

Notes and Comments

The Undiscovered L... DNA
W... Ha... K...

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A recent study by Rollo et al. (2006) attempted to deter-
mine, at a fine level of molecular resolution, the phyloge-
netic position of the Iceman's mtDNA by genotyping a set

the most important results match the CRS, these may have to go beyond anything currently practiced in studies of ancient DNA and forensics to convince the skeptics that the sequences recovered are indeed, genuine. But, ultimately, it does not matter how authentic your results are if the phylogenetic markers tested are not able to support the conclusions reached.

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DNA and patterns of damage, and, in turn, the authenticity of the results.

In conclusion, to extend ancient mtDNA analysis beyond the control region is to be encouraged, but a more informed and extensive genotyping strategy is required and needs to be coupled with far more stringent tests of authenticity to stand up to the level of scrutiny required for working with ancient human DNA. When

sequences found and the location of the Iceman's mtDNA within haplogroup K. They recognize that our results are not necessarily wrong, just that there are alternative explanations for them, which need to be eliminated through the use of a more informed approach.

The first observation concerns the length of HVS1 stretch sequenced, 122 bp in our paper and 354 bp in that of Handt et al. (1994), and the fact that the signature mutations T16224C/T16311C within this sequence define the K basal haplotype which is common throughout Europe. The comment by Endicott et al. is that the individual identification cannot be considered as irrefutable evidence that the sequence was obtained from endogenous DNA.

Endicott et al. seem to have misunderstood the aim of our experiment. The test was designed in order to check whether we could obtain results comparable to those of Handt et al. (1994) despite the fact that we were using different groups of specimens.

The identification of the two signature mutations, a

remains in association with the human remains; 2) it is very demanding as it requires carrying out a parallel investigation on different genetic systems which can be even more laborious than the primary study.

In the case of Ötzi, the analysis of human DNA has been preceded by a meticulous screening of plant and animal DNA libraries obtained from samples of the intestinal content (Rollo et al., 2002). In particular, it has been shown that two types of mammal (red deer and alpine ibex) mtDNA are present in the intestines, in addition to human