

Researchers combine drugs to develop a new treatment for human parainfluenza virus

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Institute for Glycomics Director Professor Mark von Itzstein is shown. Credit: Griffith University

Griffith's Institute for Glycomics have made a promising discovery in the treatment and prevention of human parainfluenza virus.

Institute Director Professor Mark von Itzstein and his team have shown that two existing drugs readily available on the market can work together to more effectively treat the [virus](#).

Currently no therapies or vaccines are available to treat or prevent human parainfluenza virus (hPIV), the second most prevalent cause of acute [respiratory tract infection](#) in infants in the world.

Professor von Itzstein said his team's research showed the drug Suramin, an antiparasitic drug used to treat human sleeping sickness, when combined with the anti-influenza virus drug Relenza had a much higher ability to block the infection.

Professor von Itzstein co-discovered Relenza 20 years ago. It was the world's first anti-flu drug.

"This study offers a potentially exciting avenue for the treatment of parainfluenza infection by using a combining and repurposing approach of well-established approved drugs," he said.

"Together they complement each other to inhibit parainfluenza growth and may mean it can be prescribed as a lower dosage of each for treatment.

The research is published today (April 7) in Nature journal Scientific Reports, titled 'A dual [drug](#) regimen synergistically block [human](#) parainfluenza virus infection'.

Professor von Itzstein said his team discovered the potential of Suramin to be used in parainfluenza treatment during screening tests of a wide range of approved drugs, currently used to treat a variety of other diseases.

The research was undertaken in collaboration with Professor Ralf Altmeyer from the Institute Pasteur Shanghai-Chinese Academy of Sciences in Shanghai and joint PhD student Benjamin Bailly with other Institute for Glycomics researchers Larissa Dirr, Patrice Guillon and Ibrahim El-Deeb.

The Institute collaborates with leading scientists around the world to build a critical mass around multidisciplinary research to control a wide-range of medical conditions such as cancer, diabetes, infectious diseases, inflammation and immune disorders.

The Institute's unique research expertise makes it the only one of its kind in Australia and only one of a handful in the world.

More information: Benjamin Bailly et al. A dual drug regimen synergistically blocks human parainfluenza virus infection, *Scientific Reports* (2016). DOI: [10.1038/srep24138](https://doi.org/10.1038/srep24138)

Provided by Griffith University

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