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**Safety:** Practical certainty that injury will not result from a hazard under defined conditions.

**Sarcoma:** cancer that arises from transformed cells of mesenchymal (connective tissue) origin.

**SCF:** The European Commission's Scientific Committee on Food (formerly the Scientific Committee for Food).

**Serotonergic:** Denoting a nerve ending that releases and or stimulated by serotonin.

**Signal induction pathway:** The molecular pathways that signal (i.e. turn on or off) biochemical pathways or biological functions (e.g. biochemical pathways leading to nerve conduction).

**Single nucleotide polymorphism (SNP):** DNA sequence variations that occur when a single nucleotide in the genome sequence is altered. For example, a SNP might change the DNA sequence AAGGCTAA to ATGGCTAA. By convention, SNPs occur in at least 1% of the population.

**Strand breaks:** Relating to DNA, a single strand break occurs when there is a break in double-stranded DNA in which only one of the two strands has been cleaved; the two strands have not separated from each other. Double strand breaks occur when both strands in the double helix are severed and are particularly hazardous to the cell because they can lead to genome rearrangements.

**Sister chromatid exchange (SCE):** Exchange of genetic material between two sub-units of a replicated chromosome.

**Somatic cells:** Any biological cell that forms part of the body of an organism, excluding reproductive cells and undifferentiated stem cells.

**Stakeholder:** A person or organisation representing the interests and opinions of a group with an interest in the outcome of (for example) a review or policy

decision.

**Statistical significance:** a conclusion drawn when, after carrying out a statistical test of the null hypothesis of no effect, the hypothesis is considered unlikely to be true. The criterion for the decision is often a probability (p) value, chosen to be, but not necessarily,  $p < 0.05$ .

**Stem cell:** an unspecialized cell capable of perpetuating itself through cell division and having the potential to give rise to differentiated cells with specialized functions.

**Suppressor gene:** A gene which helps to reverse the effects of damage to an individual's genetic material, typically effects which might lead to uncontrolled cell growth (as would occur in cancer). A suppressor gene may, for example, code for a protein which checks genes for misspellings, and/or which triggers a cell's self-destruction if too much DNA damage has occurred.

**Surfactant:** Also called: surface-active agent. A substance, such as a detergent, that can reduce the surface tension of a liquid and thus allow it to foam or penetrate solids; a wetting agent.

**Systematic review:** A review that has been prepared using a documented systematic approach to minimising biases and random errors.

**Systems biology:** The computational and mathematical analysis and modelling of complex biological systems.

**Systems toxicology:** The integration of classical toxicology with quantitative analysis of large networks of molecular and functional changes occurring across multiple levels of biological organisation.