**The women who conquered Covid**

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The rapid spread of the Covid-19 pandemic has caused an entirely unprecedented and catastrophic impact around the world. Human beings, before it, had certainly endured several crippling epidemics and pandemics like the great plagues, black deaths, many variants of flus, fevers, Ebola and AIDS, that altered the path of their lives and civilisations. Yet the sprawl, spread and devastation by Covid-19, was unique because having never faced it earlier, they had no immunity against it and no idea about its prevention, precautions, treatment or prognosis. The crisis was worsened by its rapid and wider spread around the planet, affecting over 281 million persons, and over 5423441 of them have already lost their lives. The routine life patterns, social interactions, education, economic, industrial output, business, travel, tourism, the entertainment sectors and the stock markets have been wantonly walloped, wiping out about $4 trillion from the leading global economies. Pakistan has also lost about twenty nine thousand lives, $21 billion in the economy and an estimated 21 million employment opportunities.

[Sudan’s prime minister resigns amid deadlock, anti-coup protests](https://nation.com.pk/03-Jan-2022/sudan-s-prime-minister-resigns-amid-deadlock-anti-coup-protests)

This trail of death and devastation would have been far more colossal if the innovation, ingenuity, rapid production, transport and supplies of various vaccines from advanced countries had not emerged to counter and control this crisis. A very interesting aspect of the wonder vaccine weapon that forced the Covid-19 to retreat, has been that almost all top brands like Pfizer, Moderna, AstraZeneca, Johnson and Johnson and their Chinese analogues like Sinopharm and Sinovac, owe their origin and perfection mostly to the innovative genius and endeavours of female scientists. The unique characteristic aspect of the western brands is that they are based on mRNA or the messenger molecule process that conveys instructions from the DNA or headquarters of the cell to its ammunition factory on which defensive weapons to produce against the invading viral cells.

This technique, contrary to the Chinese vacs and the earlier known protections against polio, measles or rabies etc., does not use the live or attenuated form of the virus to warn and train the body’s immune responses. But the novel mRNA forms are based on rather an utterly non-living genetic structure or segment of the virus. This category is thus evidently a lot safer, and can be rapidly produced, tested and modified to maul many rapidly evolving mutations of the viruses. The promise and potential of the mRNA technique transcends far beyond the current Covid crisis to create many new cures against various other viruses, cancers, a myriad other maladies and stands to transform the entire biotech industry. But this miracle technique was discovered by Katalin Kariko, originally a Hungarian biochemist who moved to the US about twenty years ago and worked at various laboratories. Initially, she even faced difficulty in procuring enough research grants as her venture was considered too fanciful. Yet her perseverance with her immunologist husband Drew Weissman, led them to develop a way to wrap the synthetic RNA in lipid nanoparticles, impart a critically precise stability and mediate to the body’s immune system.

[PML-N will establish govt in general election 2022 says Ahsan Iqbal](https://nation.com.pk/02-Jan-2022/pml-n-will-establish-govt-in-general-election-2022-says-ahsan-iqbal)

Going beyond pioneering the prerequisite design tool, women are also leading the efforts at Pfizer, Johnson and Johnson and Oxford/AstraZeneca and Moderna development complexes. Katherine Johnson, also known for her research against pneumonia and meningitis, leads the Pfizer-BioN tech team and is presently striving to evolve newer, more effective and easy-to-store versions of the Covid vaccine. The Moderna vaccine, which together with Pfizer, is making $65000 profit per minute, was similarly developed by Dr Kizzmekia Shanta Corbett, popularly known as Dr Kizzy. Working at Harvard Radcliff Institute and Public Health School, she had already studied and researched the coronaviruses like SARS and MERS and came out with a prototype of the Covid-19 vaccines in merely 66 days after the structure of this virus was determined. She has been already honoured with the USA national awards and as an innovator of the year in the Times Top100 scroll, 2021.

Sarah Gilbert likewise, is a British vaccinologist who was responsible for the design of the Oxford-AstraZeneca Covid-19 vaccine. She has recently been accorded an unusual honour by the famous toy brand Mattel in the form of a Barbie doll designed to her own likeness. The company decided to celebrate her work together with five other great women in the STEM fields in their likeness. Nita Patel seems to have almost a childhood instinct to vanquish the viral scourge as tuberculosis took away her father when she was barely four years old. Born in Gujrat, India, she not only leads the vaccine scientists at Novavax, a Maryland biotech company known for Covid-19 vaccines but her entire team comprises women. She also extolls the high team spirit, energy and interaction of her co-workers in various sections. This resplendent and rewarding trail lit mostly by female ingenuity, research and dedication to counter the current crisis, in a way, reminds me of the fantastical Herculean wonders and valour of yore when the young and mightier men of the towns used to brace the ravaging ogres, bandits and the beasts. The wonderous female venture, at this juncture, is obviously quite instructive for developing societies that still spurn the need, rights and relevance of equal access to women in all avenues and various walks of life.