

# Computer-based research could pave way for anti-flu drugs of the future

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By looking at whether existing medications could be used as a starting point for new anti-flu drugs, researchers at the University of Hertfordshire are helping to pave the way for future treatments against influenza.

The study, published in the journal *Virology* and carried out within the Biosciences Research Group at the University of Hertfordshire, used

computer-based analysis to focus on the nuclear export protein as a drug target. The nuclear export protein facilitates the spread of the [flu virus](#) by interacting with other proteins inside cells.

From the 1,700 approved drugs tested, researchers identified an [anabolic steroid](#) used in [menopausal hormone therapy](#) as a starting point for new anti-flu drugs. The findings could be used in lab-based experiments by scientists looking to create future anti-flu drugs.

Dr. Andreas Kukol, from the School of Life and Medical Sciences at the University of Hertfordshire, said: "The flu virus is constantly changing, and it adapts to evade our [immune system](#) or any treatment aimed at stopping the virus. Therefore, new vaccinations are needed every year. To uncover the virus' hidden secrets, we investigated the nuclear export protein from 3,000 virus samples to identify constant regions, which is the part of the virus that is unlikely to change as it evolves. Against those constant regions, a large number of potential drugs were screened computationally. Our predictions can help other virologists to identify the anti-flu drugs of the future."

**More information:** Hershna Patel et al. Prediction of ligands to universally conserved binding sites of the influenza a virus nuclear export protein, *Virology* (2019). [DOI: 10.1016/j.virol.2019.08.013](https://doi.org/10.1016/j.virol.2019.08.013)

Provided by University of Hertfordshire

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