

# NORDIC PRECISION MEDICINE FORUM

28-29 APRIL 2022 STOCKHOLM

## CONNECTING THE PRECISION MEDICINE ECOSYSTEM TO OPTIMISE PATIENT ACCESS AND ADVANCE REAL-WORLD IMPLEMENTATION

### 40+ EXPERT SPEAKERS INCLUDING:

Richard Rosenquist Brandell  
Professor of Clinical Genetics, **Karolinska Institutet**

Bettina Lundgren  
CEO, **Danish National Genome Centre**

Joni Komulainen  
Senior Ministerial Adviser, **Ministry of Social Affairs Finland**

Kari Stefansson  
CEO and Founder, **deCODE Genetics**

Grethe Synnøve Foss  
Project Manager, **Senior Adviser and Project Leader Personalised Medicine Norwegian Directorate of Health**

Professor Dame Sue Hill  
Chief Scientific Officer for England and Senior Responsible Officer for Genomics, **NHS England and NHS Improvement**

Paul Franks  
Scientific Director in Clinical Science, **Novo Nordisk Foundation**

Seppo Vainio  
Professor, Director, Biocentre Oulu, Borealis Biobank of Northern Finland,  
Faculty of Biochemistry and Molecular Medicine, **University of Oulu**

### PARTNERS:

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Genomic Medicine Sweden

## WELCOME TO NORDIC PRECISION MEDICINE FORUM 2022

**Since 2016, this conference has brought together the leading experts from government, industry, technology, research and healthcare to share learnings to help advance the implementation of Precision Medicine. We can't wait to return in 2022!**

With continued high-levels of investment, rich biobank and cohort data – as well as a solid commitment from Governments to lead the field of Precision

Medicine in the Nordics – the region continues to flourish and excel to move Precision Medicine from the bench, to the patient.

Since our last meeting in 2019, there is much to talk about, with scientific breakthroughs across Precision Oncology and rare diseases leading the field. However as with any transformation of this scale – there is much still to be done to seize the full potential and opportunity.

With a focus on strategy, innovation, real-world implementation, research and discovery, the Nordic Precision Medicine Forum is your chance to unite with colleagues across the ecosystem to discuss how to increase patient access and enable implementation into every day, routine medical practice.

Join us for 2 days to step back and reflect, to collaborate and learn – and get inspired!

### Key themes for 2022 include:

- Large-scale clinical trials and how these are supporting next-generation developments in the Nordics
- Advancing the application of multi-omics – from the lab and into practice
- Technology advances in machine learning and AI and how that is advancing Big Data analysis
- Next thinking to take Precision Medicine beyond genomics
- IVDR implementation and managing the roll-out for the Nordics genetic testing market
- Integrated approaches to delivering the real-world implementation of Precision Medicine in the hospital
- Unblocking data legislation barriers to enable secondary-use of patient data
- Novel approaches to biomarker discovery

*And much more!*



# 5 REASONS TO JOIN US IN STOCKHOLM 28-29 APRIL 2022



Pick and choose from 35+ sessions and access a wide-range of case studies, research projects, novel applications, policy developments and innovative thinking



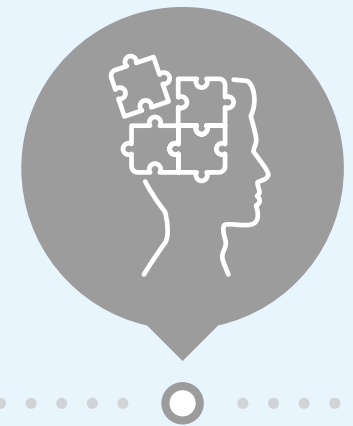
Access senior influencers, project leaders and change-makers from across the region – all in one place – for a networking and collaboration opportunity like no other



Share your insights and be part of the conversation through panel discussions, Q&A sessions and small-group discussions throughout the programme



Put your questions to 40+ top experts from across the Nordics ranging from government, industry, technology, research and healthcare



Whatever your contribution to advancing Precision Medicine, walk away with new ideas and connections to inspire your next project, solve critical challenges and be a part of shaping the future

## DAY 1 – THURSDAY 28 APRIL 2022

**09.45** Registration and Networking Coffee

**10.30** Opening remarks from the Chair

*Richard Rosenquist Brandell, Professor of Clinical Genetics, Karolinska Institutet*

### DELIVERING THE VISION

**10.40 Nordics Update**

**State of the nation: Implementation progress report from across the Nordics**

- From bench to patient: Reviewing progress across Nordics countries
- What have been the lessons to date: What works, what doesn't, where have been the most interesting results?
- How are countries collaborating on a Nordic level?
- Contrasting bottom-up vs top-down approaches

*Bettina Lundgren, CEO, Danish National Genome Centre*

*Kari Stefansson, CEO and Founder, deCODE Genetics*

*Grethe Synnøve Foss, Project Manager, Norwegian Strategy for Personalised Medicine at the Directorate for Health and Care*

*Richard Rosenquist Brandell, Professor of Clinical Genetics, Karolinska Institutet*

**11.50 Keynote**

**From research to regular use: Establishing the NHS Genomic Medicine Service**

This session will look at one of the most advanced Precision Medicine programmes in the world and share behind-the-scenes insights into the practical steps taken - at both a national and local level - to unlock largescale implementation.

*Professor Dame Sue Hill, Chief Scientific Officer for England and*

*Senior Responsible Officer for Genomics, NHS England and NHS Improvement*

**12.20 Lunch**

**13:30 Panel Discussion**

**Precision Medicine beyond genomics**

With progression in multi-omics stalling and the cost-benefit analysis not always adding up, in this discussion we'll review how to take Precision Medicine beyond genomics in practice. We'll also explore the development and application of functional analysis and how this is being used as a precision medicine tool alongside genomic-focused approaches to improve targeted drug development and accelerate clinical implementation.

*Paul Franks, Scientific Director in Clinical Science, Novo Nordisk Foundation*

*Henrik Ullum, CEO, Statens Serum Institute*

**14.10 Presentation**

**Working with Government to create an implementation roadmap in Sweden**

- Working as an ecosystem to set out to Government the specific requirements for full implementation
- Establishing milestones and priorities to deliver on the vision of Precision Medicine in the next 5 years
- Accelerate and move forwards: Next steps to build the infrastructure for patient access

*Frida Lundmark, Policy Manager, Lif*

**14:40 Refreshments & Networking**



## DAY 1 – THURSDAY 28 APRIL 2022 (continued)

### TECHNOLOGY & INNOVATION - WORKSHOPS

#### 15.10 Workshops

These focused, interactive sessions give you the opportunity to discuss a key topic of interest to you in a more participative format. Each session will be led by a facilitator who will lead the discussion and encourage maximum debate and sharing of ideas.

#### Break-out 1

Data-driven life science- what is the role of AI and ML?

#### Break-out 2

Comprehensive genomic profiling – are we there yet?

#### Break-out 3

Optimising genomics and multi-omics data for biomarker discovery  
*Prof Anagha Joshi, Professor, Department of Clinical Science, University of Bergen*

#### Break-out 4

Accessing funding mechanisms to advance health innovation  
*Merike Leego, Innovation Manager, EIT Health Scandinavia*  
*Malin Eklund, Programme Manager, Sustainable Precision Health, Vinnova*

#### Break-out 5

How do we fund precision medicine in a sustainable way?

#### Break-out 6

Where are we on decision support tools for real-world implementation of multi-omics?

#### Break-out 7

Developing machine-learning tools to support clinical decision-making in mental health therapies

#### Break-out 8

Preparing the supply chain for precision medicine manufacturing at scale  
*Apotekarsocieteten*

#### Break-out 9

Precision medicine care -how do we enable access to treatments?

#### Break-out 10

Sequencing analysis of whole exome tumor DNA and RNA

### NEXT GENERATION TESTING & CLINICAL TRIALS

#### 16:10 Exploring the opportunity for large-scale trials across the Nordics: Reviewing InPreD and IMPRESs Norway

- A national Ecosystem for implementation of cancer precision medicine – *Kjetil Tasken, Head Institute for Cancer Research, Division of Cancer Medicine, Oslo University Hospital*
- InPreD: Implementing the national diagnostics infrastructure for broad patient access – *Hege Rusness, Head Infrastructure for precision diagnostics Division of Laboratory Medicine, Oslo University Hospital*
- IMPRESs Norway: A national trial for advancing clinical implementation of Precision Medicine – *Aslaug Helland, Prof. and Head of Research, Division of Cancer Medicine, Oslo University Hospital*

#### 15 min Panel:

Transitioning from clinical trials to routine practice: engaging public-private stakeholders in a joint effort

Moderated by: *Jutta Heix, Head of Int. Affairs Oslo Cancer Cluster & Project Lead CONNECT*

#### 16:50 Presentation

#### From small-scale basket and umbrella trials – to large-scale Precision Health initiatives: The Sweden experience

- Taking a bottom-up approach, starting from a well-defined clinical need
- Creating the collaborative arena, securing national funding, joining forces with Genomic Medicine Sweden
- Running implementation projects, independently and in parallel to the trials as a learning environment for healthcare, academia and industry
- Looking to the future and how this project will be scaled to further Precision Health

*Peter Asplund, Project Director, MEGALiT, Uppsala*

## DAY 1 – THURSDAY 28 APRIL 2022 (continued)

**17:20 Panel Discussion**

**Managing the transition to IVDR across the Nordics to minimise disruption in genetics testing**

- What impact will the new regulation have on the shape of the genetic testing landscape in the Nordics
- Minimising disruption to Precision Medicine testing – practical steps
- Exploring the business case / ROI for accreditation
- How are big hospitals and labs planning to tackle the restrictions on in-house tests
- Exploring the implications of CE compliant genome data

*Mohsen Shadidi, Head of section for Molecular Diagnostics, Department of Pathology, Oslo University Hospital*

*Nicholas Baker, IVDR Certification Manager, DNV GL*

**18:00 Close of Day 1**

**Followed by complimentary networking drinks reception**



## DAY 2 – FRIDAY 29 APRIL 2022

**08.30 Welcome refreshments and networking**

**09.00 Opening remarks from the Chair**

### **ENABLING PATIENT ACCESS**

**09.05 Patient Perspective**

#### **Working in partnership with patients to optimise the development of Precision Medicine**

As we start Day 2 of the conference with a focus on enabling patient access and acilitating clinical implementation, let's reflect on the patient. In Sweden, whist the benefits of patient involvement are well understood as advantageous to the creation of better healthcare systems, it continues to be unstructured and inconsistent. However, is this set to change? In this short presentation Margareta will share the study she is conducting in association with Genomic Medicine Sweden, with the intention to establish a new standard and framework for patient collaboration. How can we implement a more structured approach to shared decision-making? How can we better enable researchers and clinicians to collaborate more effectively with patients?

*Margareta Haag, President, Nätverket mot Cancer*

**09.30 Panel Discussion**

#### **How are health economies adapting to facilitate patient access?**

- Developing a functioning precision medicine strategy that works for society
- Precision public health and ensuring health equity
- Contrasting variations in approaches to reimbursement
- National vs regional approaches – how will we best break down the barriers to achieve clinical implementation
- Is the progress enough?

*Prof Markus Perola, Research Professor and Head of the Genomics and Biomarkers Unit, University of Helsinki and Research Professor at National Institute of Health and Welfare (THL)*  
*Dr Maj-Britt Juhl Poulsen, Executive Advisor, Centre for Health Innovation, Danish Regions*  
*Hege Russnes, Leader, Norwegian Competence Network for Precision Medicine*

**10.10 Presentation**

#### **Regulatory frameworks and systems to enable data sharing across the ecosystem**

- Perspective 1: Establishing regulations to enable secondary use of health and social care data
- Perspective 2: Examining why data regulations remain a challenge – and next steps

*Joni Komulainen, Senior Ministerial Adviser, Ministry of Social Affairs Finland*  
*Katarina Nyström, Jurist, Genomic Medicine Sweden*

**10.40 Refreshments & Networking**

## DAY 2 – FRIDAY 29 APRIL 2022 (continued)

### RESEARCH & DISCOVERY – TRACKS

#### TRACK A – Exploring Precision Health

##### 11.10 Adapting approaches to R&D for complex diseases

- Reviewing why complex traits need a different approach to rare diseases
- Exploring data requirements for Precision Medicine in complex diseases, how complicated does it need to be, to be of value?
- What is required for Precision Medicine for rare diseases?

*Tuuli Lappalainen, Director of the National Genomics Infrastructure (NGI), SciLifeLab*

##### 11:30 Prevention and early therapy of rheumatoid arthritis

- Exploring targets and pathways in rheumatic and related diseases driven by inflammation using a pharmacological approach
- Arachidonic acid cascade, development of mPGES-1 inhibitors, epigenetic modulators with associated enzymes as well as kinases
- Investigating biomarkers in rheumatoid arthritis and systemic autoimmune inflammatory diseases

*Per-Johan Jakobsson, Head of Rheumatology Division, Karolinska Institute*

##### 11:50 Advancing novel molecular digital biosensors to monitor population wellness and deliver personalised, proactive treatment

- Finding new ways to reduce co-morbidities and manage future pandemics
- Optimising the role of home-based diagnostics, wearables and remote monitoring for data capture
- Collecting clinical grade DNA, RNA, protein and metabolite samples - including info of viruses, bacteria etc.

*Seppo Vainio, Professor, Director, Biocentre Oulu, Borealis Biobank of Northern Finland, Faculty of Biochemistry and Molecular Medicine, University of Oulu*

12:10 Panel Q&A

OR

These break-outs offer the opportunity to explore the latest developments in clinical research and developments taking place across the Nordics region.

Pick and choose the sessions most relevant to your work. Presentations are designed to be short to inspire thinking and new ideas.

#### TRACK B – Advancing Multi-Omics

##### 11.10 How omics technologies can contribute to Precision Medicine

- How small-scale studies are contributing to the development of omics for Precision Medicine
- Combining genomics, proteomics, lipidomics and metabolomics – what we've learned so far
- Exploring new developments in metabolomics

*Prof Nils J. Færgeman, Professor and Director of the Molecular Metabolism and Metabolomics Unit, The Department of Molecular Biology and Biochemistry, University of Southern Denmark*

##### 11:30 Advancing the application of state-of-the-art proteomics in Precision Medicine

- Precision medicine beyond genomics
- Bringing proteomic sequencing up to speed with genomic sequencing
- Combining RNA and DNA at protein level to assess how coding variations effect corresponding proteins

*Maria Pernemalm, Assistant Professor, Karolinska Institutet*

##### 11:50 Assessing the potential for lipidomics for brain and liver disease

- An introduction to lipidomics and the development of new tests
- Exploring the findings of larger scale trials:
  - \* Lipidomics and multi-omics in Alzheimer's
  - \* Lipidomics in liver fibrosis
- Next steps for the future

*Cristina Legido Quigley, Research Leader Systems Medicine, Steno Diabetes Center, Copenhagen*

12:10 Panel Q&A

12:30 Lunch



## DAY 2 – FRIDAY 29 APRIL 2022 (continued)

### TRACK C – Biomarker Discovery

#### 13:30 Novel diagnostic and prognostic biomarkers in solid tumours

- Reviewing the largest whole genome sequencing effort for colorectal cancer
- Reviewing approach, the research study and results

*Tobias Sjöblom Professor, Department of Immunology, Genetics and Pathology & Director, Research Infrastructure, Uppsala University & Sweden Biobank*

#### 13:50 Advancing novel molecular digital biosensors to monitor population wellness and deliver personalised, proactive treatment

- Reviewing how omics techniques have been widely used to identify molecular signatures predictive of progression to metabolic diseases such as type 2 diabetes and non-alcoholic fatty liver disease
- Moving forwards: Exploring how to translate various discoveries into the healthcare (precision medicine) setting

*Matej Oresic, Group Leader in Systems Medicine & Visiting Associate Professor School of Medical Sciences, Turku Centre for Biotechnology, University of Turku & School of Medical Sciences, Örebro*

#### 14:10 Composite biomarkers for single and multi-omics

- Developing a combination of biomarkers which combined may have a predictive or biomarker potential - higher than their individual potential
- Reviewing research examples and the potential for further studies in this area including: combining proteomics with transcriptomics; combining single-cell omics with tissue omics
- Moving from research to everyday clinical practice

*Zsolt Illés, Institute of Clinical Research and Institute of Molecular Medicine, University of Southern Denmark & Consultant at the Department of Neurology, Odense University Hospital*

#### 14:30 Panel Q&A

OR

These break-outs offer the opportunity to explore the latest developments in clinical research and developments taking place across the Nordics region.

Pick and choose the sessions most relevant to your work.  
Presentations are designed to be short to inspire thinking and new ideas.

### TRACK D – Data-Driven Precision Medicine

#### 13:30 Leveraging digital genetic information to study genetic variation in populations and better understand reasons for illness and health

- Combining large biobank and cohort data with other resources in the healthcare system
- Exploring opportunities for multiple sampling, prospective longitudinal follow-up and deep phenotyping
- Collaborating across private and public sector to gather real-world evidence for Precision Medicine

*Kristian Hveem, Professor in Clinical Epidemiology and Medicine, Norwegian University of Science and Technology (NTNU)*

#### 13:50 Integrating AI-driven image analysis into Precision Medicine

- Developing new AI-based diagnostic solutions based on image analysis in pathology
- Improving quality in routine cancer diagnoses
- Extracting comprehensive information from histopathology image data that enable Precision Medicine

*Mattias Rantalainen, Associate Professor, Karolinska Institute*

#### 14:10 Using genomic data to identify high-risk cohorts for breast cancer

- Taking a genotype-first approach to the detection of hereditary breast and ovarian cancer risk
- Developing an Estonian biobank cohort
- From study to population-wide testing – next steps

*Neeme Tõnisson, Professor, Tartu University*

#### 14:30 Panel Q&A

- Taking a genotype-first approach to the detection of hereditary breast and ovarian cancer risk
- Developing an Estonian biobank cohort
- From study to population-wide testing – next steps

#### 14:50 Refreshments & Networking

## DAY 2 – FRIDAY 29 APRIL 2022 (continued)

### REAL-WORLD IMPLEMENTATION

**15:00 Presentation**

**Taking an integrated approach within the hospital –  
to deliver Precision Medicine at scale**

To achieve real-world implementation of Precision Medicine, you need to work at all levels of the system, including within the hospital. Traditional ways of working do not always support implementation goals – with challenges including reimbursement, governance and outcomes measurement. So how do we embed Precision Medicine into everyday healthcare practice? In this session we'll explore a case study experience at Karolinska that developed new ways of working, breaking down silos between specialties, taking an integrated patient-centred approach. Work in progress at Karolinska to consolidate and spread the integrated way of working will also be described.

*Anna Wedell, Professor, Karolinska*

**15:30 Panel Discussion**

**Establishing the Big Data infrastructure to deliver Precision Medicine**

- Integrating a plethora of datasets for ease of use
- Where will big data be housed and managed: Centralised vs decentralised models?
- Funding the high-performance computing and data infrastructure requirements
- Handling sensitive data and managing data security

*Leon Charl du Toit, Section Leader, University Centre for Information Technology (USIT)*

*Bengt Persson, Director, National Bioinformatics Infrastructure Sweden*

*Andres Metspalu, Head of the Estonian National Biobank, University of Tartu*

**16:00 Closing remarks from the Chair**

**16:40 Conference close**



TO VIEW THE LATEST AGENDA  
AND TO REGISTER VISIT  
[www.precisionmedicineforum.com](http://www.precisionmedicineforum.com)

## Who attends the Nordic Precision Medicine Forum?

This event brings together a delegation from across the Nordics and beyond, with representation from all areas of the ecosystem.

## Access ideas, projects and research from across the Nordics

Delegates join this event from **Sweden, Denmark, Iceland, Finland, Norway and Estonia** – with some delegates also joining from across Europe to see the latest developments taking place in the region.

*"...a great event which surpassed my expectations; one of the best conference I have been to for years"*

## Network and collaborate with the organisations leading the Field

### Past attendees include:

- Karolinska Institutet
- Amgen AB
- Institute for Molecular Medicine Finland (FIMM)
- Bayer AS
- Aarhus University Hospital
- Lund University
- DNV GL
- KTH Royal Institute of Technology
- Swedish Pharmaceutical Society
- University of Copenhagen
- Bristol-Myers Squibb
- Aalborg University
- Danish National Genome Center
- Illumina
- Novartis
- University of Bergen
- Linköping University
- Rigshospitalet
- Thermo Fisher Scientific

*"if we can convert even half of our leads into sales this will make it a massive success. A must attend"*

## Unite with the community driving forwards Precision Medicine



*"..very difficult to improve on the experience"*