Novel Structural Targets in the NS5A Protein of Hepatitis C Virus

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Technology description

Summary

Hepatitis C virus (HCV) is the causative agent for non-A, non-B hepatitis and is a significant problem in global public health. It is currently estimated that 3% of the world's population has persistent HCV infections, and the current anti-viral therapeutics are not effective in clearing virus in the majority of these cases. Understanding the molecular biology of this pathogen is key to developing potent treatments for HCV-infected patients. Our investigators have been studying the non-structural (NS) proteins of HCV, and have now elucidated the three-dimensional structure of the N-terminal domain of NS5A protein at atomic resolution. The NS5A protein has been previously described as a zinc metalloprotein and is essential for viral replication. The structure reveals novel elements that are unique to the viral protein, including interaction sites that are vital to viral replication. These sites have great potential as targets for designing better drugs to battle HCV infection.

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