

With Nobel Prize in hand, mRNA set to revolutionize next generation vaccines and therapeutics

The Nobel Committee for Physiology or Medicine honored two scientists whose research into messenger RNA (mRNA) technology paved the way for much-lauded covid-19 vaccines. Katalin Karikó and Drew Weissman figured out how to tweak mRNA to prevent it from setting off an inflammatory reaction. Their discovery, [first published in 2005](#), was key to developing the mRNA vaccines from Moderna and Pfizer/BioNTech, part of a vaccination strategy that [saved millions of lives](#).

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This year, the National Institutes of Health [launched a clinical trial](#) to test another mRNA flu vaccine that doesn't contain multiple antigens, but is designed to elicit a response to a portion of the virus that isn't as likely to change from year to year.

Flu is just the beginning. The list of diseases for which mRNA vaccines are being developed goes on (and on and on): malaria, HIV, Zika virus, Epstein-Barr virus, cytomegalovirus, herpes, norovirus, Lyme disease, Nipah virus, *C. difficile*, hepatitis C, leptospirosis, tuberculosis, shingles, acne, chlamydia, and many others.

But wait! There's more. mRNA could be a powerful way to treat diseases, not just prevent them. In fact, it was originally envisioned as a therapeutic.

[**This is an excerpt. Read the original post here**](#)