

NEWSLOCAL NEWS

FSU study to aid in fight against HIV, hepatitis B

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TALLAHASSEE, Fla.(WTXL) — A new discovery by Florida State University College of Medicine researchers is expected to help in the fight against the HIV virus and hepatitis B.

According to Florida State University, the study will open the door for new and more potent treatment options for many of the more than 36 million people worldwide impacted by HIV and hepatitis B.

The work of researchers has established for the first time the mechanism responsible for how two widely used antiviral drugs inhibit viruses.

In a paper published by [Communications Biology](#) , an open-access journal from Nature Research, Professor Zucui Suo and colleagues provide the key to understanding how a single HIV-1 mutation can inactivate the anti-HIV drugs.

FSU says those drugs are worth billions in annual sales for the companies that make them.

The paper discusses new pathways for developing drugs able to avoid specific virus mutations that can render these drug treatments ineffective for many patients.

Officials say the number of drug choices available when one combination fails is limited. More than a million of those infected with HIV live in the U.S.

“In our paper, we suggest new chemical possibilities for more potent L-nucleoside analog drugs, which may possess different drug-resistance mutation profiles from the most widely used current anti-HIV drugs,” said Suo, the study’s co-lead author, and an Eminent Professor and the Dorian and John Blackmon Chair in Biomedical Science at the FSU College of Medicine. Eric Lansdon of Gilead Sciences Inc. is the co-lead author.

“Right now, there are a limited number of FDA-approved drugs available,” Suo said. “New drugs need to be developed if doctors are to have other options when treating so many patients who may have developed resistance to most of the FDA-approved anti-HIV drugs.”

Researchers say the drugs remain highly effective in keeping the disease under control for most patients, however some patients manage to develop a resistance due to mutations within the HIV virus.

Suo’s current paper also explains how a mutation found in some patient populations leads to developing resistance to antiviral L-NRTI drugs.

The university says this work was supported by Gilead Sciences Inc. and a grant from the National Science Foundation.