~~POSTER 094~~

NMR STRUCTURAL BIOLOGY OF SARS-COV-2 NSP3 PROTEINS; NEW TARGETS FOR VIRAL REPLICATION INHIBITION

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Viral infections trigger a host cell immune response manifested by IFN signaling. ADP-ribosylation is an enzymatic cascade involved in this pathway driven by enzymes that "write", "recognize", and "erase" this modification, to tune among other biological processes, protein interactions and substrate recognition events.[1] Macrodomains (MDs) are a structural family with a distinct $\alpha/\beta/\alpha$ sandwich fold, found in all kingdoms of life as well as viruses. An MD (Macro-D-type) with de-ADP-ribosylation enzymatic capacity is found at the N-terminus of the non-structural protein 3 of alphaviruses and coronaviruses. Due to this activity, viral MDs have been pointed out as important protein domains for viral escape from host defense mechanisms.[2] Herein, we examine GS-441524 as a potential inhibitor of various viral MDs, highlighting important features for its selectivity towards the SARS-CoV-2 MD.[3]

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