BiRC Seminar – open to all

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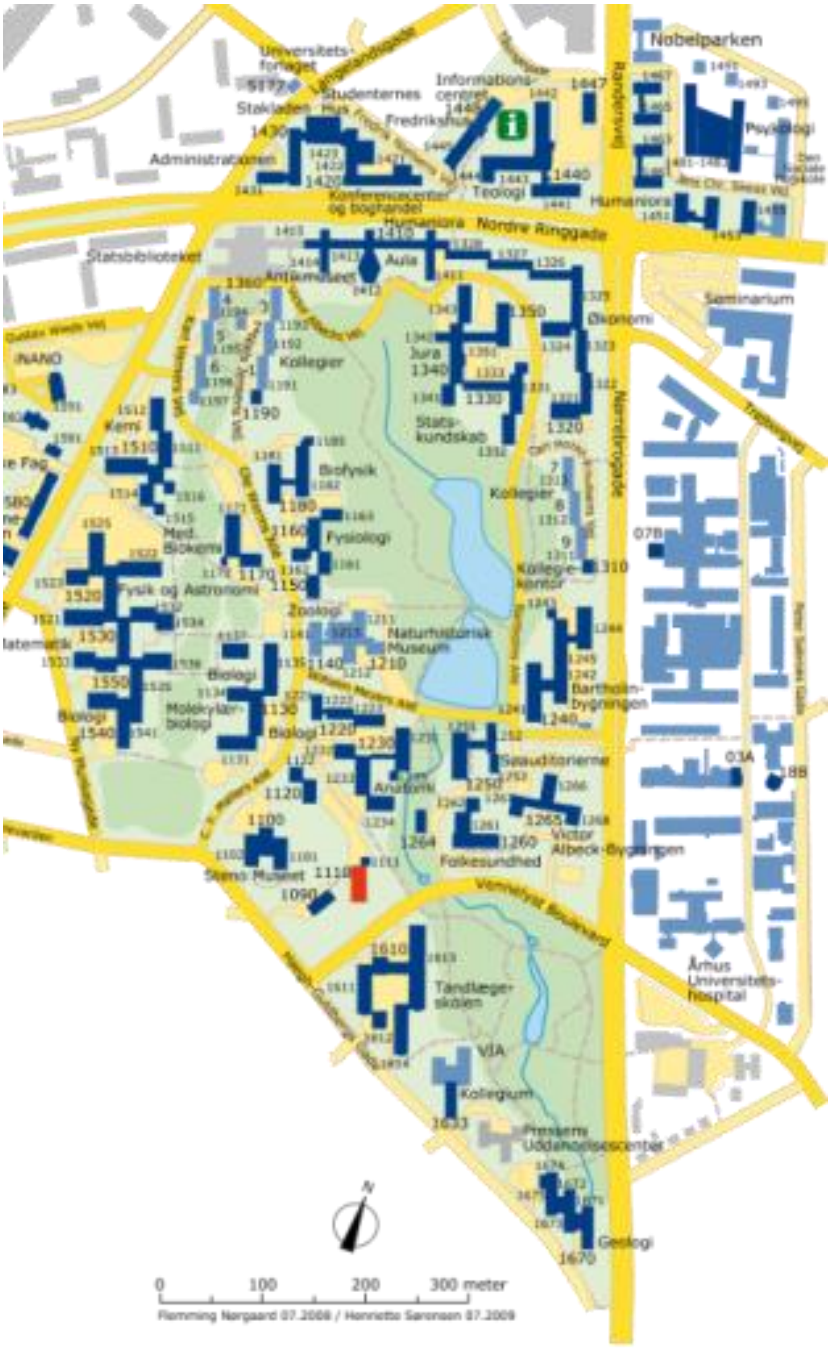
Time: Friday 5 December 2014, 14:15 — 15:00
Venue: BiRC, C. F. Møllers Allé 8, Building 1110-room 214 (2nd floor)
Title: Genes mirror subsistence in prehistoric Europe

Abstract:
The Neolithic transition swept over Europe after the invention of farming some 11,000 years ago in the Near East to reach its northern fringe some 6,000 years ago. Genomic information from ancient human remains is beginning to show its full potential for learning about the human demographic history, including the debated agricultural transition. We generate and investigate genomic data from several Stone-Age Scandinavian and Iberian individuals, including 10 Scandinavian 5,000 year old individuals from farming and hunter-gatherer groups, a 7,500 year old Mesolithic individual from the same region as the Scandinavian hunter-gatherers, and several Iberian 5,000 year old individuals from a farmer group. The Stone-Age Scandinavian individuals show remarkable population structure corresponding to their material culture association and the farmers are genetically most similar to extant southern Europeans, contrasting sharply to the hunter-gatherers whose genetic signature is unique, but closest to extant northern Europeans. The genomic make-up of present-day Scandinavians is intermediate between the two Neolithic groups suggesting that extensive admixture - perhaps around the time of the disappearance of the hunter-gatherer lifestyle - eventually shaped the patterns of variation.

Similarly, Iberian farmers show affinities to modern-day southern Europeans in contrast to the 7,000 year old Iberian hunter-gatherer from La Brana that is genetically more close to current-day northern Europeans. The pattern of genetic variation in Stone-Age Europe contrasts to current-day patterns that mirror the individuals' geographic sampling locations. We further estimate genetic diversity within the groups and show that diversity was lower among the hunter-gatherers compared to the farmers suggesting smaller population size for the hunter-gatherers, perhaps related to a lower carrying capacity associated with hunting and gathering lifestyles. These findings show that lifestyle may be the major determinant of genetic similarity and diversity in pre-historic Europe rather than geography as in modern-day Europe, which illuminate the dramatic impact of the agricultural revolution.

After the seminar there will be beer/soda and chips in room 214 (not the lunch room!)

http://birc.au.dk/activities/seminar-series/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Flemming Nørgaard 07.2008 / Henriette Sørensen 07.2009