I. Science, not Superstition

FRONTIERS OF HEALTH AND SPACE

Trump Follows the Science, Biden Follows Fear and Superstition

by Brian Lantz

Oct. 13—It is right here, plain for all to see: President Donald Trump is leading a mobilization of our nation's scientific and productive capacities in a way that is unprecedented since President John F. Kennedy. Our government has been in the forefront, and President Trump has harnessed the true entrepreneurial spirit in the process. The growing success of President Trump's national emergency mobilization to defeat COVID-19, including Operation Warp Speed, is complemented by the equally remarkable revival of the U.S. space program with NASA's Artemis program and SpaceX. President Trump is defeating the virus and taking the U.S. back to the frontiers of space.

White House, Shealah Craighead

President Donald J. Trump tours the viral pathogenesis laboratory Tuesday, March 3, 2020, at the National Institutes of Health in Bethesda, Md.

Trump's 'Warp Speed' Science vs. Flat-Earthers

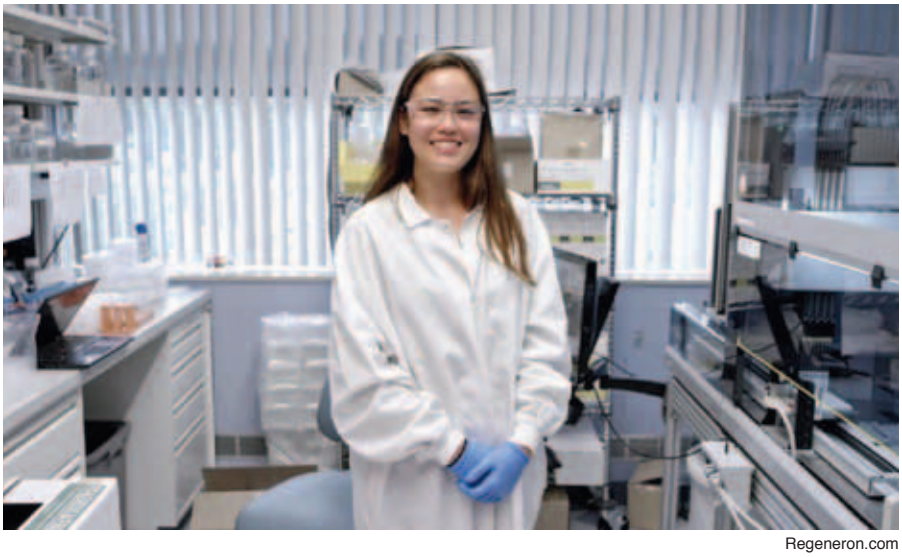
On March 2, 2020, President Trump met with pharmaceutical executives at the White House during the global outbreak of the coronavirus, and said:

> Today, we are meeting with the pharmaceutical and biotechnology companies—the biggest in the world, most prestigious, the ones that get down to the bottom line very quickly—to discuss how the Federal Government can accelerate the development of vaccines and therapeutic treatments for the coronavirus.
>
> Breakthroughs had to be made.

WhiteHouse.gov

Leonard S. Schleifer, Regeneron's founder, president, and CEO, is seen on the left at the meeting in the White House, March 2, 2020.

To encapsulate the result—a virtual miracle—over the course of the past seven to nine months, take the example of Regeneron Pharmaceuticals of Tarrytown, New York and its REGN-COV2 double monoclonal antibody cocktail. This antibody



Regeneron.com

A Regeneron employee in a lab.

treatment was taken into late-stage clinical trials in late July at some 150 sites in the United States, Mexico, Chile, and Brazil, and Operation Warp Speed has invested $450 million to build up manufacturing capacity. By October, the President was receiving the Regeneron antibody cocktail as part of his COVID-19 treatment regimen prescribed by his doctors at Walter Reed Hospital.

Today, President Trump is back at the White House, and he promises to make Regeneron's antibody treatment available as rapidly as possible to all Americans at no cost. On October 8, 2020, Regeneron Pharmaceuticals announced it has applied for an emergency use authorization for REGN-COV2, a temporary approval by the Food and Drug Administration (FDA) that would allow wide, non-trial access to the drug.

Howls, of course, are now being heard from all the usual suspects, the same media and political mouthpieces that screamed and lied about "Russia, Russia, Russia!" None of these voices are research scientists; rather, they are media scribblers, newspaper editors, and facile politicians. In Orwellian newspeak, Kamala Harris proclaims, "We will follow the science," of which she knows *nada.* Some now write that it is time to "de-fund Walter Reed Hospital"! Harris, intent on spreading hysteria, has gone so far as to state that she will not take a Trump Administration vaccine.

Regardless, as President Trump and Operation Warp Speed drive firmly forward, a vaccine or vaccines will soon be available to all Americans, and to the world. Operation Warp Speed has rapidly accelerated the development, manufacture, and distribution of COVID-19 vaccines, therapeutics, and diagnostics, showing up the ignorant and superstitious naysayers. Operation Warp Speed is usually mentioned only in the context of vaccines, but it is much broader. Every citizen has a right to understand this process of scientific discovery. Thank God and President Trump that scientists are being allowed to use their brains.

The President's far-reaching Operation Warp Speed team now coordinates a unique public-private partnership, called Accelerating COVID-19 Therapeutic Interventions and Vaccines (ACTIV), as well as the ongoing work of the Biomedical Advanced Research and Development Authority (BARDA) of the Department of Health and Human Services and that of the National Institutes of Health. ACTIV's April 17 founding press release characterizes the effort as—

> a collaborative framework for prioritizing vaccine and drug candidates, streamlining clinical trials, coordinating regulatory processes and/or leveraging assets among all partners to rapidly respond to the COVID-19 and future pandemics. This is part of the whole-of-government, whole-of-America response the Administration has led to beat COVID-19.

Developing and bringing to market a vaccine for any novel virus costs billions of dollars, with normally little assurance of success or ultimate markets. President Trump and his team boldly stepped in to cut through radical free market ideology and technocrats and "de-risk" the vaccine development process. President Trump, working with his assembled task force of medical specialists, and drawing on the deep experience of the U.S. military in bio-warfare and global logistics, crafted "one of the most ambitious scientific endeavors in modern U.S. history."

Similarly, Trump's gutsy personal leadership, including making judicious use of the Defense Production Act, led the mobilization of the nation's producers to manufacture and deploy personal protective equipment (PPE) and high-tech respirators across the nation.

Contrary to the sophists' refrain, "we will follow the science," coming now from the mouths of flat-earthers, "the science" does not exist. Scientific discovery is a uniquely human process, going beyond newspaper "factoids" and textbooks. Every citizen has a right to understand this process.

Operation Warp Speed has to date spent about $10 billion in collaboration with vaccine makers, most of it to build up dedicated production capacity to commercial scale. Vetted vaccine makers are already producing doses while trials are still underway. Further, the U.S. military with its enormous logistical capabilities is standing by to deliver vaccines to every corner of the country for mass vaccination. If a vaccine is found to be effective, it should be used immediately, and a stockpile of hundreds of thousands of potential doses is already being built for distribution as soon as that determination is made.

White House Shealah Craighead

President Donald Trump talks with (l. to r.) Capt. Mark Kobelja, Director of Walter Reed National Military Medical Center; Dr. Ronny Jackson, Physician to the President; and Dr. James Jones, Physician to the President and Medical Director of the Medical Evaluation and Treatment Unit, following the President's annual physical at the medical facility in Bethesda, MD, January 12, 2018.

There are contracts with six manufacturers, with one or two additional contracts still possible, according to Operation Warp Speed's scientific head Moncef Slaoui, Ph.D. Born in Morocco, Dr. Slaoui trained as an immunologist and microbiologist before joining a GlaxoSmithKline predecessor company as a bench scientist in 1988. Dr. Slaoui has overseen the development of 14 vaccines for GlaxoSmithKline.

Regeneron Pharmaceuticals, in its 32 years, has already brought six ground-breaking therapies to market, based on the most advanced uses of genome sequencing, research, and laboratory work. Regeneron scientists have evaluated thousands of fully-human antibodies produced by the company's proprietary VelocImmune mice, genetically modified to have a human immune system, as well as antibodies isolated from humans who have recovered from COVID-19. They are now manufacturing REGN-COV2 antibody combination therapy and providing it to the Biomedical Advanced Research and Development Authority (BARDA) and the U.S. Department of Defense.

Regeneron is also collaborating with Roche, the Swiss-based pharmaceutical company,

> to significantly increase the global supply of REGN-COV2, with both companies dedicating a certain manufacturing capacity to REGN-COV2 each year. This is expected to increase existing capacity by at least three and a half times, with the potential for even further expansion. If approved, Regeneron will distribute REGN-COV2 in the U.S. (beyond the initial U.S. Government supply) and Roche will be responsible for distribution outside the U.S.

President Trump has also announced that Abbot Labs' BinaxNOW COVID-19 test, an antigen test, was authorized by the FDA in late August. Involving

a simple nasal swab, with results in 15 minutes, readily trained technicians can provide rapid, reliable testing on a massive scale. Abbot will also offer a mobile app to check results. Abbot Labs manufactured and shipped 50 million tests a month beginning in October, and the U.S. Government has purchased the first 150 million tests to distribute in hope of reopening schools, opening up nursing homes, and securing safe workplaces. The Abbot test will allow regular, repeat testing in these and other locations.

Many of the companies that are now producing these breakthroughs to crush the coronavirus first began quietly putting teams together back in January when the world learned from China of the new novel virus and its genome sequence. Importantly, these companies and their highly trained researchers brought decades of scientific research experience to bear. A similar process got underway in Russia, China, and elsewhere. Breakthroughs being made now are creating revolutions in science. This is indeed a whole-of-government, whole-of-America response that President Trump has led, to beat COVID-19.

NASA/Aubrey Gemignani

Representatives of Congress and the National Space Council joined President Donald Trump, Apollo astronaut Jack Schmitt, and current NASA astronaut Peggy Whitson, December 11, 2017, to witness the President's signing of Space Policy Directive 1, a change in national space policy that provides for a U.S.-led program with private sector partners for a human return mission to the Moon, followed by human missions to Mars and beyond.

Moon-Mars Mission—The Artemis Program and SpaceX

President Trump is providing similar leadership in taking us back into space, to make new breakthroughs in space science for our nation and mankind.

We make things happen. That is what America does. In 2017 President Trump signed Space Policy Directive 1, calling for the return of American astronauts to the surface of the Moon, and in 2019 he declared that this should be accomplished by 2024 (before the end of his prospective second term).

This bold plan, Artemis, is named after the twin sister of the ancient Greek god Apollo (of whom the first Moon-landing program was the namesake). It is a fitting name because this mission will bring the first woman to the Moon.

President Trump and NASA Administrator Jim Bridenstine are making it plain that Artemis will land astronauts on the Moon in 2024, for the first time in more than 50 years—this time at the Moon's South Pole. This landing will be followed by the establishment of a sustained presence on the Moon by 2028—focussed on new scientific investigations, learning how to use the resources of the Moon, and demonstrating technological advances needed for human exploration of Mars. Lyndon LaRouche and LaRouche PAC emphasize that a 50-year, international crash program for lunar industrialization, the development of fusion-powered spaceflight, and Mars colonization will be the most important driver for the U.S. and global economies.

The Obama-Biden Administration, in which Joe Biden was Vice President for eight years, attempted to kill human space exploration, including its cancellation of the Constellation program. There was no replacement for the Space Shuttle to take our astronauts to the International Space Station (ISS), or beyond.

It was then only through SpaceX, a private company but fully encouraged and supported by the Trump Administration and NASA, that a new rocket and crew capsule were developed, ending an eight-year drought of U.S. manned launch capability. NASA's initial investment in SpaceX was $278 million to develop the Falcon 9 and Dragon rockets—a success accomplished during a period of economic crisis for our nation. Now, American astronauts no longer rely solely on Russian Soyuz rockets to get to the ISS.

The candidate-in-the-basement Joe Biden, and the presidential platform of the Democratic Party, now lie about their intent. As reported on Space.com on July 24, they lie outright in claiming to support NASA's space exploration objectives. Specifically, the platform claims Democrats have supported "our continued presence on the International Space Station," and says, "We support NASA's work to return Americans to the Moon and go beyond to Mars, taking the next step in exploring our Solar System." As Space.com reports,

> The document, however, does not explicitly reference the agency's goal of landing a crewed mission on the Moon by 2024 (the goal of NASA's current Artemis program) and lists no timeline or deadline for these moonshots.

As informed observers know, even slowing the pace of missions often leads to mission failure.

Trump's Team: Government and Entrepreneurs

When Trump arrived at the White House, decades of underfunding and lack of a national mission orientation had undermined the spirit of NASA. As Lyndon LaRouche had emphasized, to revive the U.S. space program you had to set a national mission orientation, cut through the bureaucracy and red tape, and engage the private sector.

As to the private sector, consider SpaceX, for example. At SpaceX, engineers who design the rockets have an office in the same building in which the rockets are being manufactured, maintaining a close relationship between design and build. The production floor and engineering are situated next to each other in the company's factory for faster turnaround and better communication. SpaceX drew on rocket engine builder Tom Mueller, one of its first employees, and his 30 years of experience at TRW.

From scratch, but with NASA collaboration, Elon Musk and SpaceX built most of its entire supply chain, from rocket engines to the electronics components used in its rockets. There is an iterative design process. Writing on Twitter February 20, Musk elaborates:

> Building many rockets allows for successive approximation, [with the additional goal of reusability]. Hardest problem by far is building the production system of something this big. 2nd hardest is achieving full & rapid reuse with payload to orbit of ~2%. These problems are fundamentally intertwined. Building many rockets allows for successive approximation. Progress in any given technology is simply # of iterations [times] progress between iterations.

Economic Payback

An international Moon-Mars 50-year crash program, as detailed by the late economist Lyndon LaRouche, will ensure the high rates of economic payback on Earth which can only be reached by developing new space and fusion technologies, and sharing those technologies internationally as the basis for durable peace on this planet.

A Moon-Mars crash effort to develop the technologies required for lunar industrialization, fusion-powered space travel at one-gravity acceleration, and Mars colonization is the most important program for generating economic growth today. To understand this, simply look at the precedent of President John F. Kennedy's Apollo lunar landing program. For every $1 the U.S. Government spent on the 1960s Apollo program, the U.S. economy generated more than $10 in payback within the next decade—a pretty good investment.

However, despite the resounding economic success of the Apollo program, most economists and politicians today understand very little about how and why crash programs work as economic drivers—or, what even qualifies as a crash program. After 50 years, President Donald Trump has revived precisely this Apollo spirit in science, both to crush COVID-19 and to take mankind back to the Moon and beyond.