



## Introduction to Biologically Active Synthetic Drugs

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**DESCRIPTION:** Synthetic biology (SynBio) is an interdisciplinary field of study that aims to create novel biological components, devices, and systems, as well as redesign existing systems found naturally. It is a scientific discipline that covers a wide variety of methodologies from different disciplines, including biotech, genetic modification, cell genetics, molecular engineering, molecular genetics, membrane scientific knowledge, biophysics, contaminant and biochemical engineering, electronics and communication engineering, control engineering, and evolutionary theory. The field of bioengineering is rapidly expanding as a result of more powerful genetic engineering functionality and lower DNA synthesis and sequential costs. In 2016, more than 350 companies in 40 countries were fully engaged in systems biology applications, with a total global market value of \$3.9 billion. The use of physical designing and genetic manipulation to generate new (and thus synthetic) organisms" of biology, engineering, and linked disciplines in the design of chemically synthesized DNA to start creating organisms with novel or enhanced characteristics and traits". Using the engineering framework of design process to create dependable and up in stable with novel features and functionality not found in nature" (The European Commission, 2005) This might include development of a single - molecule assembler based on biomedical systems like the ribosome. Biological systems are therefore put together module by module. Cell-free expression levels systems, as well as lattice molecular machinery, are frequently used. There is a growing push to bridge the gap between these strategies by creating hybrid residing cells and technology communication between living and artificial cellular components. A designer drug is a banned drug structure or function analogue that has been designed to mimic the pharmacological properties of the drug in question while avoiding categorization as illegal and/or detection in standard drug tests. Synthetic drugs include psychoactive substances designated as new psychoactive substances (NPS)

by the European Union, as well as analogues of results drugs such as designer steroids. Some of these were initially synthesised by educational or industrial scientists in an attempt to seek more potent derivative products with fewer side effects and low time (and possibly too because new compounds are easier to patent), and were later co-opted for recreational use. Other synthetic drugs were created in secret laboratories for first time, Since this safety and effectiveness of these drugs have not been extensively assessed in animal and human trials, their use could lead to unexpected adverse effects. Designer pharmaceutical research could be considered a subfield of drug design. The investigation of adjustments to known active drugs, such as systemic analogues, stereoisomers, and derivative products, yields drugs with effects that may differ significantly from their "parent" drug (e.g., showing increased potency, or decreased side effects). Synthetic drugs have effects similar to other drugs in some cases, but have entirely different molecular compounds (e.g. JWH-018 vs THC). Despite being a very broad term applied almost to every synthetic drug, it is widely used to refer to synthesized recreational drugs, including those that have not been designed at all (e.g. LSD, the psychedelic side effects of which were discovered unintentionally). Several novel new capabilities were crucial to synthetic biology's success. Standardization of physiological parts and hierarchical abstract thought to allow use of those parts in synthesized systems are concepts. Reading and writing DNA are examples of fundamental technologies (sequencing and fabrication). For precise prediction and computer-aided design, measurements underneath a variety of conditions are required (CAD)

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