

Contemporary Issues in Biotechnology

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Any systematic knowledge, machinery or equipment established based on bio systems for purposes of enhancing human life and its environment is termed biotechnology. Biological processes have been used for many centuries in preserving and processing food products like dairy e. g. cheese and bread. Progression in biotechnology has led to its application in every facets of life including but not limited to faster genetic improvement and feed utilization by plants and animals, establishment of phylogenic relationship between organisms, amelioration in human health and welfare, betterment of our environmental management and advancement of industrial processes. Key researchers have demonstrated its use in combating devastating and erratic ailments, establishment of ecofriendly environment, provision of renewable and cleaner energy, enhancement of feed and food production as well as resourceful industrialized progressions.

Although many breakthroughs have been achieved using biotechnology, a number of issues are still in quest of remedies from biotechnology and these include:

- Tailoring treatments to individuals to minimize health risks and side effects
- Optimizing bio-refineries cum biofuels to minimize greenhouse gas emissions
- Identifying root causes of age-related illness and degeneration as well as genetic disorder in man; development of repair formula and maintaining a youth-like state indeterminately
- Fortification of crop and animal products in order to enhance various aspects of human health like cardiovascular and nervous systems among others.

- Development of more precise tools for detection and management of several life-threatening ailments.
- Development of high yielding plants and animals to match the ever increasing world population. These may include tissue culture and production of laboratory meat.
- Reduction in the use of agricultural chemicals in fighting pests and diseases ravaging crops especially in the tropics.
- Fortifying crops with nutrients, vitamin and minerals in order to solve nutrient deficiencies paramount in certain regions.
- Producing allergen and toxin free crops and animals.

AS Biotechnology is therefore poised in publication of scientific findings in these areas and beyond.