

Katalin Karikó and Drew Weissman win 2023 Nobel Prize in Medicine for mRNA vaccines work against COVID-19

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The discoveries by the two Nobel Laureates were critical for developing effective mRNA vaccines against COVID-19

The Nobel Assembly at Karolinska Institutet has decided to award the 2023 Nobel Prize in Physiology or Medicine jointly to Katalin Karikó and Drew Weissman for their discoveries concerning nucleoside base modifications that enabled the development of effective mRNA vaccines against COVID-19.

The discoveries by the two Nobel Laureates were critical for developing effective mRNA vaccines against COVID-19 during the pandemic that began in early 2020. Through their groundbreaking findings, which have fundamentally changed our understanding of how mRNA interacts with our immune system, the laureates contributed to the unprecedented rate of vaccine development during one of the greatest threats to human health in modern times.?

Dr Katalin Karikó is a Hungarian-American biochemist who specialises in ribonucleic acid-mediated mechanisms, particularly in vitro-transcribed messenger RNA for protein replacement therapy.

On the other hand, Dr Drew Weissman is an American physician-scientist best known for his contributions to RNA biology. His work was used for the development of mRNA vaccines, the best known of which are those for COVID-19 produced by BioNTech/Pfizer and Moderna. Dr. Weissman's laboratory in the US focuses on the study of RNA and innate immune system biology and the application of these findings to vaccine research and gene therapy.