

INVESTIGATING VIRAL PROTEIN

BACKGROUND INFORMATION:

1. What do scientists already know about this virus?

2. This virus does not have enough genes to carry on life processes. Is it considered living? What is your evidence?

3. Where do new viruses come from if it is incapable of replicating itself?

RESEARCH:

SARS-CoV-2 produces 29 proteins. Use NCBI https://www.ncbi.nlm.nih.gov/ and the following links to learn about 5 of them. Use the URL's below to learn about the function of each protein. Investigate one or more of the proteins below and collect information to answer the questions below.

E ENVELOPE PROTEIN https://tinyurl.com/yy2qqr5h	S SPIKE PROTEIN https://tinyurl.com/y54jzehr	<mark>3A</mark> https://tinyurl.com/y26w5vaz
NSP1 https://tinyurl.com/yxvklo7y	NSP1 https://tinyurl.com/y5apjay2	NSP9 https://tinyurl.com/yxe2hyx6
1. My protein is		
2. My protein has nucleotides in the coding sequence.		
3. My protein is	amino acids long.	
4. My protein appears to be (longer/shorter) than others from this genome.		
5. What is the function of the protein in the virus?		

COMMUNICATE YOUR FINDINGS:

Use this information to create a presentation for your class that includes:

- 1. Name of your open reading frame
- 2. Sequence of the gene coding region from your protein
- 3. Amino acid sequence
- 4. Picture of the structure of the protein
- 5. Identify the functions of your protein (use our suggested abstracts)

REFLECTION:

1. Where are amino acids assembled and what is the importance of their order and composition?

2. What is cDNA and why is it used in NCBI instead of RNA?

3. NCBI is used by scientists when they are looking at a particular protein or gene. What are two things that can be learned on the NCBI site?

