# Session 1: Academic Alliances: Universities and Pharma Nurturing NextGen Talent

EFSPI 16<sup>th</sup> Statistics Leaders Meeting 2025

Leads: Kyle, Bjarke, Mikala, Per and Anna

# Academic Alliances: Universities and Pharma Nurturing NextGen Talent

The session will explore the journey of Next Gen Statisticians into the Pharma industry, and the role Statistics Leaders can play in shaping University education programs and attracting future talent.



Career Journeys

We will learn about the career journeys of the NextGen Statisticians Julie, Aksel, Christian, Signe and Farzaneh



#### **Fostering Synergies**

How can we bridge Industry and Academia for Mutual Success? We will hear from **Ingrid Sofie Harbo** on her experiences in fostering this collaboration.



We will reflect on our learnings and discuss what and how to translate into actions for both **EFSPI statistics leaders and EFSPI counsel**.

# Next-Gen Statistician: Our Paths to Pharma

Aksel Kaastrup Rasmussen Christian Bjerregård Øland Farzaneh Safavimanesh Julie Funch Furberg Signe Møgelmose

16th EFSPI Statistical Leaders Meeting 12 May 2025



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## **Julie** PhD in Biostatistics



BSc in Mathematics and Economics, MSc in Statistics – UCPH Statistician – Novo Nordisk Industrial PhD in Biostatistics – UCPH and Novo Nordisk Statistical Specialist – Novo Nordisk

- **Reason for becoming a biostatistician:** Application of statistics with meaningful outcome I quickly knew that I wanted to work with biostatistics
- **Reason for joining Pharma:** Big stat community, possibility to use skills in many areas
- Education gaps: More applied statistics (less measure theory) could be more catered towards biostatistics; designing experiments/clinical trials, survival analysis, multiple testing, ...
- **Surprises upon joining Pharma:** SOPs, processes, abbreviations, pharma lingo, and distance from new methodological work
- What will keep me in Pharma: Possibility to grow as a statistician and from a personal development perspective. Possibility to impact drug development



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## **Aksel** Math engineer, PhD



BSc and MSc in Mathematical Modeling, DTU PhD in Bayesian inference, DTU Biostatistician at Lundbeck

#### • Reason for becoming a biostatistician:

A chance to do cool data analysis (Bayesian inference) in a fascinating domain. Used for big decisions!

#### • Reason for joining Pharma:

A real feeling that it matters. A semi-big organization with many possibilities to grow. A fascinating domain. Learning across disciplines

#### • Education gaps:

Causal analysis, survival analysis, clinical trial design

• Surprises upon joining Pharma:

The amount of scientific output and efforts in qc for clinical trials The degree of innovation (positive) Proximity to decision making as a 'data translator' Regulatory interaction is fun







## **Signe** PhD in Statistics & Demography

- Vocational training at CRO; BSc in Economics, HU Berlin
- MSc in Demography, University of Southampton
- MSc in Statistics (biometrics), KU Leuven
- PhD in infectious disease modelling & demography, Hasselt/Antwerp University
- Trial Statistician, Ferring Pharmaceuticals, 2023-
- **Reason for becoming a biostatistician:** Possibility to apply statistics to interesting data and answer relevant questions
- **Reason for joining Pharma:** Meaningful work in private sector with many possibilities to grow as a biostatistician and to work cross-functionally with a common goal
- Education gaps: Mathematical foundations
- Surprises upon joining Pharma: Education gaps less of an obstacle (so far), amount of non-stat. tasks, responsibility early on, role of Stat. vs. Programming/DM
- What will keep me in Pharma: Continuous development individually, as part of a (stat.) team and in drug development in general



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## **Christian** M.Sc. In Statistics



BSc in Mathematics, MSc in Statistics – Copenhagen University

- Student Assistant Statistician Bandim Health Project, Guinea-Bissau
- Biostatistician LEO Pharma 2019 2024
- Biostatistician Zealand Pharma 2024 -.
- **Reason for becoming a biostatistician:** Student Assistant statistician in Africa within epidemiology with focus on childhood mortality and vaccines
- Reason for joining Pharma: Community and specialist role within biostatistics
- Education gaps: See Julie's slide
- Surprises upon joining Pharma:
  - How much project management and presentation skills I would need
  - The "conservative" methods still being used
  - SAS ("closed-source") > R ("open-source")
- What will keep me in Pharma: Improving as a biostatistician; leaders who are open to input, listen, and help mold ideas; belonging to a great team; work-life balance





Photo Credit: Sofie Busk

# Farzaneh

#### **PhD in Mathematical Statistics**



#### B.Sc. in Statistics, Tehran

- M.Sc. in Mathematical Statistics, Stochastic Processes in Forestry, Tehran
- Statistician in a Medical Research Center in Endocrine Sciences, Tehran
- Ph.D. in Mathematical Statistics, Stochastic Processes in Neuroscience, Denmark
- Post-doc in Cognitive Science (Neuroscience, Psychology, Linguistics, Rehab), Tehran
- Assistant Professor of Statistics in Cognitive Science, Tehran
- Statistician in a Pharma Research Center, Denmark
- Statistician in a Pharma CRO, Denmark
- Statistician in a Pharma Company, Denmark

**Reason for joining Pharma:** Possibility of impact on s.th real and meaningful (world's health), possibility of developing my other talents than math, no worries about funding, possibility of communications with non-statisticians

Why not joining earlier: Scary Job advertisements, no experience in industry (too academic to be useful), Reserving my right to wander around and know my applied taste before committing, a doubt and false image of the level of the work (Is it high enough?), loyalty to my dreams in my education field!

**Education gaps:** SAS, Applied examples of frequently used stat concepts in pharma (were assumed trivial or too simple to focus on in academia)!

**Surprises upon joining Pharma:** Wow, someone double-checks my work (such a relief!), They value PM so much that they have a separate team member for that, Medical Writers write the papers, and they do not expect to be a co-author, but then those who do not write even a word must be a co-author!

What will keep me in Pharma: Keep having space to think, discuss and challenge the way we use stat in Pharma, instead of just working to make multiple deadlines like a factory





Business understanding



# **Surprises after joining Pharma**



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# What demotivated us from joining Pharma?

Job advertisements are scary for new biostatisticians

• ADaM, SDTM, ADRG, etc.

Perception that only basic statistics are needed in Pharma

- Pharma uses all the tests our professors
  skipped
  - T-test every day and nothing else

#### Job titles

- Lack of acknowledgement
- Statistician vs. Biostatistician vs. Data scientist etc.
  - Seniority level

All jobs required at least one year of experience in industry

**Big Pharma vs public health** Joining the dark side

**SAS required** e.g., not being able to use R

Limited to Statistics, not involved from A-Z

Questions?

## Table group reflections – 10 mins

NextGen Statistician Career Journeys

• What are your initial reflections on the career journeys? Any surprises? Common denominators? Etc.

#### Session 1 Survey Results (printouts at tables)

• What are your learnings from the survey? Any surprises?

# Fostering Synergy: Bridging Industry and Academia for Mutual Success



Ingrid Sofie Harbo, VP Biometrics, Lundbeck

- More than 30 years of experience as statistician and statistics leader in the pharma industry.
- PhD in Biostatistics, University of Copenhagen.
- Member of Innobooster Panel Committee, Innovation Fund Denmark.
- Former chairperson for Industrial Research Committee, Innovation Fund Denmark.
- Member of SCIENCE Advisory Board, University of Copenhagen.
- Member of ATV's Digital Vismandsråd (Wise counsel), Danish Academy of Technical Sciences.
- Former Chairperson for Employer Panel (Aftagerpanel) for Mathematics and Computer Science



# Fostering synergy: Bridging industry and academia for mutual success

16<sup>th</sup> EFSPI Statistical Leaders Meeting May 12, 2025

Ingrid Sofie Harbo, VP and Head of Biometrics, H. Lundbeck A/S

## Lundbeck at a glance

#### Our focus

We focus on neuro-rare and neuro-specialty conditions, expanding from our psychiatry and neurology legacy. Employees and revenue 5,600 We are approximately 5,600

employees across the company. Our 2024 revenue reached DKK 22 billion

#### **Global presence**

#### + 50 countries

We are headquartered in Denmark and are present in +50 countries.

#### Ownership

#### DKK +500 million

Our largest shareholder The Lundbeck Foundation annually grants DKK 500 million for brain research.

Patients we serve

#### +7 million

Our portfolio of products reaches +7 million people on a daily average

#### R&D investment

#### ~20%

We reinvest ~20% of our revenues into R&D, corresponding to DKK 4.0 billion in 2024. History

#### 1915

Lundbeck was founded by Hans Lundbeck in Copenhagen over a century ago.

#### Commitment

#### +70 years

Lundbeck has +70 years of commitment to neuroscience and to people living with brain disorders.

## Since 2007, Danish universities must establish advisory boards

Bringing universities and surrounding society closer together – focus on quality and relevance of university programs



## Members

Advisory boards are established for an institute or group of related institutes e.g. Math & Computer Science.

External members: collectively have experience and insight into the educational field and the employment areas to which the education programs provide access

Members from university: Dean(s), Head of education at the institutes, a student representative, ...

Meet 2-3 times / year

 $(2^{\dagger})$ 

### Accreditation

Since 2007, it has been a legal requirement that university programs undergo an external quality assurance process called accreditation.

As part of the accreditation process, the university must demonstrate that there is a need for the program and that relevant stakeholders and advisory boards have been involved in the development of the program SCIENCE Advisory Board at UoC

Purpose of the SCIENCE Advisory Board is to provide the faculty management with sparring, critique, and advice

External members: the chairpersons of SCIENCE's six advisory boards and additional members from key players in business, organizations, authorities, educational institutions, etc.

The panel addresses all central themes for the faculty, including research, education, strategies, collaboration with business and authorities, infrastructure, communication, fundraising, etc.

Meet 3 times /year



## Topics for advisory boards: examples

Discussion of how to best support the early contact between employers and students:

- Career fairs
- Bachelor/Masters projects
- Experts from industry as guest teachers

Once yearly, all educational reports are reviewed;

Curriculum, admission of students, drop-outs, completion data, gender distribution, any specific focus areas (or lack of) etc. New master programs e.g. Quantum Information Science

Inspirational presentations from external members:

- Diversity & inclusion programs
- How to onboard new employees, who come from abroad
- Industry projects in high schools

The dean presents current focus areas and initiatives e.g.

Recent reform of universities

- Shorter mater's programs
- Increase in English-taught
  programs
- Dimensioning of programs

Focus on green solutions for the future across programs

Networking and inspiration across university and industries

Focus on early interest for STEM

Lundbeck

STEM: Science, Technology, Engineering & Mathematics

## Engagement is key to mutual success

Strategy 2030



Erhvervslivet skriger p

ChatGPT og lignende v fantastiske værktøjer r imod. Meningerne er r sig til kunstig intelligen kunstig intelligens fung







#### LIFELONG LEARNING PARTNER

 Seeing education as a driving licence to a long working life is not enough. We must be there all the way, says Prorector for Education Kristian Cedervall Lauta. To the left: Birgitte Brix Bendtsen, Chief People Officer, Better Energy

## SOLUTION-ORIENTED

be better at reaching outside the nel knowledge out from the universities, ssen. To the left: Henrik Kai Hansen,

# FOR THE BEST IDEAS

TOI

ue the best idea as soon as they arise – even if tector Henrik C. Wegener. To the left: Jesper opsoe







# Questions for round tables discussions:

<u>Group 1+3</u>:

- 1. What can we as Statistics Leaders do to effectively interact with universities in shaping education programs and strengthen collaborations?
- 2. What can EFSPI Council do to support the interactions with universities in shaping education programs and strengthen collaborations?

<u>Group 2+4</u>:

- 1. What can we as Statistics Leaders do to effectively interact with universities in attracting future talent to the Pharma industry?
- 2. What can EFSPI Council do to support the interactions with universities in attracting future talent to the Pharma industry?

1600 - 1635	Round Table discussions – breakout rooms
1635 - 1655	Networking break
1655 - 1725	Round Table debriefs and key actions for EFSPI Stat Leaders and EFSPI council

# Session 1 Breakout Groups

Group 1 – 00-35

- Justine Rochon
- Pantelis Vlachos (P)
- Kate Peacock
- Jennifer Visser-Rogers (L)
- Frank Langer
- Emmanual Zuber
- Signe Møgelmose
- Kaspar Rufibach
- Bjarke Klein

Group 2 – 00-39

- Rene Kubiak
- Lilla Di Scala
- Florence Cassetsemanaz
- Shahrul Mt-Isa
- Josephine Wolfram (P)
- Aaron Mitchell
- Aksel Kaastrup
- David Wright (L)

Group 3-00-24

- Simon Cleall
- Estelle lambert (L)
- Simon Wilcock (P)
- Jenny Devenport
- Richardus Vonk
- Chrissie Fletcher
- Julie Funch
- Christian Bjerregård
- Mike Branson

## Group 4 -00-42

- Lucy De Costa (P)
- Guillaume Desachy (L)
- Julia Igel
- Janice Branson
- Torsten Westermeier
- Farzaneh Safavimanesh
- Mouna Akacha
- Emma Jones (V)