Seminar 1

New approaches in drug design in the era of personalized medicine

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Abstract

Since the Human Genome Project (HGP) has revealed the heretogeneity in genomes of individuals, personalized medicine, which proposes a customized healthcare, has become an intractable field of research. Meanwhile, as the precision medicine initiative has launched, precision drug design, which aims at maximizing therapeutic effects while minimizing undesired side effects for an individual patient, has entered a new stage. Nowadays, drug design has evolved into a much more scientific and rational process due to better understanding of biological processes and the underlying chemistry, owing to the progress made due to advances in high throughput experimental techniques and availability of high-performance computational resources. The new approaches in drug design has matured to the stage where drugs are designed rather than being discovered. The development and validation of analytical methods play important roles in the discovery, development, and manufacture of pharmaceuticals. In this seminar, the new strategies and approaches in drug design in the era of personalized medicine are discussed.

Keywords: Drug design, Precision medicine, Drug discovery, Personalized medicine.