HEPATITIS C VIRUS LIFE CYCLE

1. **Hepatitis C Virus**

2. **Attachment**: Virus binds to a liver cell receptor. At least 4 different proteins are needed for virus entry.

3. **Penetration and Entry**: The virus is taken up by the liver cell, which "swallows" it.

4. **Fusion and Viral RNA release**: The virus fuses. Its protein coat dissolves. The viral RNA code is released inside the liver cell.

5. **Production of protein strand**: the viral RNA takes over the liver cell machinery to make viral proteins.

6. **Protein processing**: Protease enzymes from the hepatitis C virus and the infected liver cell cut the protein strand into various viral proteins.

7. **Replication**: Hundreds of copies of hepatitis C RNA are made by the polymerase enzyme.

8. **Viral Assembly**: A protein shell (the capsid) forms around a copy of hepatitis C RNA to make a new virus.

9. **Budding**: Immature virus buds into a fluid-filled sac in the cell.

10. **Secretion**: Immature hepatitis C viruses migrate to the cell surface.

11. **Release**: New hepatitis C viruses are released from the infected cell.

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