

Hope in the Time of the Pandemic

Editorial

'It was the best of times, it was the worst of times; it was the spring of hope, it was the winter of despair'. This opening phrase from 'The Tale of Two Cities' by Charles Dickens comes to mind, as we reflect on the sequence of events that have been unfolding across the world over the past few months. The ongoing COVID-19 pandemic has brought the world to a standstill and brought a lot of death and despair in its wake. However, there have been stories of hope, human kindness, family bonding and positive environmental impact, that have brought some cheer in the midst of all the gloom.

Science is the beacon of hope that is expected to guide us through these dark and difficult times. Technological advances in genetics and molecular biology have enabled mankind to make rapid strides in the management of this sudden and unexpected crisis. With the help of the high-throughput next-generation sequencing technology and advanced bioinformatics tools, scientists were able to sequence the entire genome of the novel SARS-CoV-2 within a few weeks of the first case reports. Knowledge of the viral genome sequence led to the development of real-time reverse transcription polymerase chain reaction (rRT-PCR)-based assays targeting various genomic regions of the virus. rRT-PCR has become the gold standard diagnostic test for COVID-19, and is being used extensively across the world for rapid and accurate diagnosis of the infection. Ascertainment of the viral genome sequence and understanding of its molecular biology, have also paved the way for identification

of drug targets, development of specific antiviral therapies, and development of vaccines including mRNA-based vaccines, for which clinical trials are now underway. These events have reiterated the fact that genetics is indeed the future of medicine.

The past few years have witnessed not just technological advances in molecular diagnosis, but also significant breakthroughs in molecular therapy. The GenExpress in this issue highlights some emerging therapeutic strategies for certain genetic disorders, which have shown promising results in clinical trials, such as RNA-based therapy for Huntington disease, hemoglobin S (HbS) polymerization inhibitor (Voxelator) for sickle cell disease, triple combination CFTR-modulator therapy for cystic fibrosis, and oral deferiprone-based iron chelation therapy for pantothenate kinase-associated neurodegeneration (PKAN). These and many other such promising therapies in the horizon, are providing a glimmer of hope for the afflicted patients.

Genetic Clinics hopes to bring you many more such accounts and reports of successful therapies for genetic disorders in the coming years. 'Stay safe, stay healthy'.



Dr. Prajnya Ranganath
Associate Editor
1st July, 2020