

## Nobel Laurates in 2024

Ms. Apeksha Herath



Nobel prize is annually awarding for the scientists in recognition of their immortal contribution towards the humankind. The prize is awarded since 1901, according to the will of the Alfred Nobel who was an inventor, entrepreneur and businessman. His will has stated that his fortune was to be used to reward “those who, during the preceding year, shall have conferred the greatest benefit to humankind.” The prize is specially devoted for the categories of physics, chemistry, physiology or medicine, literature and peace. 1969, a new prize was established – the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel.

### The Nobel Prize in Physics 2024

The prize was awarded for **John J. Hopfield Princeton University, NJ, USA** and **Geoffrey E. Hinton University of Toronto, Canada** for their service on or foundational discoveries and inventions that enable machine learning with artificial neural networks. The contribution of John Hopfield was recognized for creating an associative memory that can store and reconstruct images and other types of patterns in data. Geoffrey Hinton contributed for inventing a method that can autonomously find properties in data, and so perform tasks such as identifying specific elements in pictures.



John J. Hopfield



Geoffrey E. Hinton

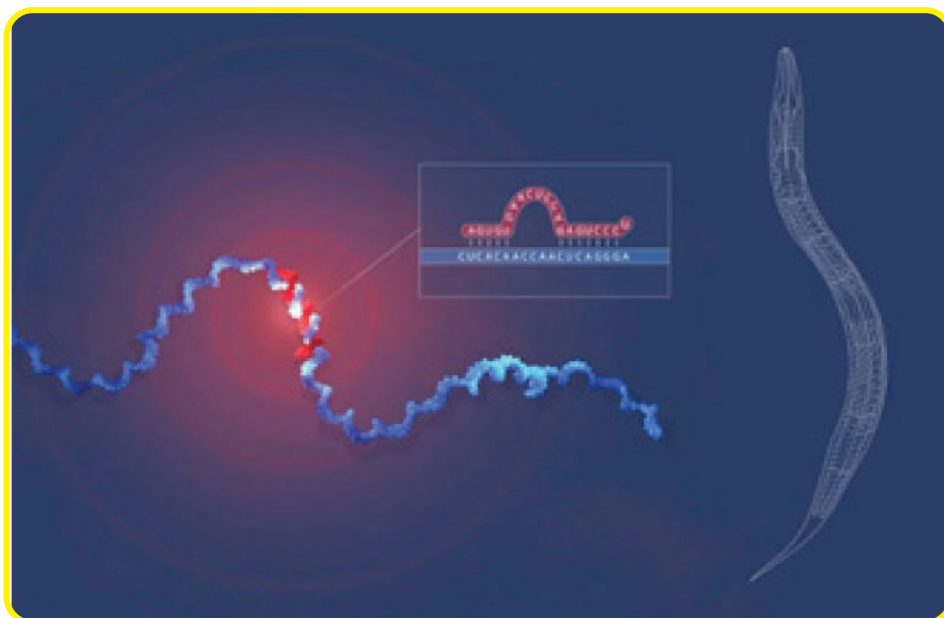
### Nobel Prize in Physiology or Medicine

**Victor Ambros**, professor at the University of Massachusetts Chan Medical School, and **Gary Ruvkun**, professor at Harvard Medical School was recognized as the Nobel prize winners in Physiology or Medicine. They were recognized for their service on discovery of a fundamental principle governing how gene activity is regulated.

Their discoveries focused on microRNA, a new class of tiny RNA molecules that play a crucial role in gene regulation. It revealed a completely new principle of gene regulation that is very essential for multicellular organisms specially humans.

### The Nobel prize in Chemistry 2024

**David Baker**, Professor of University of Washington and **Demis Hassabis** and **John Jumper**, two scientists from Google DeepMind were recognized for their pioneering work on Protein Structures. Prof. David Baker was identified for this



David Baker



Demis Hassabis



John Jumper

contribution for building entirely new kinds of proteins.

Professor David Baker used computer-based methods to design a new protein that was unlike any other protein leading to possibilities to create enormous diversity of new proteins. Those new proteins can be used for the development of drugs, vaccines and other relevant materials.

Demis Hassabis and John Jumper have developed an Artificial Intelligence (AI) model to predict proteins' complex structures. They predicted a three-dimensional structure of a protein from a sequence of amino acids. It led for the prediction of the structures of all most all 200 million known proteins. Their AI programme was known as AlphaFold Protein Structure Database. It was used by large number of scientists all around the world. It provides an easy access to predicted models of protein.

### The Nobel Prize in Literature

The South Korean author "Han Kang" was awarded for The Nobel Prize in Literature. She began her career in 1993 as a poet. Currently she has authored many of the novels and short stories. In her writing, she confronts historical traumas and invisible sets of rules and, in each of her works, exposes the fragility of human life. It was known that she has a unique awareness of the connections between the body and soul. She has become an innovator in the contemporary prose. The Vegetarian, Human Acts and We Do Not Part are the best pieces of work that she has contributed.



Gary Ruvkun



Victor Ambros



Han Kang



### The Nobel peace prize

The Japanese organization Nihon Hidankyo was awarded the Nobel peace prize considering the efforts made to achieve the world free of nuclear weapons witnessing the that nuclear weapons must never be used. The project is known as "**Hibakusha**". A huge global movement was arising with the consequences of the atomic bomb in 1945 and they work immensely to aware the hazardous effects of using nuclear weapons. This cause for the gradually development of a powerful international norm to refuse the nuclear weapons which is known as "the nuclear taboo"

The Nihon Hidankyo has provided many of the witness accounts indicating the suffers and disasters made due to the usage of nuclear weapons. They have collected those appeals and witness records and sent annual delegations to the United Nations and other peace conferences pressing need for nuclear disarmament. They have strongly elaborated the hazardous



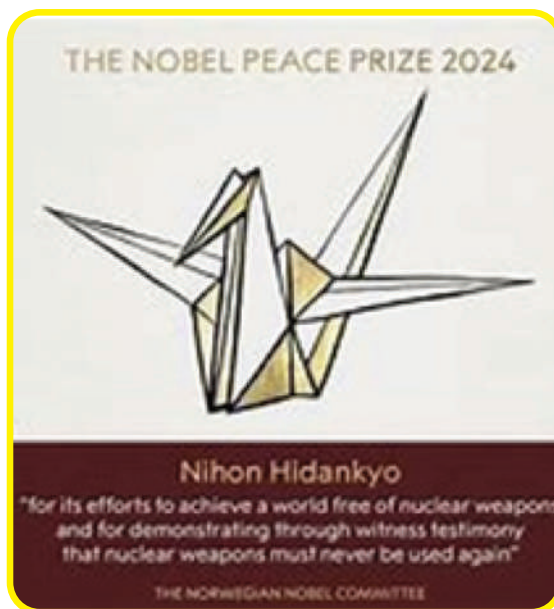
Daron Acemoglu



Simon Johnson



James Robinson



effects and convince the message to stop the nuclear weapons.

### The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2024

European economists Daron Acemoglu, Simon Johnson and James Robinson were awarded for the Nobel prize in economics. Both Daron and Simon are professors at Massachusetts Institute of Technology (MIT) where the James Robinson is attached to University of Chicago, IL, USA. Their studies of how institutions are formed and affect prosperity is recognized for their prize. The study was valuable in understanding the difference in the prosperity between the nations.

According to their studies, it is impossible to generate growth or change for the betterment of future for the societies with a poor rule of law and institutions that exploit population.



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