

Har Gobind Khorana

January 19, 2022

In news-100th birth anniversary of the biochemist and chemical biologist Har Gobind Khorana was observed on January 09, 2022.

About Har Gobind Khorana-

- He was an American biochemist born on January 9 1922 in Multan (present day Pakistan) of Pre-Independent India.
- He made **significant contributions to the science of PCR tests, which we use today to look for SARS-CoV-2 infections.**
- While on the faculty of the University of Wisconsin–Madison, **he shared the 1968 Nobel Prize for Physiology or Medicine** with Marshall W. Nirenberg and Robert W. Holley **for research that showed the order of nucleotides in nucleic acids, which carry the genetic code of the cell and control the cell's synthesis of proteins.**
- Khorana and Nirenberg were also awarded the Louisa Gross Horwitz Prize from Columbia University in the same year.
- In the 1960s, Khorana **confirmed Nirenberg's findings that the way the four different types of nucleotides are arranged on the spiral "staircase" of the DNA molecule determines the chemical composition and function of a new cell.**
- He **also proved that the nucleotide code is always transmitted to the cell in groups of three, called codons.**
- He also **determined that some of the codons prompt the cell to start or stop the manufacture of proteins.**
- In 1970, he and his research team were able to synthesize the first artificial copy of a yeast gene.
- His later research **explored the molecular mechanisms underlying the cell signaling pathways of vision in vertebrates.**

- He **investigated mutations in rhodopsin**, a light-sensitive protein found in the retina of the vertebrate eye and **are associated with retinitis pigmentosa, which causes night blindness.**
- He became a naturalized citizen of the United States in 1966, and received the National Medal of Science in 1987.
- In 1971, he joined the faculty of the Massachusetts Institute of Technology, where he remained until he retired in 2007.
- In 2007, the University of Wisconsin, **India's Department of Biotechnology and the Indo-US S&T Forum launched the Khorana Program.**