

Where Will the First Coronavirus Vaccine Come From?

by Hugh Fitzgerald



I think we can guess, don't you? The United States, or Israel – as the Iranians say, Great Satan or Little Satan – are the two likeliest contenders. For now, it seems as though a vaccine developed in Israel will be the first off the starting block, ready for testing on humans within two months.

The story of that vaccine is [here](#).

Israeli researchers said [on April 3] they are days away from finishing production of the active component of a coronavirus vaccine that could be tested on humans starting June 1.

"We are in the final stages and within a few days we will hold the proteins—the active component of the vaccine," Dr. Chen Katz, group leader of the biotechnology group at the

MIGAL Galilee Research Institute, told The Jerusalem Post on Tuesday [March 31].

The human trials will be conducted on “young, healthy individuals” and will then likely expand to the general population, Katz said, adding that he believes the vaccine will be available first in Israel.

MIGAL said in late February that it would complete production of its vaccine within three weeks and have it on the market in three months, but Katz explained to the Post that the process was delayed because it took longer than anticipated to receive the genetic construct they ordered from China, due to airways being closed and the product needing to be rerouted.

The group, funded partially by a NIS 30 million (\$8,225,600) grant from Israel’s Ministry of Science and Technology, is working with regulators to ensure that the vaccine is safe to try on human.

Katz said because it will be an oral vaccine, “the quality of this kind of vaccine should be closer to food regulations than pharma regulations or somewhere in between. We hope that we will not need to go through the complete purification process like in the drug industry because that could delay us.”

Another Israeli company, Kamada, a biopharmaceutical company in Rehovot has announced that it has started to work on developing a blood-plasma derived treatment against the coronavirus; it uses the antibodies found in the plasma of those who have survived the coronavirus.

There are dozens of other Israeli researchers, and Israelis outside of Israel, working on vaccines. There is, for example, Dr. Ofer Levy, an Israeli-American who heads the Precision Vaccines Program (PVP) at Boston Children’s Hospital, where

researchers are working on developing a vaccine for the coronavirus. Dr. Levy says that among the worldwide vaccine efforts, his group is uniquely focused on a solution for the elderly, a population Levy defines as age 65 or older.

“Vaccines are not one size fits all,” Levy told The Times of Israel via a conference call on Monday [March 31]. “Immune response varies with age.” He said that the elderly are “at greatest risk of severe infection,” and thus he is concentrating on this age group.

A physician and associate professor at Harvard Medical School, Levy and his fellow researchers have been working on a vaccine since mid-January. He estimated that over 40 separate groups are working on vaccines, but as of press time, none are approved.

As we have all come to expect, when it comes to medical and technological advances, Israel punches far above its weight. None of us would be surprised were a vaccine to be developed first in Israel. It could be by the MIGAL Galilee Research Institute; the vaccine it has developed is said to be ready for human trials by June. We would take in stride the news that the antibody-based vaccine of the Israeli company Kamada would be ready for human trials by June, or that the vaccine being developed by PVP (Precision Vaccines Program) that Dr. Ofer Levy directs at the Boston Children’s Hospital might start trials in July. And we expect something to come from the half-dozen other Israeli research groups. We would be surprised not if one or more succeeds, but if they all were to fail.

There are, of course, many other vaccines in the works outside Israel. American researchers include Dr. Stephane Bancel and his team at Moderna (among them at least one Israeli-born scientist). Others who come swimmingly to mind as developers of a coronavirus vaccine include: Dr. Chen Wei and his fellow

researchers in Wuhan itself; Russian scientists at the Vektor State Virology and Biotechnology Centre in the city of Novosibirsk; investigators. at Imperial College, London. Again, no surprises. We have only rounded up the usual suspects: America, Israel, China, Russia, the U.K.

But among the 40 or so research groups now working in a half-dozen countries on a coronavirus vaccine, none were to be found in any of the 57 Muslim countries that are members of the O.I.C. (Organization of the Islamic Conference). You are not surprised. But why should that be? Could it be that Islam discourages free and skeptical inquiry? The fear among Muslim clerics has always been that if ordinary Muslims began to question authority in one area, they might end up by questioning aspects of Islam itself, and that would never do. Islam means "submission," and the habit of mental submission to that authority – that is, to the Qur'an itself, and to the Hadith – has always been encouraged in Islam. Rote memorization confers prestige; the Believer who memorizes the entire Qur'an is deeply respected as a "hafiz," as if that empty feat signified learning. Would any of us in the Western world celebrate as a gifted mathematician someone who had memorized pi to the 200th decimal point? Of course not. Memorization is favored in Islam because it reinforces authority; we learn by heart what it is the Qur'an tells us; we do not question it. If you need to find out what is halal or haram, ask a Muslim cleric, in person or at the many such sites on-line), who will supply you with a Qur'anic verse, or an "authoritative" Hadith (from Bukhari or Muslim), to answer your question. That "free and skeptical inquiry" that Islam discourages is the very thing that furthers the enterprise of science. Some Muslims, especially those living and working in the West, manage to acquire the habits of mind of their Western teachers and colleagues, and are able to contribute to scientific advances. Alas, how few they are in number.

Some are enthralled with Muhammad, Messenger of God. Others

are more interested in Messenger RNA. It is the latter who will discover the vaccine for the coronavirus.

First published in