** and **education** at Universities are the primary source for creation of new knowledge and competences.
- Industry is the primary source for converting knowledge into **commercial products** and the creation of growth in the economy of the country.
- Innovation in a knowledge society is based on the **two way collaboration** between the above mentioned partners
- Based on: **Quality and quality**