

THE NOBEL HALL OF SCIENCE-2020

Every year, as the year approaches its end, people anxiously await the announcements of Nobel Prizes by the Royal Swedish Academy, Sweden. The prizes for Chemistry, Physics and Physiology/ Medicine for the year 2020 have been announced.

1. Chemistry Nobel Prizes for the year 2020 have been announced *“for the development of a method for genome editing”*

The prize for Chemistry went for the work on ‘genetic scissors’, to **Emmanuelle Charpentier**, Max Planck Unit for the Science of Pathogens, Berlin, Germany & **Jennifer A. Doudna**, University of California, Berkeley, USA.

They are responsible for the most useful technique of that will go a long way in modifying genes, proving a way to new therapies. They discovered one of gene technology’s precise tools called CRISPR/Cas9 genetic scissors. It is a significant basic science contribution but has also resulted in innovative crops and will lead to ground-breaking new medical treatments.

2. Physics Nobel Prizes for 2020 have been announced for work related to black hole and super compact object discovered in the our galaxy.

The Royal Swedish Academy of Sciences has decided to award the Nobel Prize in Physics 2020 with one half to **Roger Penrose**, University of Oxford, UK as he established the black hole formation to be a “robust prediction” of Einstein’s general theory of relativity”.

The other half of the award was equally shared by **Reinhard Genzel**, Max Planck Institute for Extraterrestrial Physics, Garching, Germany and **Andrea Ghez**, University of California, Los Angeles, USA. They had discovered a super massive compact object in the centre of Milky Way galaxy.

3. Nobel Prizes for 2020 for Physiology/ Medicine have been announced for work related to Hepatitis-C Virus.

Harvey J. Alter, National Institutes of Health, Bethesda, MD, USA; **Michael Houghton**, University of Alberta, Edmonton, Canada and **Charles M. Rice**, Rockefeller University, New York, NY, USA made significant contribution to the battle against viral diseases making the very sensitive blood tests for the virus possible.

This has helped in getting rid of post-transfusion hepatitis in a major way. The research also led to antiviral drugs directed at hepatitis C. Harvey J. Alter studied transfusion-associated hepatitis showing that an unknown virus was a common cause of chronic hepatitis. Michael Houghton isolated the genome of the new virus that was named Hepatitis C virus while Charles M. Rice produced the clinching evidence to establish that Hepatitis C virus alone could cause hepatitis.

The Nobel Prize is the most coveted award in the world. The funds for the Nobel Prizes come from the will of chemist, engineer and industrialist Alfred Nobel, whose invention of dynamite had helped him earn a fortune and he decided to bequeath the major part of it, an amount worth approximately 342 million dollars (in today’s worth), for this purpose.