

News Details

From basic knowledge to healthcare applications

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New strategies based on the engineering of proteins, genes and cells as therapeutic agents are poised to revolutionize medicines in the coming decades. Areas may include gene therapeutics, tissue engineering, stem cell biology, cell-based therapeutics and gene connection technologies.

We are in the early hours of a dawn of the new biological revolution with genuine depth and great diversity. Today's biotechnology industry is a colossal melting pot of many ascendant technologies, including molecular biology, pharmacogenomics, biotechnology tools, genomics, proteomics, bioinformatics, nanotechnology, telemedicine, electronics, fiber optics and computerisation.

The primary value driver of the genomic era will be an explosion in target. During the next decade, today's 400 odd targets will increase to at least 4000. Today's \$300 billion pharma market would grow to \$3 trillion by 2020.

In biotherapeutic cure, natural products like plant sources, animal sources and microbial diversity are accessed. These are made into therapeutic proteins and protein-based drugs. Anti-bodies are also finding applications as therapeutics.

Bharat Biotech Intl. Ltd (BBIL) has set up a large facility for biotherapeutics at Turkapally in the Genome Valley. The production of the therapeutic molecules covers bacteria, yeast, tissue culture, chemical synthesis, and transgenic animals/plants.

More than other industries, biotherapeutic industry requires a single window. Too many ministries and approvals that take a minimum of three years to produce for non-regulated markets. It is even more difficult for regulated markets like the US.

Ultimately, the translation of basic science knowledge and technological advances into useful applications has a huge impact on the promotion of health and on the economic development of our country.