



Chimpanzee (*Pan troglodytes*)

GTATTTGTGGTAAACCCAGTG

Sequence from the gene that codes for granulysin. Granulysin is a toxic protein that is released by immune cells in response to infection, to kill pathogens like bacteria.



Brown trout (*Salmo trutta*)

TACATCAGCACTAACTCAAGG

From trout mitochondrial DNA; variation in this sequence can be used to trace trout populations and evolution. Mitochondria are small energy factories within eukaryotic cells that have their own genome of about 16,000 base pairs.



Human (*Homo sapiens*)

TCTGAGTTCTTACTTCGAAGG

Part of the *OCA2* gene sequence. The *OCA2* gene codes for a protein involved in pigmentation and variation in its sequence is a major influence on whether we have brown or blue eye colour.



Butterfly (*Danaus plexippus*)

ATGATCCCGACTATTACTATG

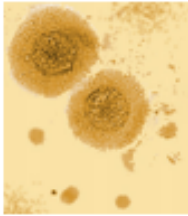
Sequence from a gene that codes for an 'opsin' protein. This particular opsin reacts to ultraviolet (UV) light, which the butterfly uses to navigate.



Malayan spitting cobra (*Naja sputatrix*)

AACCGACCGCTGCAACAACTG

Sequence from a gene that codes for a toxin protein. This toxin is a component of the cobra's venom, and blocks signals between the nerve and muscle cells of the cobra's prey, paralyzing it.



Flesh-eating microbe (*Mycoplasma alligatoris*)

CAACAGTGATTTAGGTTACAC

Part of the gene that codes for an enzyme called sialidase. When these bacteria infect an alligator they secrete sialidase to break-down the alligator's tissues, enabling them to spread through its body.



Sweet orange (*Citrus sinensis*)

TGCTACAGTTGCTGTTGTTGG

Sequence from the gene that codes for pectinesterase. Pectinesterase is an enzyme that helps to break down the cell walls of the orange when it ripens, making the flesh soft.



Carnivorous plant (*Drosera rotundifolia*)

GTAGCCACAGACTCAGTCATC

Part of a gene that codes for a chitinase enzyme. The plant secretes this enzyme to break down the chitin-rich body casing of any insect that gets trapped on its tentacles.



Giant Madagascar hissing cockroach (*Gromphadorhina portentosa*)

GATTCGCCGCTATCAGAAGAG

From the gene that codes for histone 3. Histone 3 is one of eight histone proteins that combine to form nucleosomes, the bundles around which DNA is wrapped in the nucleus.



Corpse flower (*Amorphophallus titanum*)

TCGAACCCGTTGTTGGGGAGG

This sequence is from the gene that codes for ribulose-1,5-bisphosphate carboxylase/oxygenase (RuBisCO), an enzyme that is involved in plant photosynthesis and respiration.