



NOBEL SYMPOSIA



The PowerPoint presentation by Svante Pääbo is unfortunately not available.

Report from the lecture presented by Svante Pääbo

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Svante Pääbo discussed principles of human evolution. Humans and chimpanzees were separated around 4-6 million years before the present, The DNA sequences humans and chimpanzees differ by around 1.2%. It has been hypothesized that regulatory mutations may account for biological differences between the species and comparison of gene expression patterns in humans and chimpanzees is therefore of interest. A study of around 5000 genes revealed that the expression of 200-400 genes was significantly different between humans and chimpanzees. The gene expression patterns differed much more in liver than in brain.

Sequencing of mitochondrial DNA from humans and Neanderthals has revealed that both originated from a common ancestor 600000 years ago. Modern techniques for high-speed high throughput DNA sequencing will allow a complete sequencing of the Neanderthal nuclear genome despite heavy contamination of DNA from other sources. Proof of principle has been obtained by analysis of the genome of the extinct cave bear.