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Commentary

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Short commentary on medical biotechnology

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ABOUT THE STUDY

Medical biotechnology is a department of medicine that makes use of living cells and cell components to analyse and produce pharmaceutical and diagnosing product. These discovered or invented products assist in dealing with the deadly diseases. From the Ebola vaccine to mapping human DNA to agricultural impacts, clinical biotechnology is making several improvements and saving lives of many people. Some of the latest usage of biotech is work in genetic testing, drug treatments, and synthetic tissue growth. With the various improvements in scientific biotechnology, there are new queries that arise. From the past ethics, there are numerous things to clarify and modify in relation to this fast-paced industry.

Importance of medical biotechnology

- The field of medical biotechnology is experiencing speedy advancement in latest years, leading to the improvement of numerous modern strategies for preventing, diagnosing, and treating diseases.
- Novel methodologies, inclusive of polymerase chain reaction, gene sequencing, fluorescence in situ hybridization, microarrays, cell culture, gene silencing the usage of interference RNA, and genome editing, have notably contributed toward enhancing fitness science.
- The sequencing of the human genome, use of stem cells for regenerative medicinal drug, tissue engineering, improvement of antibiotics, and the technology of monoclonal antibodies for remedy and lots of greater fall beneath the achievements of biotechnology advances.
- If the present growth rate of improvement continues, then the medical biotechnology will quickly become a chief pillar of life sciences.

Some of the vital branches of biotechnology

1) Tissue engineering is a top clinical department, which make use of the combination of engineering principles and the knowledge of cell biology to update the features of tissues and organs.

- This field offers a variety of alternatives for repairing the damaged tissues via transplanting new organs by conducting surgeries.
- Apart from the regenerative medicinal drug, tissue engineering make use of stem cell culturing and differentiation methods, is taking the gain of the usage of biodegradable and bio-safe substances including polyesters and collagen to form flexible systems called "scaffolds."

2) Regenerative medicinal drug is the system of changing or regenerating human cells, tissues, or organs and setting up ordinary function.

- In the final 20 years "stem cell research" has made giant development in their essential understanding of therapeutic intervention.
- The different kinds of organ-specific, embryonic, and induced pluripotent stem cells based treatment plans provide promising remedy regimens for present and future medicinal drug.
- Some of them are even authorized and legalized for medical practice through regulatory bodies of health research, including US Food and Drug Administration.