

Students' Annual Webinar

Chemical Synthesis of SARS-CoV-2 Accessory Proteins

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As the interaction between spike-RBD and ACE-2 is crucial for the invasion of the SARS-CoV-2 virus into epithelial cells, blocking this interaction will eventually stop the spread of virus. In this regard, we have specific aims to develop D-protein inhibitor against spike-RBD using mirror image phage display technique. In my talk I will present the optimisation of chemical synthesis of the spike-RBD protein in a significantly large quantity in order to perform the phage display screening against spike-RBD.

Alongside, I will also discuss the chemical synthesis of another SARS-CoV-2 accessory protein, named ORF-8. The ORF-8 protein molecule is one of the leading factors behind the acuteness of SARS-CoV-2, although very little is known about its cellular function. To understand the ORF8 function, a significant amount of protein folded into a single isoform needs to be produced, which is difficult by ribosomal synthesis. Our efforts on the total chemical synthesis of ORF8 will be discussed as well.

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11:30 AM