

# The Danish Biomarker Network

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Vice chair the Danish Biomarker Network



# Agenda

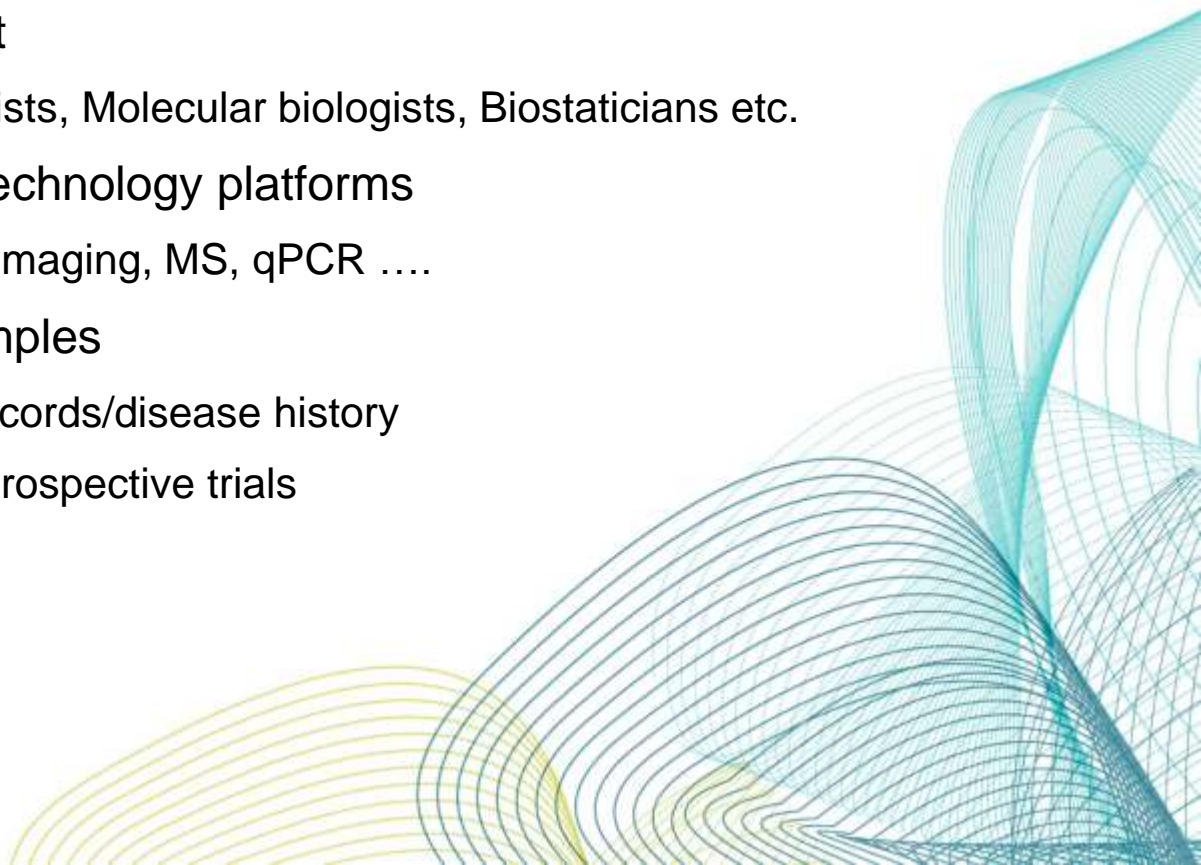
- Biomarkers in brief
    - What, why and how?
  - The Danish Biomarker Network
  - Biomarkers as an emerging growth area in Denmark
  - CEBR perspective
    - Experiences and knowledge sharing
    - collaboration possibilities and Linkage to CEBR members
  - Join us
- 

# What are Biomarkers?

“A biomarker is a characteristic that is objectively measured and evaluated as an **indicator** of **normal** biological processes, **pathogenic** processes or **pharmacological responses** to a therapeutic intervention.”

# How can we efficiently exploit the potential of biomarkers both in the clinic and in the life science industry?

- Biomarker development and validation requires:
  - Multidisciplinary effort
    - MD's, Pharmacologists, Molecular biologists, Biostatisticians etc.
  - The use of different technology platforms
    - IHC, ISH, NGS, Bioimaging, MS, qPCR ....
  - Access to clinical samples
    - Biobanks, patient records/disease history
    - Retrospective and prospective trials



# Establishing the Danish Biomarker network

## The 1st Danish Biomarker Symposium, January 2015

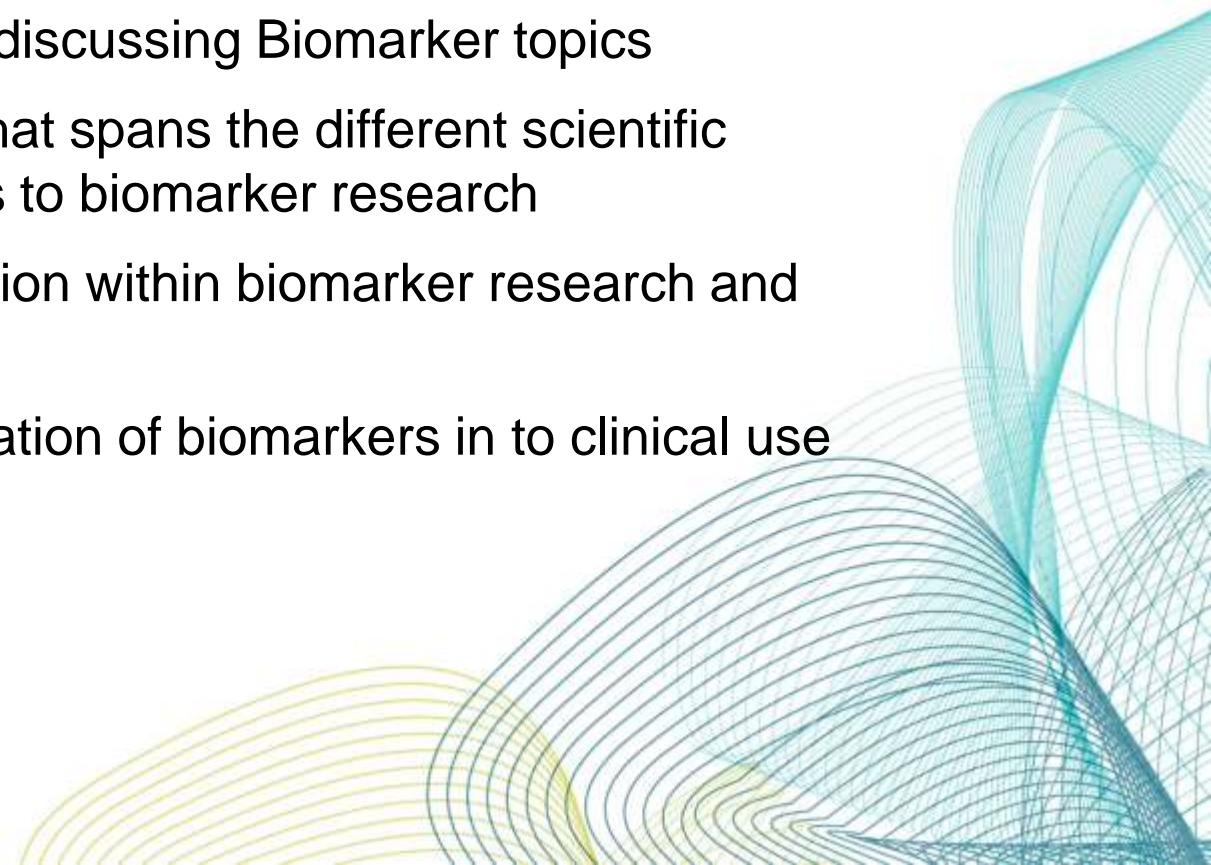


150 people attended the first Biomarker Symposium in January 2015  
-and enrolled as members in the network

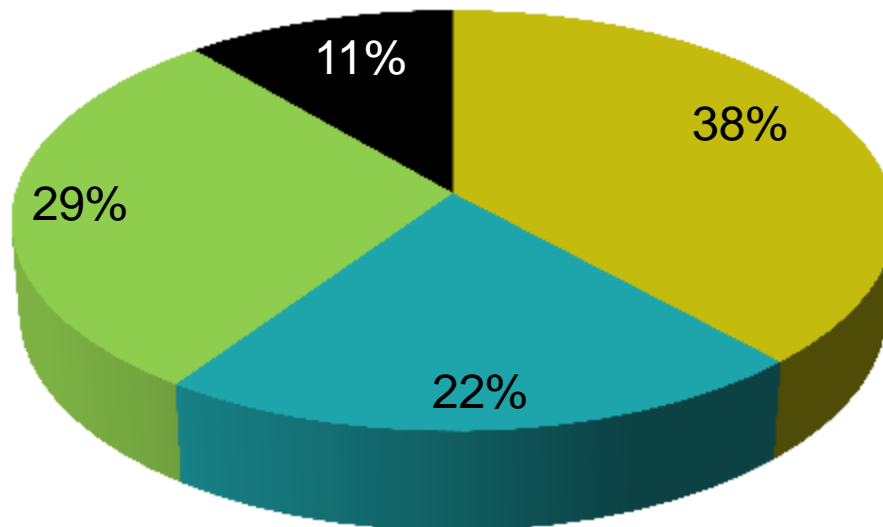
- 2014: **Intensive dialogue** with the Advanced Technology Institution institution Bioneer regarding the need for a Biomarker Network in Denmark
- January 2015: **Co-organization** of the 1st Biomarker Symposium with built-in network initiation incentives
- Establishing the **Danish Biomarker Network in collaboration** with Bioneer
- February Identify focus areas in collaboration with members
- March 2015: Establishing working groups and planning first workshop
- The Danish Biomarker network's website <http://biomarkers.dk/> and LinkedIn Group

One year Anniversary - 208 members of the Danish Biomarker network

# Purpose of the network

- To link researchers and companies within biomarker research
  - To create a forum for discussing Biomarker topics
  - To create a network that spans the different scientific disciplines that relates to biomarker research
  - To promote collaboration within biomarker research and development
  - To facilitate the translation of biomarkers in to clinical use
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# Members of the network

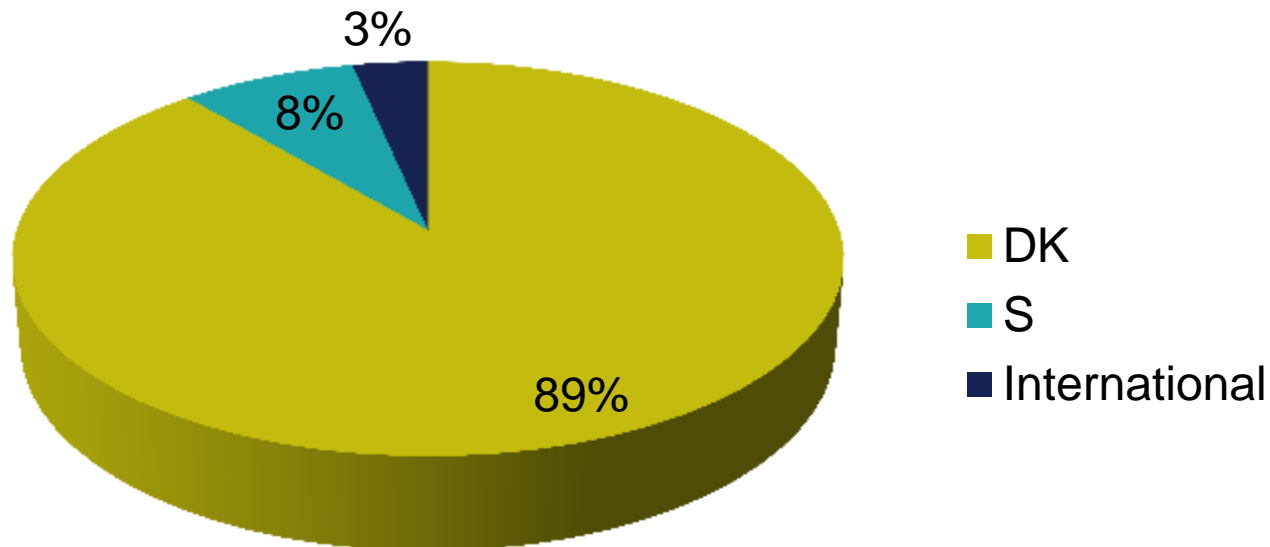


- Companies
- Hospitals/Dept
- Universities
- Other organisations

## 89 organisations represented

- 34 companies
- 19 hospital depts.
- 26 university depts.
- 10 other organisations

# Members – Geographical distribution



89 organisations represented

- 79 from Denmark
- 7 from Sweden



# How can we efficiently exploit the potential of biomarkers both in the clinic and in the life science industry?

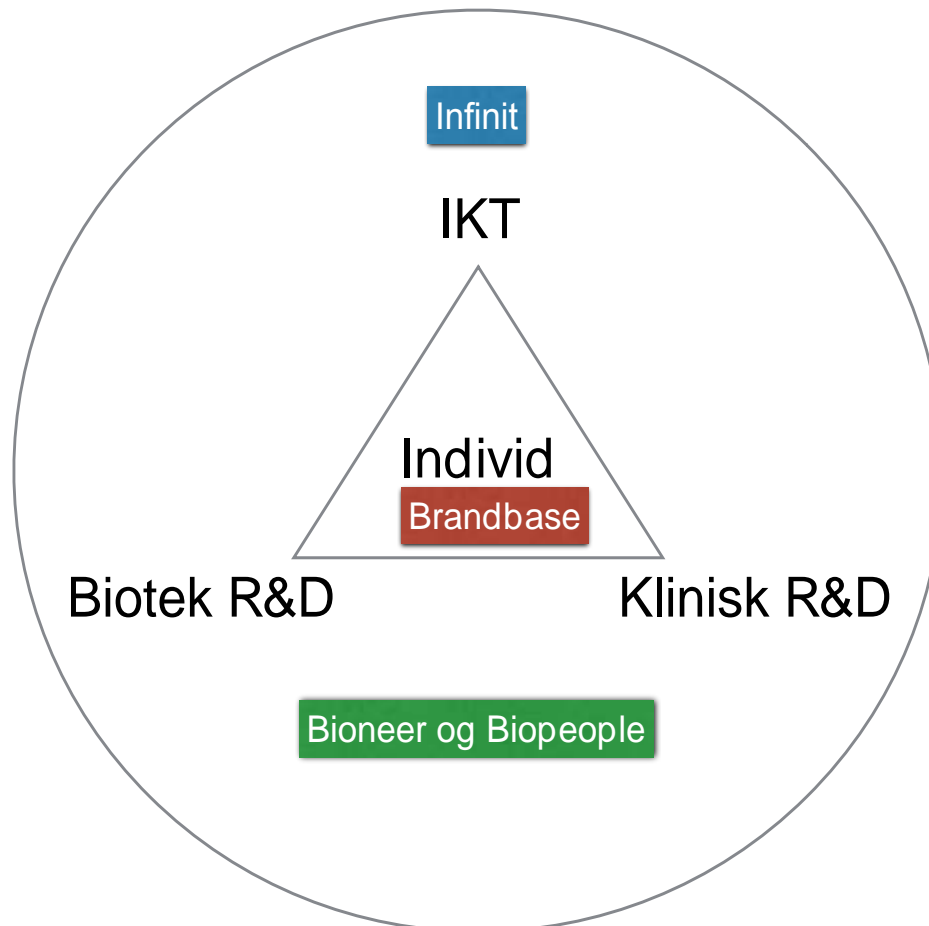
- To benefit the patients / end-users



# The project: Biomarkers as an emerging growth area

- Partners: InfinIT, BrandBase, Bioneer, Biopeople DKK 2.8 Mill/2,5 years + 2.8 mio from industry (in-kind)
- How can we make an efficient ecosystem to get validated biomarkers to the clinic?
- Cross disciplinary approach including ICT, and patients / end-users
- Framework conditions, what do we have (in Denmark) and what is lacking?

# The cross disciplinary approach looking beyond Biotech/Pharma



# The CEBR angle

## **Present**

Study tour?

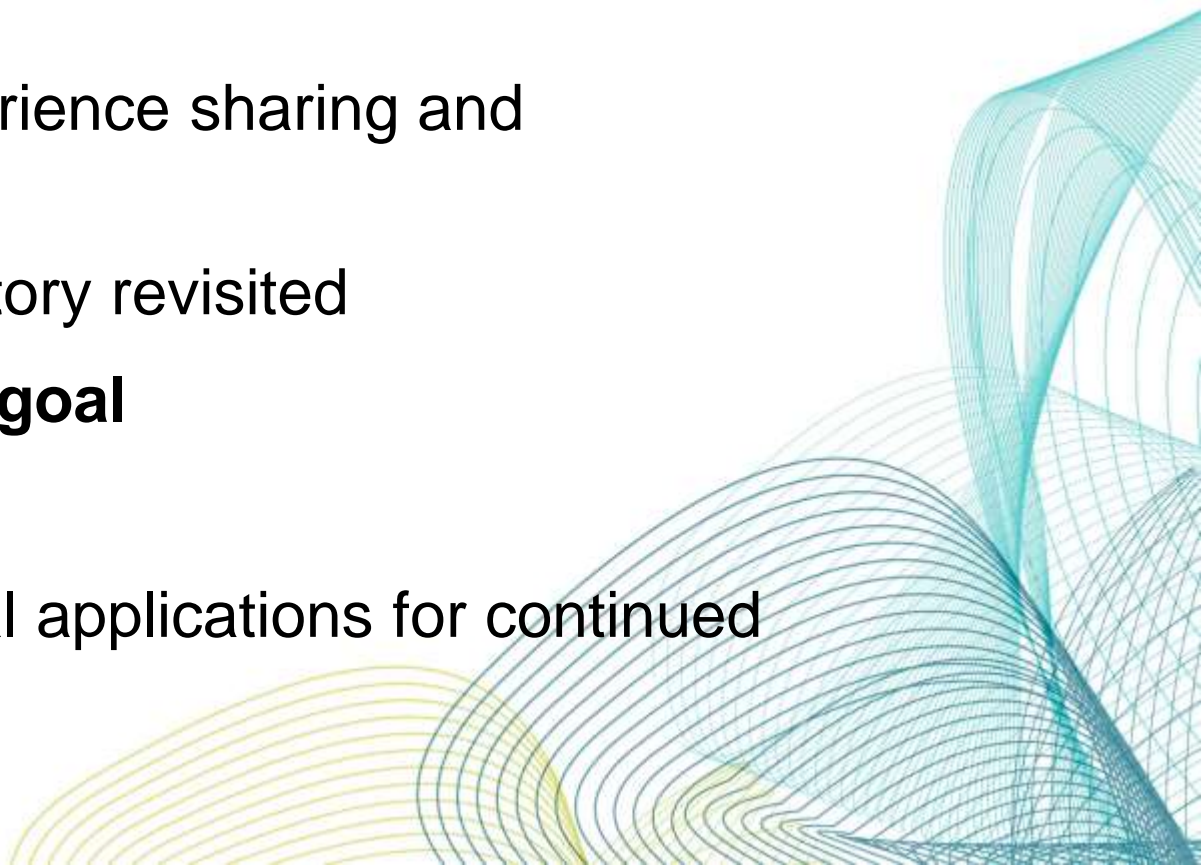
Knowledge and experience sharing and exchange

The Biomarker Directory revisited

## **Future /project end goal**

White paper

Joint European/global applications for continued project funding



# Join us

- The network is open to all interested parties
- It is free of charge
- Currently includes Denmark, Sweden and Germany
- We welcome new members
- Visit us:

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



The Danish Biomarker Network



# Back up slides



# People and organisations behind



Kim Holmstrøm, MSc, PhD, R&D  
Manager

Initiator, co-founder and chairman  
of The Biomarker Network

10+ years of expertise in  
Biomarker R&D

Elias Zafirakos, MSc, EBA, LAICS

Co-founder and vice chairman of The  
Biomarker network

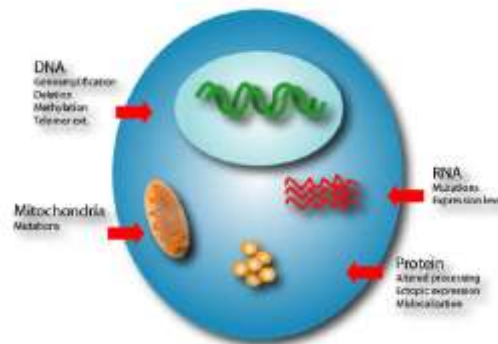
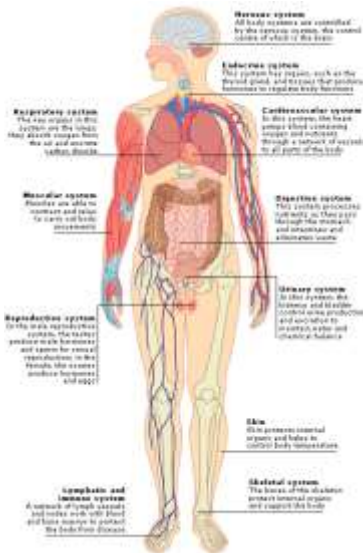
10 years of expertise in cross  
disciplinary innovation management



# What are Biomarkers?

## Classical

- Body temperature
- Blood pressure
- Heart rate, etc.



## Molecular markers

- Proteins (e.g. antibodies, membrane receptors)
- Hormones (e.g. peptide hormones, steroid hormones)
- Carbohydrates (e.g. glucose)
- Nucleic acids (DNA, mRNA, ncRNA)
- Epigenetic factors (methylation, histone modifications)
- Lipids (e.g. cholesterol)



# Why do we need Biomarkers?

- In the clinic to improve:
  - diagnostics
  - prognostics
  - prediction of successful treatment

...with the aim to implement Personalized Medicine

- In pharma to accelerate the drug development process by identifying:
  - mechanism of action of the drug
  - efficacy
  - safety issues
  - PK/PD, metabolic profiles

...more rapidly than conventional clinical endpoints offer

