

Strategic Research Center

GenSAP

Genomic Selection in Animals and Plants

Opening Symposium

June 13-14





We are pleased to invite you to the opening symposium of the strategic research center GenSAP - Center for Genomic Selection in Animals and Plants at Aarhus University, Denmark.

GenSAP aims to generate the next generation of genomic selection tools through a broad collaborative research effort between Danish research groups, breeding companies and world-leading international researchers.

The broad collaboration in GenSAP is reflected in the symposium program which features many of our national and international collaborators. The symposium will address the challenges that lie in using the vast amount of data emerging from new genotyping and phenotyping technologies to enhance the understanding of genetic architecture and ensure long-term sustainable genomic selection.

We look forward to seeing you.

On behalf of GenSAP,

Mogens Sandø Lund
Center Director



Thursday June 13th, Aarhus

9:30 Registration

10:00 Welcome & introduction to GenSAP

Center Director Mogens Sandø Lund, Center for Quantitative Genetics & Genomics (QGG), Aarhus University (AU)

10:15 *Session 1:*

Understanding the genetic basis of complex traits

Senior Researcher Peter Sørensen, QGG, AU

Charting the genotype-phenotype map: Lessons from *Drosophila*

Professor Trudy Mackay, Dept. of Genetics, North Carolina State University, USA

11:15 *Coffee break*

Genome-wide association studies – lessons learned and future directions

Senior Researcher Goutam Sahana, QGG, AU

GxE and epigenetics in plants

Senior Researcher Torben Asp, Dept. of Molecular Biology & Genetics, AU

Connecting biological pathways and the genomics of complex traits

PhD Student Stefan McKinnon Høj-Edwards, QGG, AU

12:45 *Lunch*

13:45 *Session 2:*

Genomic prediction models: towards use of full sequence and large populations

Senior Researcher Luc Janss, QGG, AU

The 1000 bull genomes project - reconstructing the past genetic history of cattle, and accelerating future gains

Research Leader Ben Hayes, Dept. of Primary Industries, Victoria, Australia

14:45 *Coffee break*

Genomic selection using QTL information

Senior Scientist Didier Boichard, INRA, France



Visions and perspectives for genomic prediction in animals, plants and humans
Professor Daniel Gianola, University of Wisconsin-Madison, USA

The benefits of haplotypes as predictors of genetic merit
PhD Student Beatriz Castro Dias Cuyabano, QGG, AU

16:15 *Poster session & reception*

17:30 *Bus to Viborg*

19:00 *Dinner at Golf Salonen, Viborg*

Friday June 14th, Foulum

9:00 *Welcome*
Center Director Mogens Sandø Lund, QGG, AU

9:10 *Session 3:*

Assessment and optimization tools in genomic breeding programs
Senior Researcher Christian Sørensen, QGG, AU

Genomic selection and the design of breeding schemes
Professor Theo Meuwissen, University of Life Sciences, Norway

10:10 *Coffee break*

On the doorsteps of a new era in plant breeding
Senior Scientist Christian Sig Jensen, DLF Trifolium, Denmark

Making a world-class pig-breeding program even better with genomic selection
Chief Geneticist Mark Henryon, Danish Pig Research Center

Medium to long-term effects of selection in finite locus models with non-additive effects
EGS-ABG PhD Student Hadi Esfandyari, Wageningen University/QGG, AU

11:45 *General assembly meeting*

12:30 *Lunch*

13:30 *PhD defense: Genomic predictions using combined populations and SNP marker panels*
PhD Candidate Rasmus Froberg Brøndum, QGG, AU



Genomic selection is currently revolutionizing cattle, pig, and poultry breeding world-wide and has the potential to do so in other agricultural animal as well as plant species. The method is recognized as the key genetic improvement technology of the future, and will be crucial in meeting the global challenge to efficiently increase production of high quality agricultural products while improving animal welfare, reducing environmental impact, and maintaining biodiversity.

GenSAP wishes to contribute to the foundation of a globally competitive and sustainable food production by developing next generation genomic selection tools that are efficient for several species across environments, in addition to being economically and genetically sustainable. The tools will be based on methodology that manages, integrates, and extracts information from the massive amounts of data emerging from new genotyping and phenotyping technologies while optimizing selection decisions.

The strategic research center GenSAP consists of 17 partners including Danish breeding companies and research groups as well as world-leading international researchers.

The center receives funding from the Danish Council for Strategic Research.

For more information about us, please visit www.gensap.au.dk



When:

June 13-14, 2013

Where:

Day 1 - Aarhus University campus, [iNANO house](#), Gustav Wieds Vej 14, 8000 Aarhus C

Day 2 – Aarhus University, Research Center [AU Foulum](#), Blichers Allé 20, 8830 Tjele

Registration:

Please register before May 17th using this link <https://auws.au.dk/GENSAP>

Upon registration, you can book accommodation, dinner, and transportation back and forth from Viborg to Aarhus University.

Registration is only necessary if you wish to participate in more than a single session.

Participation is free of charge, however accommodation is not.

For more information:

Please contact center coordinator Louise.DybdahlPedersen@agrsci.dk