ID No.	K3005
Project Title	A nanocaged nanobody display platform for infectious diseases detection and therapy
Principal Investigator	Xiyun Yan (Prof., Institute of Biophysics, CAS)
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Report

During this project, Professor Yan has visited IMSUT on the January of 2020, and discussed with Prof. Kawaguchi about the research prospect of infectious disease and immunity. They expected to create more opportunities for young researchers in Japan and China to communicate with each other. Also, during the past year, we have achieved progress on our research project.

(1) We have proven that through genetic engineering approach we can display targeting peptide on the outer surface of ferritin nanocage, also we have prepared a H5N1-specific nanobody which can be used to display on the ferritin nanocage.

(2) Through double-antibody sandwich ELISA, we have verified the specificity and bindi ng affinity of fenobody to the H5N1 virus.

(3) We have labeled fenobody nanocages with FITC and intravenously injected FITC-fen obody into mice to determine the half-life of fenobody. And we found that fenobody had a significant longer half-life than that of nanobody.