

Antiviral lipid earns patent: Lipids in lung can inhibit RSV and influenza infections

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Dennis Voelker, PhD, professor of medicine at National Jewish Health, has been awarded a U.S. patent (#8,367,643) for various lipids and related compounds that can inhibit inflammation and infection in the lungs, especially those caused by influenza and respiratory syncytial virus (RSV). Over the past several years, Dr. Voelker has published several scientific papers describing a naturally occurring lipid in the lungs, POPG (palmitoyl-oleoyl-phosphatidylglycerol), that reduces inflammation and inhibits infection by the influenza virus and RSV. The patent covers POPG and other naturally occurring lipids in the lungs as well as related anionic lipids.

"POPG and related compounds offer a promising approach for the prevention and treatment of influenza and other respiratory virus infections," said Dr. Voelker. "We are thrilled to earn this patent, so that we can push this work forward toward clinical application."

POPG is one of several lipids in the fluid that lines the [air sacs](#) of the lungs. Other lipids and proteins in this surfactant fluid are known to prevent collapse of the air sacs and to contribute to innate immunity. Only recently have Dr. Voelker and his colleagues discovered POPG's anti-inflammatory function and its ability to inhibit viral infection.

"Lipids such as POPG, offer potential advantages over antiviral proteins, because they are less likely to elicit unwanted immune responses, are more chemically stable, and less expensive to manufacture than proteins," said Dr. Voelker.

Provided by National Jewish Health

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