

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 APPLICATIONS OF MEDICAL BIOTECHNOLOGY IN MEDICINE

BIOPHARMACEUTICAL

Through advanced methods in biotechnology, biopharmaceuticals were produced safely and quickly for treating illnesses. Furthermore, biopharmaceuticals do not contain any chemicals and use targeted organisms to synthesize the medicine successfully. Big molecules of proteins are the typical origin of

biopharmaceuticals. When they are inside the human body, they target dangerous and hidden parts of the disease and obliterate them. Today, scientists and researchers are aiming to extend and develop biopharmaceutical medicines which can be used to fight diseases related to heart, hepatitis and cancer.

PHARMACOGENOMICS

Pharmacogenomics is the technique that leverages the person's heredity information to choose the best biotechnological medicine for their illness. This studies the body system's response to certain medications. To put it simply, this is the combination of advances in pharmaceuticals along with genomics. The end goal of this application is to improve medicines that are specifically targeted to a

person in lieu with his genetic makeup to ensure effective treatment of illness. The end goal of this branch of medical science is to effectively produce biotechnological medicines which are placed in the patient's body in accordance with his genetical makeup.

With the use of pharmacogenomics, medical companies can produce medicines that depend on the proteins, compounds, and RNA particles based on the chosen qualities and infections applicable. Synthesized medicines are almost guaranteed to improve remedial effects, in addition to diminishing harm to other nearby cells. With the knowledge of the person's hereditary inclinations, specialists can ascertain how

well the patient's body can prepare and process a medication and decide the correct amount of medication doses. As a result, an accurate prescription will be given, and the chance of overdose is mitigated.

RAPID DEPLOYMENT OF VACCINES

A global pandemic is a real issue and has always proven its powerful grip on humanity.

Through Biotechnology, scientists and researchers can quickly pinpoint precursors or markers that can cause severe illnesses and diseases. As a result, they can synthesize vaccines quickly against any dangerous pandemic sickness.

In a study of vaccines and biotechnology, researchers found a great decline in illnesses when patients were administered with a vaccine

produced through
biotechnology.