



**For Immediate Release**

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## **University of Pennsylvania Studies Show Early Promise for New mRNA Flu Vaccine**

*Vancouver-based Acuitas Therapeutics plays a key role*

**Vancouver, B.C.** – A new [study](#) co-authored by scientists from the University of Pennsylvania and Vancouver-based biotechnology firm Acuitas Therapeutics shows early promise for an mRNA vaccine targeting all known flu strains. The study provides data from pre-clinical trials and shows that the vaccine produces high levels of antibodies against all known strains of the flu, which may allow for a universal flu shot in the future.

While a potential vaccine is likely several years away (this mRNA vaccine is still in preclinical testing and planning for human trials has just begun), the data is promising. mRNA vaccines were crucial in pushing back the global pandemic. The globally validated safety and efficacy of mRNA COVID-19 vaccines has created worldwide interest in how mRNA can be used on other viruses and diseases.

Acuitas is the global leader in the development of lipid nanoparticles (LNP) – tiny “delivery vehicles” that protect the mRNA vaccine after it is injected into the body and delivers it into our cells, exactly where it needs to be. mRNA (and other nucleic acid therapeutics) are incredibly fragile. Without the LNP, mRNA would disintegrate upon injection. Their LNP enables mRNA vaccines to work including the Pfizer/BioNTech COVID-19 vaccine COMIRNATY®.

In addition to working with global partners in the development of vaccines, Acuitas is supporting the development of mRNA therapeutics for gene editing medicines and to express monoclonal antibodies.

“The World Health Organization estimates that there are close to one billion flu cases globally each year and 290,000 to 650,000 deaths.\* This makes the study out of the University of Pennsylvania important for people around the world,” said Acuitas President & CEO Dr. Thomas Madden. “There is still work to be done, but the study shows strong potential for a safe and effective universal mRNA flu vaccine. We look forward to the next data set.” He added: “COVID-19 created a great deal of global interest in mRNA and our LNP; this has resulted in a substantial increase in research and development in this area. I believe this will help people to live healthier lives and will save lives. It is humbling to be a part of such important work.”



## **About Acuitas Therapeutics**

Vancouver-based Acuitas Therapeutics ([www.acuitastx.com](http://www.acuitastx.com)) is a private biotechnology company specializing in the development of delivery systems for nucleic acid therapeutics based on lipid nanoparticles. Acuitas partners with pharmaceutical and biotechnology companies, as well as non-governmental organizations and academic institutes, to advance nucleic acid therapeutics into clinical trials and the marketplace. The team works with global partners to develop new therapies to address unmet clinical needs based on the internationally recognized capabilities of its proprietary delivery technology. Acuitas Therapeutics' lipid nanoparticle technology is used in the Pfizer/BioNTech COVID-19 vaccine COMIRNATY®. The Acuitas team is currently working on therapeutics focused on addressing cancer, HIV/AIDS, tuberculosis, malaria, rabies and other serious diseases.

In 2022, the company's co-founders – Drs. Thomas Madden (who is President & CEO), Michael Hope and Pieter Cullis – received the Governor General's Innovation Award; Acuitas was named Life Sciences BC's Company of the Year and won the Greater Vancouver Board of Trades' Business Growth Award; Dr. Madden was named a Pacific Winner in the EY Entrepreneur of the Year Award Program and he received BIOTECanada's Gold Leaf Award for Game Changing Industry Leadership; and Dr. Cullis won the Bloom Burton Award, the Canada Gairdner International Award and the Tang Prize.

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\* WHO estimate: <https://bit.ly/2Hq3itS>