PHA 210

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Pharmacology

Discuss in details, the aspects of medical biotechnology

The field of Medical Biotechnology includes research and development of technology used in the medical, agricultural and pharmaceutical industries. Medical biotechnology is the use of living cells and cell materials to research and produce pharmaceutical and diagnostic products that help treat and prevent human diseases. Most medical biotechnologists work in academic or industrial settings. Medical biotechnology is the use of living cells and cell materials to research and produce pharmaceutical and diagnostic products that help treat and prevent human diseases. Most medical biotechnologists work in academic or industrial settings. In academic laboratories, these professionals conduct experiments as part of medical research studies; industrial biotechnologists work toward developing drugs or vaccines. The medical biotechnology field has helped bring to market microbial pesticides, insect-resistant crops, and environmental clean-up techniques. The field of medical biotechnology is experiencing rapid growth in recent years, leading to the development of several innovative techniques for preventing, diagnosing, and treating diseases. Novel methodologies, including polymerase chain reaction, gene sequencing, fluorescence in situ hybridization, microarrays, cell culture, gene silencing using interference RNA, and genome editing, have significantly contributed towards improving health science, such as the sequencing of the human genome, use of stem cells for regenerative medicine, tissue engineering, development of antibiotics, and the generation of monoclonal antibodies for therapy. This chapter will summarize and update important techniques used and the products generated using these tools in the field of medical biotechnology. If the current growth rate continues, medical biotechnology will soon become a major pillar of health science.h