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**Binôme : Anglais / SVT**

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THEME IA4: HUMAN EVOLUTION  
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**Gorilla genome analysis reveals new human links**

5 Humans and gorillas last shared a common ancestor 10 million years ago, according to an analysis of the first full sequence of the gorilla genome. The gorilla is the last of the living great apes – humans, chimpanzees, gorillas and orangutans – to have its complete genetic code catalogued. ( ...) The genomes of all three species are, in any case, highly similar: humans and chimpanzees share more than 98% of their genes, while humans and gorillas share more than 96%.

An initial analysis also showed similarities in genes involved in sensory perception and hearing, and brain development showed accelerated evolution in all three species. Genes associated with proteins that harden up skin were also particularly active in gorillas – which goes some way to explaining the large, tough knuckle pads on gorillas' hands.

10 "Gorillas are an interesting animal in their own right but the main reason they are of particular interest is because of their evolutionary closeness to us," said Aylwyn Scally<sup>1</sup>. "They're our second-closest evolutionary cousins after chimpanzees and knowing the content of the gorilla genome enables us to say quite a lot about an important period in human evolution when we were diverging from chimpanzees." ( ...)

15 Comparing the sequences of humans, chimpanzees and gorillas has enabled scientists to put a more accurate clock on when the three species split from their last common ancestors. It was traditionally thought that the emergence of new species (known as "speciation") happens at a relatively localised point in time but emerging evidence suggests that this is not necessarily the case, that species split over an extended period. Studying the gorilla genome suggests that the divergence of gorillas from  
20 the common ancestor of humans and chimpanzees happened around 10 million years ago. Humans and chimpanzees last shared a common ancestor around 6 million years ago. Eastern and western gorillas split some time in the last million years.

Science correspondent Alok Jha - *The Guardian*  
Wednesday 7 March 2012

**Sum up this article and explain the main ideas using your scientific knowledge.**

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<sup>1</sup> author of the research from the Wellcome Trust Sanger Institute