Our Animal DNA:
Comparing genes across the Tree of Life

Glossary

Algorithm: A computer program or process to run a calculation.

Bioinformatics: studying biology using computers.

BLAST: a tool for finding protein or DNA sequences that are similar to a known short sequence.

Clustal: a tool for aligning together sequences of DNA or protein to see how similar they are.

DNA: deoxyribonucleic acid, the substance genomes are made from.

Domains of life: species are grouped into sets based on their evolutionary relationships.

Eukaryotic: Organisms where the DNA is found in the cell nucleus like plants, animals and fungi. Organisms with free-floating DNA, like bacteria and archaea, are prokaryotic.

Evolutionary time: Changes due to evolution take several generations. For some species, such as humans, which have long generation times, evolution occurs over thousands of years. For others, such as bacteria, which can reproduce in minutes, we can observe evolution within days.

Genome: all the DNA found in a cell.

Morphology: the size and shape of an organism or its parts.

Open data: data which is made freely available via the internet for researchers to use.

Orthologues: genes which started out the same and diverged over time between species. They usually do the same job in the different species, so we can use what we know about the gene in one species and apply this to the other species.

Phylogenetic Tree: a representation of how species are related to each other.

RNA: ribonucleic acid, molecules made by copying or transcribing genes which can be translated to proteins.

Species: a type of organism. Organisms are considered separate species if they cannot reproduce to produce viable offspring.