Respiratory Syncytial Virus (RSV) inhibitor

Abstract

McMaster researchers have developed a peptide mimetic inhibitor that blocks RNA polymerase formation and inhibits RSV replication in vitro. The peptide is a cognate peptide sequence derived from the RSV phosphoprotein subunit which binds to the Nucleocapsid protein subunit. They have also developed peptides that prevent phosphoprotein oligomerization or block binding of the phosphoprotein to the large polymerase subunit rendering the polymerase inactive and thus blocking virus replication.

There is a distinct need for novel RSV therapeutics; currently only one humanized monoclonal antibody, capable of reducing RSV related hospitalization rates in young children is in use, and no RSV antivirals are available.

Applications

- Lead compounds for the development of RSV therapeutics
- Treatment of children or adults infected with RSV—including immunocompromised patients infected with RSV

Advantages

- Currently, there are no antivirals available for treatment of RSV infections, this is a new, unique RSV therapeutic
- Peptide should not induce or select for resistant viruses