



Genome Sciences Seminar

Wednesday, 5.31.17 | 3:30 | Foege Auditorium



Dr. Orjan Carlborg

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<http://www.imbim.uu.se/Research/+Genomics/carlborg--rjan/?languageId=1>

“Complex trait genetics – what is there beyond additivity”

Carlborg Lab:

Our research aims to increase our understanding about how polymorphisms in the genome contribute to the phenotypic variation that can be observed for most complex traits within a species. We are particularly interested in examining the contribution of non-additive mechanisms, such as genetic interactions, to this variation. To do this, we develop new analytical methods that are then used to analyze experimental data from a wide variety of microorganisms, plants and animals. We mainly develop new mathematical-genetic models, data-algorithms, statistical methods and bioinformatic pipelines to analyze wholegenome and genotype data from natural and experimental populations. The new methods allow us to study the genetic mechanisms that regulate the complex, polygenic traits in new ways and to decipher how these contribute to adaptation and evolution. Since most biological traits and common diseases are regulated by a combination of genes and environmental factors, our research contributes new analysis methods and basic knowledge that is useful for research in many other fields. For example, our methods are useful for increasing the understanding of how genomic knowledge can be used to predict disease risk in individual patients, or how the new traits (such as antibiotic resistance) may arise in due to dramatic changes in the environment.

Refreshments served outside the Auditorium at 3:20pm

Questions? Contact Brian Giebel at bgiebel@uw.edu or visit the Seminar website at <http://www.gs.washington.edu/news/seminars.htm>

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