

What Makes Us Human: Genetic Evidence?

When the Chimpanzee Genome was published in 2005, there was a media frenzy suggesting that there was now genetic evidence that Chimps and Humans share approximately 99% of the same DNA. A closer examination of the published data arising from the chimpanzee genome project, however, reveal other profound differences which make the initial claim of 1% difference look somewhat foolish. Furthermore, since the publications of ENCODE (**Encyclopedia of DNA Elements**) during 2012; it is now apparent that at least 80% of the genome is functional. We now know that the majority of DNA is involved in the highly coordinated and exquisite control of gene expression in different tissues and this is also species-specific. Overall, the implications for Darwinian evolution and common descent are enormous.

More recently, DNA analysis of different populations of ancient man has been reported. These populations include the well preserved Neanderthal specimens from several sites in Europe and Asia. However, potentially, two other distinct populations of ancient man have now been identified. For example, in 2008, a finger bone of a young female individual was found in the Denisova Cave in the Altai Mountains of Siberia. Mitochondrial and nuclear DNA analysis of this material seems to indicate that this bone is from a population that can be distinguished from the Neanderthal. Accordingly, these people have been called the Denisovans. The most recent academic publication (December 2013), however, has indicated that there may be another distinct population of ancient man which is, as yet, un-named.

What is now clear is that all of these ancient populations coexisted, cohabited and interbred with each other and contributed some of their DNA to *Homo sapiens* (modern man). From a genetic perspective, they are definitely involved in “what makes us human”. The significance of these new findings (scientific and Biblical) will be discussed in a highly illustrated talk.

Geoff Barnard is the author of over 100 academic papers and articles. He has a PhD in Biochemistry from the University of London and a MA in Theology from the University of Southampton. He was a professional biochemist for over 40 years, a Senior Lecturer in Biological Sciences at three UK Universities, and a regular visiting scientist at the Weizmann Institute of Science in Israel. His last academic position in the UK was as a Senior Research Scientist in the Department of Veterinary Medicine at the University of Cambridge, a position he held for over seven years. He now lives in Arad, Israel with his wife Caryl.

Presenter’s Note: The following outline is appropriate as on 17th March 2014 which is the actual deadline for its submission. It is my experience that the Lord sometimes brings to my attention newly published academic material in the days leading up to the conference. If this is again the case, I will re-arrange the presentation accordingly to accommodate it.

I. Does the Genome provide Evidence of Common Ancestry?

A. The Myth of 1%¹

1. Lecture given at ELF in 2010

¹ Barnard, Geoff (2009) *Does the Genome provide Evidence of Common Ancestry?* In: Nevin, Norman C. (editor) *Should Christians Embrace Evolution?* Nottingham: Inter-Varsity Press, pp.166-186

2. A Tale of Two Books

B. The Impact of the ENCODE Project

1. At least 80% of the Genome is Functional
2. New Definitions are Required²

II. The Myth of Chromosomal Fusion

A. A Salutary Lesson – Don't Commit Yourself!³

1. Centromeres and Telomeres
2. Inappropriate Concessions made

B. The Research Work of Jeffrey Tomkins and Jerry Bergman

1. Problems at the So-called Fusion site
2. Where the Current Evidence Leads

III. Ancient Man

A. Neanderthal Man

1. The Feldhofer Grotto in the Neander Valley (Neander Tal)

² See Mark Gerstein *et al.*, (2007) *What is a gene, post-ENCODE? History and updated definition Genome Res.* 17: 669-681. In particular, the term "pseudogene" has ceased to have any meaning.

³ Barnard, Geoff (2009) *Chromosomal Fusion and Common Ancestry* In: Nevin, Norman C. (editor) *Should Christians Embrace Evolution?* Nottingham: Inter-Varsity Press, pp.151-157

2. The Distribution of Neanderthal Man
3. The Extent of the Ice Age
4. The Draft Sequence of the Neanderthal Genome (2010)
5. Co-Existence, Co-habitation and Interbreeding with Eurasians
6. The Complete Genome of the Neanderthal Man (2014)

B. Denisovan Man

1. The Denisova Cave in the Altai Mountains of Siberia
2. Co-Existence, Co-habitation and Interbreeding with Melanesians
3. The Significance of Mitochondrial DNA studies
4. The Existence of a Third as yet Unknown Group
5. The Migration of Ancient Man

C. Current Academic Literature on Ancient Man

1. Ancient Signatures in Modern Man
2. The Difference between Genes and Alleles
3. *homo Sapiens* – Ancient and Modern

4. The Face of Adam?

IV. What does the Bible say about Ancient Man?

A. Who was Adam?

1. Is it Important?
2. Homo Divinus?
3. The Distribution of Ancient Man⁴

B. Thy Word is Truth

1. Is the Bible True?
2. Is the Bible Factual?

C. Longevity

1. Before the Flood
2. After the Flood
3. The Significance of Mitochondrial DNA, Mutation and Aging

⁴ Acts 17:26 From one man he made every nation of men, that they should inhabit the whole earth; and he determined the times set for them and the exact places where they should live.

4. The Descent of Man

D. Growing Older

1. The Research work of Dr. Jack Cuzzo
2. The Effects of Aging on the Human Skull
3. Slow Maturation in Ancient Man

V. Conclusion

Praise to the Lord, the Almighty, the King of creation!
O my soul, praise Him, for He is thy health and salvation!
All ye who hear, now to His temple draw near;
Praise Him in glad adoration.

Joachim Neander 1680

Suggested Readings:

Denis Alexander (2008) *Creation or Evolution: Do we have to Choose?* [Kindle Edition;
http://www.amazon.co.uk/Creation-Evolution-Denis-Alexander-ebook/dp/B00AEOJSMS/ref=sr_1_1?s=books&ie=UTF8&qid=1394700824&sr=1-1&keywords=creation+or+evolution+do+we+have+to+choose]

Norman C. Nevin, editor (2011) *Should Christians Embrace Evolution: Biblical and Scientific Responses* [Kindle Edition; http://www.amazon.co.uk/Should-Christians-Embrace-Evolution-Scientific-ebook/dp/B009VJC4NC/ref=cm_cr_pr_product_top]

Ann Gauger, Douglas Axe and Casey Luskin (2012) *Science and Human Origins* Seattle: Discovery Institute Press [Kindle Edition; http://www.amazon.co.uk/Science-Human-Origins-Ann-Gauger-ebook/dp/B008BPJV1K/ref=sr_1_1?ie=UTF8&qid=1394711321&sr=8-1&keywords=Science+and+Human+Origins]

Jerry Bergman and Jeffrey Tomkins (2012) *Is the human genome nearly identical to chimpanzee? - A reassessment of the literature* Journal of Creation 26:54–60
<http://creation.com/human-chimp-dna-similarity-literature>

Jeffrey Tomkins (2012) *More than a Monkey: The Human-Chimp DNA Similarity Myth* CreateSpace Independent Publishing Platform [http://www.amazon.co.uk/More-Than-Monkey-Human-Chimp-Similarity/dp/1475253257/ref=sr_1_1?ie=UTF8&qid=1394703416&sr=8-1&keywords=More+than+a+Monkey]

Jerry Bergman and Jeffrey Tomkins (2011) *The chromosome 2 fusion model of human evolution - Part 1: Re-evaluating the evidence* Journal of Creation 25:106–110
[\[http://creation.com/chromosome-2-fusion-1\]](http://creation.com/chromosome-2-fusion-1)

Jeffrey Tomkins and Jerry Bergman (2011) *The chromosome 2 fusion model of human evolution - Part 2: Re-analysis of the genomic data* Journal of Creation 25:111–117
[\[http://creation.com/chromosome-2-fusion-2\]](http://creation.com/chromosome-2-fusion-2)

Jeffrey Tomkins (2012) *Alleged Human Chromosome 2 “Fusion Site” Encodes an Active DNA Binding Domain Inside a Complex and Highly Expressed Gene* Answers Research Journal 6: 367-375. [www.answersingenesis.org/articles/arj/v6/n1/human-chromosome-fusion]

Jack Cuozzo (1998) *Buried Alive* [Kindle Edition; http://www.amazon.co.uk/Buried-Alive-Jack-Cuozzo-ebook/dp/B002IPHW4M/ref=sr_1_6?s=books&ie=UTF8&qid=1394701084&sr=1-6&keywords=Buried+Alive]

John C. Sanford (2008) *Genetic Entropy and the Mystery of the Genome* Feed My Sheep Foundation, Inc. [http://www.amazon.co.uk/Genetic-Entropy-Mystery-Genome-Sanford/dp/0981631606/ref=sr_1_1?ie=UTF8&qid=1394702317&sr=8-1&keywords=Genetic+Entropy]