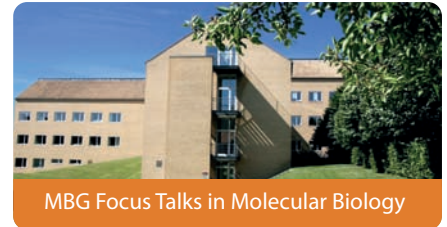


MBG FOCUS TALK

hosted by Erik Østergaard Jensen



Tuesday 28 June, 9:15 - 10:00

Science Park, Gustav Wieds vej 10, meeting room 5 (3140-114)

Filippo Biscarini, Ph.D.

PTP Science Park, Lodi, Italy

The use of genotypes and phenotypes in plant & animal breeding: a few applications and perspectives

Novel technologies have made genotypic and phenotypic data available for a large number of plant and animal species of interest in agriculture. This information can be successfully applied to breeding, for instance in classification problems like the prediction of mutation carriers. Data, though, can contain errors, and these may have an impact on results. Localizing polymorphisms associated to phenotypes is also of interest; GWAS is a standard methodology for this, but is known to be susceptible to return a proportion of spurious results. Alternative approaches are being explored to detect more robust signals of genotype-phenotype associations, like resampled predictive models and the use of runs of homozygosity (ROH). Runs of homozygosity and of heterozygosity are also useful to characterize the genomes of populations. Finally, on-farm automation is continuously generating large amounts of data, that will require the scaling-up of methods for data processing and analysis.