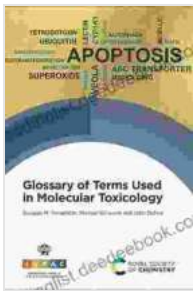


Glossary of Terms Used in Molecular Toxicology

Molecular toxicology is the study of the effects of toxicants on molecules and cells. It is a relatively new field, but it has already made significant contributions to our understanding of how toxicants cause disease. The following glossary provides definitions of some of the key terms used in molecular toxicology.



Glossary of Terms Used in Molecular Toxicology

★★★★★ 5 out of 5

Language	: English
File size	: 15268 KB
Text-to-Speech	: Enabled
Screen Reader	: Supported
Enhanced typesetting	: Enabled
Print length	: 419 pages



A

- **Adduct:** A molecule that is formed by the covalent binding of a toxicant to a cellular molecule.
- **Apoptosis:** A form of programmed cell death that is characterized by the activation of specific enzymes that lead to the destruction of the cell.
- **Bioactivation:** The process by which a toxicant is converted into a more toxic form.

- **Biomarker:** A molecule that can be used to measure the exposure to a toxicant or the effects of a toxicant on the body.
- **Carcinogen:** A substance that can cause cancer.
- **Cytotoxicity:** The ability of a toxicant to kill cells.
- **Genotoxicity:** The ability of a toxicant to damage DNA.

D

- **Detoxification:** The process by which the body removes toxicants.
- **DNA adduct:** A molecule that is formed by the covalent binding of a toxicant to DNA.
- **Dose-response relationship:** The relationship between the dose of a toxicant and the effects of the toxicant.

E

- **Endocrine disruptor:** A substance that can interfere with the endocrine system.
- **Epigenetics:** The study of changes in gene expression that are not caused by changes in the DNA sequence.
- **Genotoxicity:** The ability of a toxicant to damage DNA.

G

- **Gene expression:** The process by which the information in genes is used to produce proteins.
- **Genome:** The entire set of genes in an organism.
- **Genomics:** The study of the genome.

M

- **Metabolism:** The process by which the body converts nutrients into energy and other molecules.
- **Metabolite:** A molecule that is produced by metabolism.
- **Molecular toxicology:** The study of the effects of toxicants on molecules and cells.
- **Mutagen:** A substance that can cause mutations.
- **Mutation:** A change in the DNA sequence.

O

- **Oxidative stress:** The damage caused by free radicals.

P

- **Pharmacokinetics:** The study of the absorption, distribution, metabolism, and excretion of drugs and other chemicals in the body.
- **Pharmacodynamics:** The study of the effects of drugs and other chemicals on the body.
- **Proteomics:** The study of proteins.

R

- **Reactive oxygen species (ROS):** Free radicals that can damage cells.
- **Receptor:** A protein that binds to a specific molecule and triggers a cellular response.

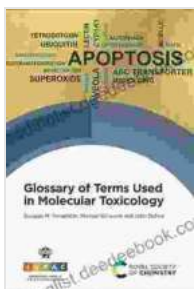
S

- **Signal transduction:** The process by which signals are transmitted from one molecule to another.
- **Toxicant:** A substance that can cause harm to the body.
- **Toxicology:** The study of toxicants and their effects on the body.
- **Transcriptomics:** The study of the transcriptome.

V

- **Xenobiotic:** A substance that is not normally found in the body.

This glossary is not exhaustive, but it provides definitions of some of the key terms used in molecular toxicology. For more information, please consult a textbook or journal article on molecular toxicology.



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