

Extended Abstract

A Novel Series of Sialic Acid-Based Influenza Virus Inhibitors that Target Influenza Virus Neuraminidase [†]

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Influenza virus continues to be a clinically-significant human pathogen that causes both epidemics and pandemics. Successful inhibition of the viral neuraminidase hinders the release of virion progeny from the infected host cell and significantly reduces further virus spread.

We recently described the discovery of highly potent sialosyl sulfonate inhibitors of influenza virus sialidase [1,2]. One of the designed sialosyl α -sulfonate derivatives is a nanomolar inhibitor² in a cell-based influenza virus replication assay and has comparable activity to that of anti-influenza drugs zanamivir and the active form of oseltamivir, oseltamivir carboxylate.

Finally, we undertook a protein X-ray crystallographic study that provides atomic-level detail of the binding mode of these sialosyl α -sulfonate derivatives [2].

References

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