

“Corona viruses 101: Focus on Molecular Virology”

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https://www.youtube.com/watch?v=8_bOhZd6ieM

Questions to guide you through the video:

- The current pandemic is caused by what is commonly called “the corona virus”. Is there only one kind of corona virus?
- What animals are suspected in the origin and transmission of corona viruses?
- How (in what form) do Corona viruses store their genetic information?
- Where on the virus is the “Spike” protein located and what is its role?
- What feature on human cells does Spike attach to?
- What is the main difference in the Spike protein between SARS-CoV-2 and the “original” 2002 SARS? How does it make the new SARS variant more infectious?
- What other host membrane protein is involved in viral entry and what is its role?
- How does SARS-CoV-2 enter the host cell?
- What are strategies that corona viruses use to encode multiple proteins using a single RNA?
- What is thought to be the limit of genome size for RNA viruses and what sets that limit?
- What is proofreading in biology?
- What are nucleotide analogues and how can they help fight corona viruses?
- What are replication-transcription complexes (RTCs)? Why is it beneficial for the virus to have separate compartments?
- What does the viral protein nsp1 do? How? Why?
- For the “original” 2002 SARS, how long do patients typically have neutralizing antibodies?