Abstract

Next-Generation Sequencing (NGS) is a recent life-sciences technological revolution that allows scientists to decode genomes or transcriptomes at a much faster rate with a lower cost than conventional cloning methods. Genomic-based studies are in a relatively slow pace in India due to the non-availability of genomics experts, trained personnel and dedicated service providers. Using NGS there is a lot of potential to study India's national diversity (of all kinds) "We at the Centre for Cellular and Molecular Platforms (C-CAMP) have launched the Next Generation Genomics Facility (NGGF) to provide genomics service to scientists, to train researchers and also work on national and international genomic projects. We have HiSeq1000 from Illumina and GS FLX Plus from Roche454. The long reads from GS FLX Plus, and high sequence depth from HiSeq1000, are the best and ideal settings for solving problems using a systems biology approach. Under NGGF, we have bioinformatics experts and high-end computing resources to dissect NGS data such as genome assembly and annotation, gene expression, target enrichment, SNP analysis, etc. Our services (sequencing and bioinformatics) have been utilized by more than 45 organizations (academia and industry) both within India and outside, resulting in many publications in peer-reviewed journals and several genomic/transcriptomic data is available in NCBI/GenBank.