

Daryna Karpova, Teresa Ferrer de Noguera, Stepan Strelchenko, Uscinnia Dyn'ko, Anastasiya Petrenko, Luba Shestakova, Aygul Minnegalieva









Fixing Coronavirus (experiment)

Global context:



There is



Coronavirus genome encodes accessory proteins that can manipulate host response to the virus. We want to know what exactly they do within a host cell.

For that we can study their interactome.

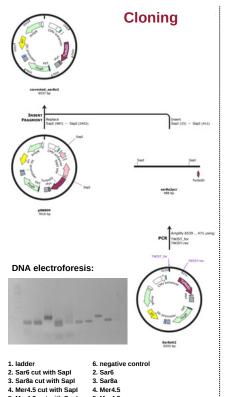
In the future, this can help with designing treatment strategies.

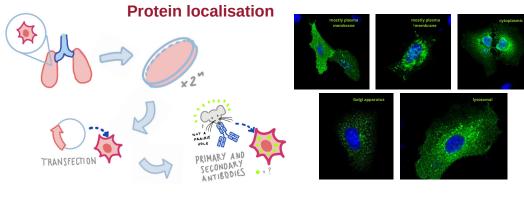


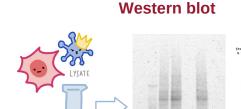
Aims & tasks:

- optimise IF (with human proteins of known localisation)
- · optimise/learn WB to detect nucleocapsid protein
- · troubleshoot cloning of plasmid with a viral gene
- gain hands-on experience in the lab
- have fun:)

Methods & Results:









Protein gel electrophoresis

Nucleocapsid protein detection in cells infected with Coronavirus

Conclusions:

- · We created references of protein localisation in different cell compartments
- We identified Nucleocapsid protein in cells infected with SARS-CoV-2; in future studies, these lysates can be used to measure amount of accessory proteins in the infected cells
- We encountered some complications in the course of our experiments that we have successfully worked around; if we had more time, we could resume the research and find out if our attempt to fix the plasmids was successful