H Gobind Khorana received, with Robert Holley and Marshall Nirenberg, the Nobel Prize for Physiology or Medicine in 1968 for “Interpretation of the Genetic Code and Its Function in Protein Synthesis”. He grew up in India, graduated from the University of Punjab and further studied Organic Chemistry at Liverpool, Zurich and Cambridge. He developed the use of the then little-known compounds, carbodiimides, as synthetic reagents, which proved to be of wide application in Organic Chemistry and in the synthesis of nucleotides, nucleotide coenzymes, nucleic acids and polypeptides. By using multi-disciplinary approaches, he contributed to the elucidation of the genetic code and later accomplished total synthesis of biologically functional genes in the laboratory. In the mid-seventies, making a radical switch in his work, he studied biological membranes and bioenergetics and elucidated the mechanism of proton transport in light-transduction by the purple membrane. His current interests are in the mammalian visual sensory system and G-protein-coupled receptors.