



Dottorato in Genetica, Biologia Molecolare e Cellulare

Scuola di Dottorato in Scienze della Vita "Camillo Golgi" - Università degli Studi di Pavia

Nell' ambito del Corso "Evoluzione: dal fenotipo agli approcci molecolari"

"The driving force of life: evolution"

How prokaryotes and eukaryotes adapt their genomes in space and time

si segnala:

Prof. Dr. Johannes Krause

Tuesday, 21st May 2013

"Paleopathogenomics: the evolution of human pathogens from ancient skeletons"

15:00 – 17:00 - Aula Grande, Dip. Biologia e Biotecnologie, Botta 2

Wednesday, 22nd May 2013

"What makes us human: insights from archaic human genomes"

11:00 – 13:00 - Aula Grande, Dip. Biologia e Biotecnologie, Botta 2

Johannes Krause is Professor for Paleogenetics at the Eberhard Karls University in Tuebingen, Germany. Despite his strong focus on evolutionary genetics and ancient DNA research, his work includes a large variety of topics ranging from method development in high-throughput DNA sequencing and innovative targeted DNA enrichment strategies, to phylogenetics of Pleistocene megafauna such as woolly mammoth and cave bear, and complete genome-wide studies of Pleistocene archaic humans such as the Neanderthal.

Dr. Krause's work on the discovery of a new Siberian hominin in 2010, the Denisovan, garnered worldwide acclaim, with press and media coverage in major newspapers and television. This work represents the first identification of a new hominin, which was made possible solely from molecular data. The reconstructed draft genomes of the Neandertal and Denisovan provide evidence of gene flow into modern human populations putting to rest former theories about human evolutionary history. Dr. Krause's team recently demonstrated the application of DNA capture techniques and high-throughput DNA sequencing to the reconstruction of complete ancient pathogen genomes using *Yersinia pestis* isolated from victims of the Black Death. The Black Death genome revealed a medieval origin of all currently circulating human pathogenic strains for which full genomic data are available.

Organizers: 2nd year PhD students (XXVII ciclo) of the Program in Genetics, Molecular and Cellular Biology