



Strategic Research Center

GenSAP

Genomic Selection in Animals and Plants

6th Annual Meeting
27-28 November
2018

LEGOLAND Hotel & Conference Center
Billund, Denmark



Practical information

About the meeting:

Welcome to the 6th and final, annual GenSAP workshop.

This year as well, we are very pleased to have many of our international partners represented in the program, and hope that we will have many fruitful discussions about research and plans ahead.

Date: 27-28 November, 2018

Venue: LEGOLAND Hotel & Conference Center, Aastvej 10, 7190 Billund, Denmark ([link to map](#))

Registration: Please register for the meeting before 5 November [using this link](#)

Accommodation: After your registration for the meeting, **please make sure to [book your room on this link](#) and no later than 5 November**. The LEGOLAND Hotel offers two restaurants, a large morning buffet, a fireplace lounge and bar, a fitness centre and free access to Billund Bath & Wellness.

Transport: For those travelling from abroad; Billund Airport is the second largest airport in Denmark. The easiest way to get to Billund is by booking your plane ticket to and from Billund. The LEGOLAND Hotel is a mere 5 minute drive from the airport. If you need any help in travel arrangements, please feel free to contact us.

For those travelling from Foulum; transport back and forth from Foulum to Billund can be booked when you register. A more detailed plan of pick-up and drop-off will follow later.

Price: GenSAP pays for the meeting. All expenses in relation to travel and accommodation are covered by the participants through the individual partner grants.

Questions? Please contact Johanna Höglund (johanna.hoglund@mbg.au.dk)



Program – Day 1

- 09.00 Check-in and registration
- 10.00 **Welcome, general introduction & status, and introduction to the sessions**
Professor Mogens Sandø Lund, QGG AU

Session 1:

- **Scientific Focus Area 1 – Understanding the genetic basis of complex traits**

- 10.30 **Introduction to the session by the chair**
Senior researcher Peter Sørensen, QGG AU
Introduction to SFA1 + Overview Genomic feature models
- 10.50 Senior researcher Goutam Sahana, QGG AU
Gene mapping in cattle: lessons learnt from genome-wide variants
- 11.15 Senior researcher Torben Asp, MBG AU
Understanding Gene by Environment Interactions in Ryegrass.
- 11.40 Postdoc Zexi Cai, QGG AU
Building genomic resources for breeding in a new species – mink as an example
- 12.00 Lunch

Session 2:

- **Scientific Focus Area 2 – Genomic prediction in animals and plants**

- 13.00 **Introduction to the session by the chair**
Senior researcher Luc Janss, QGG AU
Advances in genomic prediction over 5 years GenSAP
- 13.20 Professor Just Jensen, QGG AU
Use of metabolomics in pig, barley and cattle
- 13.40 Research assistant Mette Dam Madsen, QGG AU
Adjusting for macro-environmental sensitivity in growth rate
- 14.00 Professor Mogens Sandø Lund, QGG AU
Use of whole genome sequencing, fine mapping and custom LD chips in cattle
- 14.20 Senior researcher Jens Due Jensen, Nordic Seed
From project to practice, successful implementation of GS in a commercial barley breeding program
- 14.45 Coffee break



Session 3:

- **Scientific Focus Area 3 – Assessment and optimization tools**

- 15.15 **Introduction to the session by the chair**
Senior scientist Anders Christian Sørensen, QGG AU
- 15.30 Senior scientist Mark Henryon, SEGES
Pedigree relationships to control inbreeding in optimum-contribution selection realize more genetic gain than genomic relationships
- 16.00 PhD student Lu Cao, QGG AU
Impacts of GxE on breeding program decision-making using genomic selection
- 16.20 Postdoc Biructawit Bekele Tessema, QGG AU
Application of genomic selection in wheat breeding
- 16.40 Senior scientist Mark Henryon and
Tage Ostensen, Manager Breeding and Genetics SEGES
Changes in the pig breeding program in Denmark after GenSAP
- 17.00 Break & poster session: Looking Back/Retrospect
- 18.30 Workshop dinner



Program – Day 2

Session 4:

- **Future challenges for research and industry in development and application of genomic selection**

08.30	Introduction to the session by the chair Professor Just Jensen, QGG AU
08.35	Professor Daniel Gianola, University of Wisconsin-Madison, USA <i>Alternative models for quantitative genetics and genomics</i>
09.05	Professor Peer Berg QGG AU / NMBU <i>Future use of big data in animal and plant breeding</i>
09.30	Professor Theo Meuwissen, NMBU <i>Super-large-scale genomic evaluation</i>
09.55	General questions
10.00	Coffee break
10.30	Professor Mike Goddard, University of Melbourne, Australia <i>Functional genomics to understand gene function and gene regulation</i>
11.00	Head of turf research Christian Sig Jensen, DLF <i>Current status and future needs for grass breeding programs</i>
11.25	Senior researcher Jørn Rind Thomasen, QGG AU / Viking Genetics <i>Current status and future needs in cattle breeding programs</i>
11.50	Professor Søren K. Rasmussen, KU <i>Understanding the link between genotype and phenotype</i>
12.15	General Questions
12.25	Professor Mogens Sandø Lund, QGG AU <i>Closing remarks on GenSAP</i>
12.45	Lunch
13.45- 16.00	Board meeting