



Strategic Research Center

GenSAP

Genomic Selection in Animals and Plants

4th Annual Meeting

About the meeting:

At the 4th annual GenSAP meeting we are happy to welcome and introduce our two new industry partners: Aqua Search and Dansk Varmblod!

As last year, the meeting will be focused on results and progress within key areas which this year include areas such as non-additive effects, crossbreeding and use of sequence information.

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

The meeting will be open to GenSAP participants and invited speakers only.

Date: November 8-9, 2016

Venue: Marselis Hotel, Strandvejen 25, DK-8000 Aarhus, Denmark ([link to map](#))

Registration: Please register before October 7th using this [link](#)

Accommodation: Upon registration, you can book accommodation from November 7 to November 10, if needed. The Marselis Hotel offers a gym, sauna and swimming pool free of charge for the participants. In addition, the hotel is situated directly at the beach and close to the forest, so there will be opportunity for a nice walk or run ([link to hotel](#)).

Transport: For those travelling from abroad; the easiest way to get to Aarhus is by train from Copenhagen airport or by bus from Billund and Aarhus airport. The train station at Copenhagen airport is situated within the international terminal building. If you need any help in travel arrangements, feel free to contact me.

For those travelling from Foulum; transport back and forth from Foulum to Aarhus can be booked upon registration. A detailed plan of pick-up and drop-of will follow later.

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

Questions? Please contact Louise.DybdahlPedersen@mbg.au.dk

9:00 *Check-in and registration*

10:00 Welcome, general introduction & status (Prof. Mogens Sandø Lund, QGG-AU)

Session 1: *Industry collaboration*

10:20 Introduction to the session & welcome to our new partners by the chair

Presentations by our new partners on why are they endeavoring into GS and wish to join GenSAP:

10:30 AquaSearch (Managing Director Torben Nielsen, AquaSearch)

11:50 Danish Warmblood (Breeding Manager Karina Christiansen, Dansk Varmblod)

11:10 *Short break*

Session 2: *Breeding programs*

11:30 Introduction to the session by the chair

11:40 Stochastic simulation of selective-breeding schemes for crops (Post docs Huiming Liu & Biructawit Tessema, QGG-AU)

12:00 Genomic information in Optimum Contribution Selection does not lead to improved decisions (Senior researcher Christian Sørensen, QGG-AU)

12:30 *Lunch*

Session 3: *Crossbreeding*

13:30 Introduction to the session by the chair

13:40 Models including dominance in genomic prediction of purebreds and two-way crossbreds (Research Director Andres Legarra, INRA)

14:10 Application of single-step genomic evaluation for crossbred performance in pig (joint PhD student Tao Xiang, QGG-AU/INRA)

14:30 Long-term selection for crossbred performance (Post doc Hadi Esfandyari, QGG-AU)

14:50 *Coffee break*

Session 4: *Use of non-additive variation*

15:20 Introduction to the session

15:30 The genetic architecture of quantitative traits: Lessons from *Drosophila* (Prof. Trudy Mackay, North Carolina State University)

16:00 The effect of genetic architecture on accuracy of genomic prediction (PhD student Fabio Morgante, North Carolina State University)

16:20 Approaches for GxE modelling and prediction in cereals (Post doc Fabio Cericola, QGG-AU)



16:40 *Short break*

Session 5: Poster session

17:00 Introduction to the session by the chair
 Poster contributions by GenSAP PhD students and postdocs incl. 3 min speed-talks and refreshments.

19:00 Meeting closure – day 1 (Mogens Sandø Lund)

19:30 *Workshop dinner*

Session 6: APY/single-step methods

- 8:00 Short Introduction including outlook for use of single step in plants by the chair
- 8:10 Large scale genomic prediction using SVD (Prof. Theo Meuwissen, NMBU)
- 8:40 Use of metafounders to model unknown parent groups in Single Step GBLUP for dairy sheep (Research Director Andres Legarra, INRA)

Short break

- 9:20 Single-step genomic evaluation in pigs and adapting to large scale genomic testing (Head of department Tage Ostersen, VSP/Senior Researcher Ole Fredslund Christensen, QGG-AU)
- 9:50 Bayesian single step (Industrial post doc Hongding Gao, NAV/QGG-AU/Prof. Just Jensen, QGG-AU)
- 10:10 DMU development in relation to large scale genomic evaluation (Post doc Viktor Milkevych & Senior researcher Per Madsen, QGG-AU)

10:30 Coffee break

Session 7: Prediction based on sequence and structural information

- 11:00 Introduction to the session by the chair
- 11:10 Bayes R multi-class (Prof. Mike Goddard, University of Melbourne)
- 11:40 Direct use of sequence information (Post doc Irene van den Berg, University of Melbourne)

Short break

- 12:20 Draft reference genome of American mink (*Neovison vison*) opens new opportunities for genomic research in mink (Post doc Zexi Cai, QGG-AU)

12:40 Meeting closure – day 2 (Prof. Mogens Sandø Lund)

13:00 Lunch

14:00 GenSAP general assembly meeting for partners incl. comments from the advisory board (agenda will follow)

15:00 Board meeting incl. comments from the advisory board (agenda will follow)