Epigenetics might explain how humans differed from Neanderthals despite very similar genes

The DNA sequences of Neanderthals and other extinct human relatives have exposed lost migrations, sexual escapades and even new species. Now, researchers have uncovered another molecular clue lurking in the bones of long-dead humans: the so-called ‘epigenetic’ chemical modifications that adorn DNA and orchestrate gene activity.

Epigenomes of two archaic humans — a Neanderthal and a Denisovan, groups that lived in Europe and Asia until around 30,000 years ago — are revealed in Science. The report follows on the publication in December of a similar map from another group analysing epigenetic modifications in a 4,000-year-old native of Greenland.

Epigenetic differences between humans and their ancient relatives may explain differences in physical traits, or phenotypes, such as the jutting brow ridge of Neanderthals. Yet various obstacles still hinder the study of ancient epigenomes, and some researchers are not yet sure if the approach will yield insights.

Read the full, original story: How to build a Neanderthal