

Synopsis@NEF

Various topics are treated in this compendium. Though briefly summarized, the reader is endowed with basic knowledge in the various scientific fields represented. Sources of information include the Food and Drug Agency (FDA) and the National Institute of Health (NIH) websites.

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Orphan Drugs

The term "orphan drug" refers to a **product that treats a rare disease** affecting fewer than **200,000** Americans. The Orphan Drug Act was signed into law on **January 4, 1983**. Since the Orphan Drug Act passed, over 100 orphan drugs and biological products have been brought to market.

The intent of the Orphan Drug Act is to stimulate the research, development, and approval of products that treat rare diseases. This mission is accomplished through several mechanisms:

- Sponsors are granted seven years of marketing exclusivity after approval of its orphan drug product.
- Sponsors also are granted tax incentives for clinical research they have undertaken.
- FDA's Office of Orphan Products Development coordinates research study design assistance for sponsors of drugs for rare diseases.
- The Office of Orphan Products Development also encourages sponsors to conduct open protocols, allowing patients to be added to ongoing studies.
- Grant funding is available to defray costs of qualified clinical testing expenses incurred in connection with the development of orphan products.

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Regulatory Classification of Recalls

Class I : Violative product poses reasonable probability of serious adverse health consequences or death.

Class II: Violative product may cause temporary or medically reversible adverse health consequences; probability of serious consequences remote

Class III: violative product not likely to cause adverse health consequences.

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Prescription Drug Marketing Act

This act was published in Dec. 1999 and will go effect on Dec. 4, 2000.

This rule would require drug distributors to have detailed sales histories for the products they resell

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Matrix metalloproteinases (MMPs) comprise a family of enzymes that collectively have the ability to degrade all the components of the extracellular matrix. High expression of these enzymes occurs in cancer and is associated with the ability of tumors to grow, invade, develop new blood vessels and metastasize.

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NME and Phase IV: New molecular entities and Phase IV(Post marketing surveillance). The drug companies are required to complete Phase IV after their products have been approved. This

may take several years. The FDA uses public disclosure of status of Sponsor's Phase IV commitment as a way to make them complete their clinical trials. It is very important for companies to complete Phase IV especially when dealing with NMEs

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Control drug act

Measures for control of distribution and use of stimulant, depressant and drugs of abuse

Five classes:

Schedule I (CI): High abuse potential; no medical use eg, cocaine, marijuana, and LSD

Schedule II (CII):

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CPMP is the Committee for Proprietary Medicinal Products and is a subcommittee of the European Agency for the Evaluation of Medicinal Products (EMA).

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FDA Risk management Program

A new tool instituted by the agency to strengthen its post-marketing surveillance efforts. The program may include a physician certification component: physicians would have to demonstrate they can identify the correct patient population, recognize the side effects and manage those side effects. A registry of the patients and the prescribers is also needed.

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Occupational safety and health administration regards anything with an LD50 of >500 mg/kg as not toxic.

Corporate toxicology: a compound is regarded as potent if the dose is < 10 mg/day

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Poison Prevention Packaging Act (1970)

Special packaging : package is designed or constructed to be significantly difficult for children under 5years old to open or obtain a toxic or harmful amount of substance contained therein within a reasonable time and not difficult for normal adults to use properly, but does not mean packaging which all such children cannot open or obtain a toxic or harmful amount within a reasonable time.

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Approvable letter

An approvable letter is defined by the FDA as a written statement that the FDA will approve the application if specific additional information or material is submitted or specific conditions are met. But it does not constitute an approval of the application.

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Solvents classification

Class 1 solvents: Solvents to be avoided

Known human carcinogens, strongly suspected human carcinogens, and environmental hazards.

Class 2 solvents: Solvents to be limited

Non-genotoxic animal carcinogens or possible causative agents of other irreversible toxicity such as neurotoxicity or teratogenicity. Solvents suspected of other significant but reversible toxicities.

Class 3 solvents: Solvents with low toxic potential

Solvents with low toxic potential to man; no health-based exposure limit is needed. Class 3 solvents have PDEs of 50 mg or more per day.