CONFERENCE

25 NOVEMBER 2020 * COPENHAGEN

AI & BIG DATA
LIFE SCIENCE

EXPERIENCES FROM

NOVO NORDISK * RIGSHOPITALET * D-WAVE
DANISH MEDICINES AGENCY * STUDIES&ME
SECURE AI LABS * GOOGLE * ENVERSION
INTOMICS

relevent*

IN COOPERATION WITH

MEDWATCH ITwatch Bech-Bruun

PARTNERE

DANSK ERHVERV IT-Branchen

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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.

PARTNER

DANSK ERHVERV

Dansk Erhverv non-profit organization whose goal is to make running a business easier for our members. By means of political influence and expert advice to our members, we strive to create conditions that will make it attractive to do business in a globalized world. Furthermore, we seek to ensure development opportunities are maximized for the growth industries by increasing the competitiveness of our members.

Dansk Erhverv also acts as the chief negotiator on behalf of its members on a number of collective agreements with the trade unions. These agreements constitute the basic framework for wages and working conditions for employees in the majority of companies in Denmark.

IT-Branchen

The Danish ICT Industry Association (IT-Branchen) works to create a strong and digital community which exploits the full potential of the technologies for the benefit of the economy, society and the individual. Through events, network and insights we build on a strong professional community to ensure a competitive and digital Denmark.

SPONSOR

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.

LIST OF SPEAKERS

Moderatorer:

Martin Dræbye Gantzhorn
Partner
Bech-Bruun

Peter Lind Nielsen
Senior Associate
Bech-Bruun

Emil Kjeldahl Bjerregaard Bjerrum
Senior Associate
Bech-Bruun

Alexander Norup Nielsen
Manager
Danish Medicines Agency

Thomas Senderovitz
CEO
Danish Medicines Agency

Professor of Infectious Diseases MD
Jens Lundgren
DMSc, Senior Consultant, Academic Chair, Director
Rigshospitalet

Tove Holm-Larsen
CEO
A-Evidence

John Zibert
Chief Medical Officer
Leo Innovation Lab
& CEO
Studies&Me

Hossein Sadeghi
Senior algorithm researcher
D-Wave Systems Inc. &
Investigator
Creative Destruction Lab

Anne Kim
Co-Founder and CEO,
Secure AI Labs

Anders Rething Borglykke
Director Data Analytics
Novo Nordisk

Claudio Garutti
Cloud Architect
Life Sciences
Google Cloud

Ph.D Thomas S. Jensen
M.Sc (Bioinformatics)
CEO
Intomics

Bo Thiesson
President AI
@enversion
@kaunt

PROGRAM

09:00-09:05 WELCOME
MARTIN DRÆBYE GANTZHORN, PARTNER, BECH-BRUUN

09.05-09.50 AI – IPR, REGULATORY AND LIABILITY ISSUES, CHALLENGES AND OPPORTUNITIES

Using AI is in almost every respect travelling uncharted water and legal uncertainty is only one of your – major – concerns. How is AI likely assessed and judged in an existing legal framework that was written before AI was even thought of? How is AI IPR protected and is the result or output from the AI protected under the IP regulations? If so, then who is the author and who is the legal owner? Can AI carry out regulated activities such as healthcare services or would that be governed as a medical device? Who is responsible for defects in the AI and if the AI is causing damage? Is the developer to blame? The trainer, the user, or the owner? Is AI considered a product regulated under product liability and does it fall within the normal scope of existing insurance coverage?

Peter Lind Nielsen and **Emil Kjeldahl Bjerregaard Bjerrum**, Senior Associates, *Bech-Bruun*

Alexander Norup Nielsen, Manager, *Danish Medicines Agency*

09.50-10.30 USING BIG DATA ANALYTICS IN A NEW PARADIGM FOR REGULATING MEDICINE

Denmark has one of the most extensive health data registries in the world. The huge amount of patient-level data on everything from treatment regimens over experienced adverse effects to socioeconomic factors constitutes an unique possibility for the use of big data analytics to discover hidden patterns to the benefit of the patients. Another aspect of the use of data analytics on health data is the potential to create a new paradigm for approval of new medicines. By tracking adverse effects on a large scale in real time, it will be possible for the regulators to approve drugs faster and act on signals if unexpected adverse effects present themselves. It will reduce the entry barriers for new drugs to go to market while maintaining the high safety standards currently in place. In addition, regulators must build data analytical capabilities within analyzing drug development data (e.g. CDISC data) in order to ensure better quantitative scientific advice and continuous regulatory evaluation of new medicines.

Thomas Senderovitz, CEO, *Danish Medicines Agency*

10:30-10:45 NETWORKING BREAK

10:45-11:20 MEDICAL ARTIFICIAL INTELLIGENCE

Use AI to support clinical decision making in real life, in care of sick patients.

Professor of Infectious Diseases MD
Jens Lundgren, DMSc, Senior Consultant, Academic Chair, Director, *Rigshospitalet*

11:20-11:55 DISRUPTION OF A SLEEPING GIANT: HOW AI AND BIG DATA ARE CHANGING THE DRUG DEVELOPMENT PROCESS

Big data and AI are about to change almost all elements of the drug development process. FDAs and EMAs new focus on Real World Data have given tail wind to this trend and huge Pharma companies have followed suit, e.g. Novartis is now running a 'Secondary Data First' policy.

Join us as we delve into two practical examples of how big data and AI are disrupting drug development. The first example illustrates how big data can be used to inform and tailor clinical trials to decrease the risk of trial failure and minimize the number of patients needed. The second example demonstrates how AI can improve meta-analysis, thereby increasing the speed of transforming published data into better and fully updated medical treatment of patients.

Tove Holm-Larsen, CEO, *A-Evidence*

11:55-12:55 LUNCH AND TIME TO NETWORK

12:55-13:30 NOVEL DISEASE PHENOTYPES BASED ON PASSIVE SMARTPHONE DATA

This talk will showcase how big data obtained from patients smartphone can be utilized in improving disease understanding. Furthermore, he will also discuss how we can engage patients in providing researchers with big data of behavioral character in a clinical trial setting.

John Zibert, Chief Medical Officer, *Leo Innovation Lab* & CEO, *Studies&Me*

13.30-13.35 SHORT BREAK

13:35-14:00 *ONLINE* -THE APPLICATIONS OF QUANTUM COMPUTING IN PROTEIN DESIGN.

After introducing quantum annealing and its applications, I'll expand on one of the applications that potentially can be used to design new enzymes and proteins.

Hossein Sadeghi, Senior algorithm researcher *D-Wave Systems Inc.* & Investigator, *Creative Destruction Lab*

PROGRAM

14:00-14:15 NETWORKING BREAK

14:15-14:45 *ONLINE* -FEDERATED LEARNING: EMPOWERING MACHINE LEARNING WITH MORE SECURE ACCESS TO DATA FOR FASTER COLLABORATION AND MORE ACCURATE MODELS

Current standards for sharing data in life sciences are archaic, slow, and insecure—hard drives mailed across countries, physical transportation of data scientists, or untraceable copies of "anonymized" data sent through digital means. Federated Learning allows data scientists to train predictive models and glean insights, while maintaining the privacy of the data as well as intellectual property of the analysis & code. Because data is never transferred, analysis can be conducted while data owners maintain complete ownership of the data. In this talk, Secure AI Labs will be discussing:

- GDPR compliant methods of using data without moving or even seeing data
- Federated Learning
- Secure Enclave CPU's
- A case study with a pharmaceutical partner that federated microbiome algorithms across 5 hospital datasets for powerful insight into the genes driving irritable bowel disease.
- Future applications in ICU management, drug discovery, and other life sciences use cases

Anne Kim, Co-Founder and CEO, *Secure AI Labs*

14:45-15:25 REAL-WORLD DATA AND ADVANCED ANALYTICS IN DRUG DEVELOPMENT – FROM THE SMALLEST INSIGHTS TO AI

My talk will focus on how our data scientist create value from real-world data by creating insights and evidence throughout the product lifecycle. I will share examples of new types of (big?) data generated as well as examples where advanced analytics generates valuable insights and automates manual processes.

Anders Rething Borglykke,
Director Data Analytics, *Novo Nordisk*

15:20-15:35 NETWORKING BREAK

15:35-16:05 BIG DATA IN PRACTICE: LIFE SCIENCES IN THE CLOUD

The life science industry has a rich ecosystem of transactional tools built for one specific purpose, whether it is to collect data in a clinical trial, to track payments, or other. The challenge often lies in having one service where this data, once useful, could be of any value ever again. This talk is an introduction to Google Cloud for the life sciences, with a particular focus on the service that is synonymous with big data at Google - BigQuery - and how it can be leveraged by this industry to get more value from more data.

Claudio Garutti, Cloud Architect, *Life Sciences, Google Cloud*

16:05-16.35 GRASP THE EMERGING OPPORTUNITIES IN THE BIG DATA AND AI ERA

We are witnessing a data explosion with the potential to transform almost all of the drug discovery and development processes. However, to fully harness the emerging opportunities, adapting your data analytics approach to the data situation is critical. In very data rich projects, sophisticated AI models, such as deep learning, may successfully be used, while in projects with less data, an 'AI on small data'-approach may be needed instead. The talk will include examples of how AI, machine learning, and human intelligence can be used, with 'big' and 'small' data, to improve drug discovery and development outcomes

Ph.D Thomas S. Jensen, M.Sc (Bioinformatics), CEO, *Intomics*

16.35-17.00 XAI IS A NECESSARY PRECONDITION FOR SUCCESS WITH AI IN CLINICAL / BIOMEDICAL RESEARCH

You may ask yourself what exactly is decisive for how a model predicts as it does? Honestly, it is a complicated talk, but a really important one. Because what are the models worth if they cannot explain why they decide as they do? Nothing. It is crucial that the models when they enter real-life and are used by clinicians can explain the foundation of their decisions. Therefore, it is really is a fantastic feeling that we have now developed models that can explain to the clinician which electronic health data (EHRs) the prediction is based on.

Bo Thiesson, President AI, *@enversion & @kaunt*

17:00-17:05 CLOSING REMARKS

Martin Dræbye Gantzhorn, Partner, *Bech-Bruun*

PRISER & PRAKTIK

REGISTRATION FEE

REGISTRATION	Early bird by 28 october 2020	Regular fee after 28 october 2020
	DKK 4.995,- (+ VAT)	DKK 5.995,- (+ VAT)

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, telefon +45 3527 1500

WHEN

Tuesday 25 November 2020

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 10 November 2020 - 10% of registration fee.*

Cancellation fee before 17 November 2020 - 50% of registration fee.

Cancellation fee from 20 November 2020 – 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

**Due to CORONA it is possible to cancel your registration up till 2 weeks before the date of the conference WITHOUT any cancellation fee.*

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