Big risk, big rewards: Betting on RNA to make cheaper, faster coronavirus vaccines

[A] promising — but unproven — new generation of vaccine technologies is based on deploying a tiny snip of genetic code called messenger RNA to trigger the immune system. It has never before been approved for use.
But almost overnight, these cutting-edge RNA vaccine efforts have leaped forward as top candidates to fight covid-19. Some developers plan to have tens of millions of doses ready by the end of the year.

Elegant in theory, efficacious in the laboratory but untested in the real world, the possible RNA vaccines are especially attractive because they might be cheaper, easier and faster to manufacture on a massive scale — at least one team boasts it could partner with producers in developing countries to provide millions of vials for as little as $5 a pop.

…

At least 17 teams are now testing their potential vaccines in humans — and at least five of these are betting on RNA vaccines.

The RNA group has been among the first out of the gate because they can be rapidly designed on computers, using just the genetic sequence of the coronavirus that was shared online in early January.

The stakes, and risks, are enormous.

“This is the greatest science experiment in vaccinology that’s ever been done,” said Andrew Ward, a structural biologist at the Scripps Research Institute in San Diego.

Read the original post