



## Commentary

### The invention of vaccine for COVID 19

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Received: Jan 06, 2021, Accepted: Jan 20, 2021, Published: Jan 27, 2021

#### Editorial

As the number of corona virus cases continues to rise at an alarming rate across the globe, scientists and medical experts are making accelerated efforts to develop a vaccine fit for human use. Currently, there are more than 160 vaccine candidates in different stages of production and 27 of these have reached the human trials. While the vaccine created by Oxford University and drug maker AstraZeneca is considered one of the frontrunners in the race to develop a corona virus jab, Russia has become the first country in the world to launch its corona virus vaccine on Tuesday.

President Vladimir Putin has announced that one of his daughters has already been vaccinated against the novel corona virus as Russia became the 'world's first nation' to register a corona virus vaccine on Tuesday.

According to agency reports, Putin emphasized that the vaccine had passed all the necessary tests and of one of her daughters had taken part in the trial. "She's feeling well and has a high number of antibodies," the Russian leader added.

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The vaccine candidate developed by Russia's Gamaleya National Research Centre and Russian defense ministry has been raising eyebrows ever since the announcement of it being the 'world's first COVID-19 vaccine' started doing rounds. As per the recent updates, the corona virus vaccine has been registered on August 11, 2020, making Russia the first country in the world to register a vaccine to battle the novel corona virus.

Russia's vaccine candidate is an adenovirus-based viral vector vaccine which is combined with the spike protein of the SARS-CoV-2 virus to induce an immune response in the body. Addressing speculations about the safety and efficacy of the vaccine, Alexander Gintsburg, director of the Gamaleya National Research Centre maintained that the corona virus particles in the vaccine cannot harm the body as they cannot multiply.

According to Sputnik News Agency, Alexander Gintsburg said, "The particles and objects that can reproduce their own kind are the ones that are considered alive. The particles in question cannot multiply.

While the Russian vaccine was given the go-ahead by Russia's sanitary watchdog 'Anna Popova', experts are questioning the fast track approach in the development of the vaccine. Alexander Chepurinov who is the former head of infectious diseases at Vektor was sceptical about the data provided by the Russian government. He said, "The danger is there in terms of the possibility of increasing the disease's severity with the wrong vaccine.

Pointing out that there is always a scope of 'infection intensifying', he said, "With some diseases - and for the corona virus, this is already known that the infection can intensify with the presence of certain antibodies. So it should be known which antibodies the vaccine forms."

It should be noted that the World Health Organization has already sternly advised the Russian authorities to proceed as per the already established guidelines to produce a safe and effective corona virus vaccine.

Considering the surge in cases, it is clear that the waiting game for a COVID-19 vaccine is only getting intense day by day. The world over is ardently waiting for a medical innovation or a virus-fighting jab which could prevent COVID-19 from infecting masses. Even as research groups fight it out, some are also on the lookout for breakthroughs and DIY innovations of their own and turning to self-experiments. A recent Google trends report revealed that 'How to make corona virus vaccine in-home', was indeed the second top trending question related to COVID-19 outbreak on the search provider in the month of July.

The revelation was made recently, as per a search analysis about the various trends in India. While stats revealed that Google searches for corona virus grew by 10%, the search for 'Corona virus vaccine' saw traffic spike up. This could primarily be because of the positive data received from early clinical trials done by Oxford University and AstraZeneca in July. India's homegrown vaccines also made a jump-start in terms of development and trials in July itself, which also fueled hopes for an Indian vaccine available.

Interestingly, searches revealed that a lot of people browsed the internet in hopes of making their own DIY Corona-effective vaccine. As strange as that sounds, it's not the first time we have heard of it. Scientists in the US are also involved in the making of innovative DIY corona virus vaccine kits. According to reports, as many as 20 scientists, some of them who are also associated with Harvard University are trying out DIY vaccine proportions so as to cut out the waiting game (which could be more than a year). The vaccine was devised out of easy materials such as peptides (a type of protein present in SARS-COV-2) and chitosans (a type of sugar molecule obtained from shellfish) and is supposed to be injected nasally. It is still under trial and has no surety about working.

Russian scientists, in the hopes of getting a vaccine out for the public also took it a step ahead and tried injecting the vaccine on them, terming it to be 'self-defence'.

Another interesting innovation is being done by Josiah Zanyer, a biohacker and former NASA scientist. Since June, Josiah, with two other scientists is working on creating a prototype of a unique DNA vaccine which was set to trigger immunity against the virus, as per a paper published by Harvard University. While the experiment is being tried out on monkeys first, Zanyer plans to use the internet's help and live-stream the injection process so that people could learn. This, of course, made a lot of heads turn in the medical community.

Vaccines take a long route to develop before it becomes ready for public deployment. DIY vaccines can be even riskier. There is no real proof that DIY vaccines work or not. Secondly, most vaccines under production are being made on an experimental basis. Whether they elicit the right immune response, fight off COVID-19 or lasts for long still remains to be researched. Hence, our advice would be to exercise caution instead of playing around with medical sciences, even if the idea of a DIY vaccine sounds interesting.

The only thing you can do right now, to prevent yourself from getting sick from COVID is to limit exposure, wear a mask and practice social distancing.