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Nobel Prize in Chemistry 2024 to trio for cracking code for protein structures

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Nobel Prize in Chemistry 2024 is about pro-teins, life's ingenious chemical tools


David Baker. Ill. Niklas Elmehed © Nobel Prize Outreach


Demis Hassabis. Ill. Niklas Elmehed © Nobel Prize Outreach


John Jumper. Ill. Niklas Elmehed © Nobel Prize Outreach

The Royal Swedish Academy of Sciences has decided to award the Nobel Prize in Chemistry 2024, with one half to **David Baker,** University of Washington, US for computational protein design; and the other half jointly to **Demis Hassabis,** Google DeepMind, London, UK; and **John M. Jumper,** Google DeepMind, London, UK for protein structure prediction.

Proteins generally consist of 20 different amino acids, which can be described as life's building blocks. In 2003, **David Baker** succeeded in using these blocks to design a new protein that was unlike any other protein. Since then, his research group has produced one imaginative protein creation after another, including proteins that can be used as pharmaceuticals, vaccines, nanomaterials and tiny sensors.

On the other hand, in 2020, **Demis Hassabis** and **John Jumper** presented an AI model called AlphaFold2. With its help, they have been able to predict the structure of virtually all the 200 million proteins that researchers have identified. Since their breakthrough, AlphaFold2 has been used by more than two million people from 190 countries. Among a myriad of scientific applications, researchers can now better understand antibiotic resistance and create images of enzymes that can decompose plastic.