

## Assignment 2 - Remdesivir

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Remdesivir is a prodrug for a ribonucleotide analogue which is able to act as an inhibitor of viral RNA-dependent RNA polymerase (RdRp) enzymes. Remdesivir does this by halting progress of the enzyme via an irreversible blockage by the serine-861 residue of Coronavirus RdRps. It is able to do so by mimicking Adenosine, base pairing with Uracil. Then, after three additions to the strand of RNA, its C1 cyano- moiety comes into close enough proximity with serine-861. This interaction sterically hinders the ability for the RdRp to return back to its pre-translocated state, disabling its locomotion along the template RNA strand.