

Generations of sequencing technologies

Abstract:

Advancements in the field of DNA sequencing are changing the Scientific horizon and promising an era of personalized Medicine for elevated human health. Although platforms Are improving at the rate of Moore`s Law, thereby reducing The sequencing costs by a factor of two or three each year, We find ourselves at a point in history where individual genomes are starting to appear but where the cost is still too high for routine sequencing of whole genomes. These needs will be met by miniaturized and parallelized Platforms that allow a lower sample and template Consumption thereby increasing speed and reducing cost.

Introduction:

The ability to swiftly and accurately gain knowledge
Of nucleic acid composition is essential to many of the
Biological sciences. As the pace of progress is high and
We are moving towards an era of synthetic genomics and
Personalized medicine, the demand for highly efficient
Sequencing technologies is obvious, where effortless
Deciphering of genetic sequences will shed light on novel
Biological functions and phenotypic differences.
Metagenomic endeavors are providing new tools in the art
Of genetic engineering, thereby enabling the design of
Artificial life in the service of humanity.