AI & BIG DATA
L I F E   S C I E N C E

EXPERIENCES FROM
- ✳ **NOVO NORDISK**
- ✳ **NOVARTIS**
- ✳ **BENEVOLENT**
- ✳ **BOEHRINGER INGELHEIM**
- ✳ **LEYMUS GENOMICS**
  and others

relevent*

IN COOPERATION WITH:

MEDWATCH   **IT**watch   **Bech·Bruun**

PARTNERS:

DANSK ERHVERV   IT-Branchen

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KPMG   §sas

In cooperation with

MEDWATCH

MedWatch reports on the pharmaceutical and medtech industry in Denmark, which are important areas beyond the domestic commercial sector and play a vital role for public health and society in general. MedWatch delivers independent, critical and fair journalism and focuses on core substance.

ITwatch

ITWatch closely follows Danish IT and telecommunication players, focusing on the businesses behind the products. We cover strategy, management, results, competition, policy, orders, acquisitions, innovation, careers, job moves and much more. ITWatch delivers independent, critical and fair journalism about the large, leading firms – but also the sub-canopy of small and medium-sized businesses that form the backbone of Denmark's private sector and general society.

Bech·Bruun

Bech-Bruun is a market-oriented law firm offering a wide range of specialist advisory services to large sections of the Danish corporate and public sectors as well as global enterprises. Counting more than 500 experienced and highly specialised employees, of which 69 are partners, we are one of Denmark's leading full-service law firms.

We have the size and specialist skills to field the best legal team at any time. As our client you can expect valuable and value-adding advisory services. You gain access to a wide range of legal specialist skills. But just as importantly, you will find in-depth understanding of your business reality.

Partners

DANSK ERHVERV

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The Danish ICT Industry Association represents +700 ICT companies and is the largest independent representative for the ICT business community in Denmark. We represent the business executives who understand that their position obliges, and we are a community that takes responsibility in relation to the Danish society.

Sponsors

KPMG

KPMG is a global network of professional services firms providing Audit, Tax and Advisory services. We operate in 153 countries and have 207,000 people working in member firms around the world. We work closely with a broad range of clients, such as business corporations, governments and public sector agencies and not-for-profit organisations. We support them in mitigating risks and exploiting business opportunities.

KPMG in Denmark is the fastest growing professional services firm in Denmark, with a revenue of DKK close to 700m in FY18. More than 600 employees and partners ignite potential in clients, delivering value to them with a combination of deep local insight and strong global perspectives.

Ssas

SAS is the leader in analytics and artificial intelligence. Through innovative software and services, SAS empowers and inspires customers around the world to transform data into intelligence. SAS gives you THE POWER TO KNOW® "AI has been an integral part of SAS software for years.

Today we help customers in every industry capitalize on advancements in AI, and we'll continue embedding AI technologies like machine learning and deep learning in solutions across the SAS portfolio." – Jim Goodnight, CEO & Founder, SAS Institute.

LIST OF SPEAKERS

MODERATOR:

Partner
Martin Dræbye Gantzhorn
Bech-Bruun

Brian Mikkelsen
CEO
Danish Chamber of Commerce

Lars Lynne Hansen
Senior Data Scientist, Digital Accelerator
Novo Nordisk

Morten Friis
Principal Consultant
Epista Life Science

Sebastian Brandes
Co-Founder
Criterion AI

Rasmus Brøndum
Founding CEO
Leymus Genomics

Peter Krusche
Associate Director
Novartis

Bryn Williams-Jones
Director of Exploratory Research
Benevolent.ai

Jannik Henriks
Manager
KPMG Switzerland

Manuela Mara Schöner
Project Manager
Boehringer Ingelheim

Henrik Dybdahl Andersen
Direct Sales Executive
Wonderware Scandinavia

Mark Wolff
M.S., Ph.D.
Advisory Industry Consultant &
Chief Health Analytics Strategist
SAS Global IoT Division, SAS Institute

Lars Rinnan
Group Vice President AI & Robotics
Amesto Group

AI & BIG DATA - LIFE SCIENCE

09:00-09:05 — **WELCOME**

Martin Dræbye Gantzhorn, Partner, *Bech-Bruun*

09:05-09:20 — **OPENING REMARKS**

Brian Mikkelsen, CEO, *Danish Chamber of Commerce*

09:20-09:55 — **ENABLING MACHINE LEARNING IN DRUG DEVELOPMENT WITH AN OPERATIONAL DATAHUB**

A key challenge to succeed with machine learning is to link and normalize disparate data sources on which to train algorithms. This is particularly challenging in knowledge-driven industry like drug development. Adoption of knowledge-graph technologies have been a key component in building a datahub for drug development. This increases transparency of the development processes and enables implementation of machine learning across the development value chain.

Lars Lynne Hansen, Senior Data Scientist, Digital Accelerator, *Novo Nordisk*

09:55-10:10 — **NETWORKING BREAK**

10:10-10:40 — **AI COMPANY AND THEIR JOURNEY TO GOOD MACHINE LEARNING PRACTICE**

The use of AI is experiencing unprecedented growth in the Life Science industry. According to the FDA: "Artificial intelligence and machine learning technologies have the potential to transform health care by deriving new and important insights from the vast amount of data generated during the delivery of health care every day." But remember, as the saying goes: "Power is nothing, without control." Join this AI company to learn more about their manufacturing inspection platform and how they're conforming AI to the strict regulations of the Life Science industry. In an interactive session, we'll discuss:

- The 'black box' of the AI algorithm
- Important considerations like intended use, stakeholders, risks/mitigations, and more
- Data – the key to AI. Structure, quantity, features, and bias
- GMLP (Good Machine Learning Practices)

Morten Friis, Principal Consultant, *Epista Life Science*

Sebastian Brandes, Co-Founder, *Criterion AI*

10:40-11:15 — **DATA STORAGE AND MACHINE LEARNING IN THE GENOMICS ERA**

- Data storage considerations for the pharmaceutical industry, clinical genomic labs and national genome programs
- Amount of data generated and stored
- Data safety and storage performance
- Combinations of Cloud and on-site storage
- Meeting the needs for a 1.1 PB of very fast and secure data storage at SciLife Clinical Genomics Stockholm, data requirements for a Population scale genomic project in Scotland
- Machine learning on Petabytes of Genomic data

Human whole genome sequencing is the cornerstone in the national precision medicine projects emerging these years.
The sequencing of short-reads of DNA has mainly been solved, in the next decades three crucial questions must be answered. How to store these massive amount of data being generated every day from national and regional genomics labs, what are the requirements and how do we analyze Petabytes of genomic data.

Rasmus Brøndum, *Founding CEO, Leymus Genomics*

11:15-11:25 — **NETWORKING BREAK**

11:25-12:10 — **DATA SCIENCE IN DRUG DEVELOPMENT RESEARCH – CHALLENGES AND OPPORTUNITIES**

The promise of data science in many industries is the ability to improve decision-making processes continuously by building and utilizing data assets at scale. One challenge building these assets is that datasets in a drug development and healthcare setting may have associated privacy and regulatory requirements or are available only through access-controlled silos. Bringing data together requires careful considerations of privacy, data standards and data security in addition to data science methodology. I will discuss approaches to data science at Novartis based on two scenarios: academic collaborations and enterprise-wide research data sharing in the Data42 project.

Peter Krusche, Associate Director, *Novartis*

AI & BIG DATA - LIFE SCIENCE

12:10-13:10 **LUNCH AND TIME TO NETWORK**

13:10-13:45 **HOW AI IS REVOLUTIONISING DRUG DISCOVERY AND DEVELOPMENT**
In a world where so much has been reimagined by technology, why are hundreds of millions of people suffering from incurable diseases and healthcare spending placing an unsustainable burden on society? Despite an explosion in scientific research and exponential advances in technology, bringing a new medicine to market takes 10+ years, costs up to $2.5bn and has over a 90% likelihood of failure. Bryn Williams-Jones, Director of Exploratory Research, will present an overview of The Benevolent Platform® which is used by our scientists and technologists to find new ways to treat disease, improve the efficacy and lower the development time and costs of new treatments.

Bryn Williams-Jones, Director of Exploratory Research, *Benevolent.ai*

13:45-14:10 **DRIVING VALUE FROM THE MOST PERSONAL OF ALL HUMAN DATA
– GENOMIC DATA**
Technological advances, to process large data volumes and generate deep insights, is enabling Life Sciences companies with discovering and taking forward new personalized drugs. With the explosion in health data, including genomic data, enabled by the exponential growth in computing power and the commercialization of wearable technologies such as smartphones, fitness trackers and heart rate monitors, Life Sciences companies stand on the verge of unprecedented opportunities. These opportunities also bring with them risks, leading to a change in the way the information is gathered, stored, analyzed and used in AI; with privacy, reliability, and security posing as core challenges.

Jannik Henriks, Manager, *KPMG Switzerland*

14:10-14:25 **NETWORKING BREAK**

14:25-15:00 **BLOCKCHAIN TECHNOLOGY
– USE CASES IN THE PHARMACEUTICAL INDUSTRY**
• Introduction to Blockchain
• Relevant use cases in the pharmaceutical industry
• Current pilots & projects
• Challenges & limitations

Manuela Mara Schöner, Project Manager, *Boehringer Ingelheim*

Manuela Maria Schöner is Project Manager in the Corporate Strategy & Consulting division at Boehringer Ingelheim. She holds a triple degree in Finance & Economics allied with several years of professional experience in management consulting & data analytics.

15:00-15:30 **HEALTH CARE IN THE AGE OF INTELLIGENT MACHINES**

Mark Wolff, M.S., Ph.D. Advisory Industry Consultant & Chief Health Analytics Strategist, SAS Global IoT Division, *SAS Institute*

Dr. Wolff has more than 25 years of experience in the health and life sciences industries as a scientist and analyst working in the US and Europe. Mark is recognized as an accomplished practitioner and thought leader in the development and application of advanced and predictive analytics to complex problems in healthcare. His current focus is on the development and application of machine learning approaches to real time sensor/IoT data in support of health outcomes and safety research, visualization and development of intelligent, decision support systems.

15:30-15:40 **BREAK**

15:40-16:10 **BIG DATA & MANUFACTURING ANALYTICS IN PRACTICE**
More control over the quality of produced products and make savings visible by applying Manufacturing Analytics on the existing data. During this interactive presentation you will learn how analysis of large amounts of data provides a source of valuable information for A-brands producers. The information obtained enables global players in the Food and Life Science industry to better control the quality of their products and structurally achieve substantial raw material and energy savings.

Henrik Dybdahl Andersen, Direct Sales Executive *,Wonderware Scandinavia*

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16:10-16:45 **THE WORLD IN 2029**

The lecture takes the audience on a journey into the future to the year 2029, where computers have as high processing power as the human brain. This means that machines can do just about anything a human can, only faster and better. What does the world look like then? This is not a doomsday lecture - quite the contrary. Maybe poverty, famine and environmental problems are eliminated? The lecture tells how this might happen. The lecture will include my take on the life sciences going towards 2029.

Lars Rinnan, Group Vice President AI & Robotics, *Amesto Group*

Lars Rinnan is an experienced leader, futurist and speaker, who speaks passionately about Artificial Intelligence and Exponential Technology. He is frequently used as a lecturer and is an avid writer and blogger. Lars has more than 25 years management experience, and over the course of 7 years has started 6 companies within AI, BI & Analytics, all joined together in Amesto NextBridge AS. The company has recently established an office in Copenhagen.

16:45-16:55 **CLOSING REMARKS**

Martin Dræbye Gantzhorn, Partner, *Bech-Bruun*

REGISTRATION & VENUE

REGISTRATION FEE

Early bird by 25 October 2019	Regular fee after 25 October 2019
kr. 4.995,- (ekskl. moms)	kr. 5.995,- (ekskl. moms)

Registration fee includes conference delegate material, refreshments and lunch.
Accommodation is NOT included.

3-AT-2 DISCOUNT
3 delegates from the same company, that register at the same time, pay the price of 2

Members of *The Danish Chamber of Commerce* and *The Danish ICT Industry Association* get a
member discount – please inform us about your membership when registering.

DISCOUNTS CAN NOT BE COMBINED

WHERE
Charlottehaven, Hjørringgade 12C, 2100 København Ø, telephone +45 3527 1500

WHEN
Tuesday 19 November 2019

REGISTRATION
Registration at info@relevent.dk
– please contact +45 28305445 or +45 41951429 with any questions.

Cancellations must be given in writing to info@relevent.dk and will be subject to a fee.
Cancellation fee **before** 5 November 2019 – 10% of registration fee.
Cancellation fee **before** 12 November 2019 – 50% of registration fee.
Cancellation fee **from** 15 November 2019 – no refund, thus 100% of registration fee.

To avoid cancellation fees – you may transfer your registration to a colleague.
Please inform Relevent prior to the conference in writing to info@relevent.dk