

# **SARS-COV-2 SPIKE PROTEIN IMPAIRS ENDOTHELIAL FUNCTION VIA DOWNREGULATION OF ACE 2**

## **THE NOVEL CORONAVIRUS' SPIKE PROTEIN PLAYS ADDITIONAL KEY ROLE IN ILLNESS**

*Salk Researchers and Collaborators show how the Protein damages cells, confirming COVID-19 as a Primarily Vascular Disease*

The purpose of this report is to provide a short synopsis of the Scientific Report coming out of the Salk Institute. In this report, the findings do confirm that indeed, there is and will be damage to the human cells in taking the COVID-19 Injections. The false Scientific Mantra that the COVID-19 is 'Safe and Effective' is downright a deception. While the WHO and world Federal Governments, Municipalities, School Boards and many Doctors and Scientist echo that the COVID-19 Shots are 'Safe and Effective', they are not and some very prominent Scientists are speaking-out about this. Who better than the actual Doctor who discovered the mRNA method of Transcriptase. Yet, such nonetheless are being labeled as 'Misinformation' and not to be listened.

It used to be the case that when such Doctors spoke, People listened, Governments listened. But presently, the Agenda has hijacked Science and is using Medical Marital Law to implement a Dystopian 'Reset' that will be induced, however painful, psychological, and deadly upon the World. The Salk Institute in San Diego, California is often referred to the 'Temple to Vaccines'. Yet, they came out with a critical Scientific Paper attesting that the Spike Proteins that the COVID-19 Injections that are being administered are indeed causing damage to the human body. The following is from the Salk Website and a synopsis if the findings along with links to further read the details of this bombshell report that comes from the 'Heart of the Vaccine Headquarters.

'The Salk Institute for Biological Studies embodies Jonas Salk's mission to dare to make dreams into reality. Its internationally renowned and award-winning scientists explore the very foundations of life, seeking new understandings in neuroscience, genetics, immunology, plant biology and more. The Institute is an independent nonprofit organization and architectural landmark: small by choice, intimate by nature and fearless in the face of any challenge. Be it cancer or Alzheimer's, aging or diabetes, Salk is where cures begin.'

Interestingly, the Inventor of the mRNA, Dr. Robert Malone who has incorporated this new technology into vaccines is a premiere Scientists that worked in this prestigious Institution. He has come out warning of the dangers of injecting this new mRNA technology in those populations like Young Adolescents, and Children. He speaks about having Informed Consent and how the Government, to include the FDA, NIH, and CDC are not being transparent and honest upfront about the Adverse Side Effects. It is presently a War of the Mind and Science; a War of Reality of Truth vs. Lies.

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SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2) infection relies on the binding of S protein (Spike glycoprotein) to ACE (angiotensin-converting enzyme) 2 in the host cells. Vascular endothelium can be infected by SARS-CoV-2,<sup>1</sup> which triggers mitochondrial reactive oxygen species production and glycolytic shift.<sup>2</sup> Paradoxically, ACE2 is protective in the cardiovascular system, and SARS-CoV-1 S protein promotes lung injury by decreasing the level of ACE2 in the infected lungs.<sup>3</sup> In the current study, we show that S protein alone can damage vascular endothelial cells (ECs) by downregulating ACE2 and consequently inhibiting mitochondrial function.

We administered a pseudovirus expressing S protein (Pseu-Spike) to Syrian hamsters intratracheally. Lung damage was apparent in animals receiving Pseu-Spike, revealed by thickening of the alveolar septa and increased infiltration of mononuclear cells (Figure [A]). AMPK (AMP-activated protein kinase) phosphorylates ACE2 Ser-680, MDM2 (murine double minute 2) ubiquitinates ACE2 Lys-788, and crosstalk between AMPK and MDM2 determines the ACE2 level.<sup>4</sup> In the damaged lungs, levels of pAMPK (phospho-AMPK), pACE2 (phospho-ACE2), and ACE2 decreased but those of MDM2 increased (Figure [B], i). Furthermore, complementary increased and decreased phosphorylation of eNOS (endothelial NO synthase) Thr-494 and Ser-1176 indicated impaired eNOS activity. These changes of pACE2, ACE2, MDM2 expression, and AMPK activity in endothelium were recapitulated by in vitro experiments using pulmonary arterial ECs infected with Pseu-Spike which was rescued by treatment with N-acetyl-L-cysteine, a reactive oxygen species inhibitor (Figure [B], ii).

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**Link to entire Study Publication:**

<https://www.salk.edu/news-release/the-novel-coronavirus-spike-protein-plays-additional-key-role-in-illness/>

**Main Sources**

**JOURNAL:** Circulation Research

**TITLE:** [SARS-CoV-2 Spike Protein Impairs Endothelial Function via Downregulation of ACE2](#)

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## Online Discussion

**Inventor of mRNA Dr. Robert Malone vaccine tech talks**

<https://www.youtube.com/watch?v=KEoZh6YzsW8>

**Heather Heying & Bret Weinstein: The Lab Hypothesis | Real Time (HBO)**

<https://www.youtube.com/watch?v=ZMGWLLDSA3c>

**Spike protein causes cell damage (from Livestream #79)**

[DarkHorse Podcast Clips](#)

**Free COVID-19 Resource Page**

[www.PostScripts.org/covid.html](http://www.PostScripts.org/covid.html)