

## **Optofluidic Nano-Cytometer for Virus Purification, Sorting and Quantification As An Assistive Toolkit for Virus Diagnosis**

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The goal of this research program is to develop an **optofluidic nano-cytometer** for viruses by optically manipulating and characterizing single nano-sized bioparticles to facilitate their purification, sorting and quantification. The innovation can enhance our understanding of the study of viruses and address some of the most challenging technological bottlenecks in viral research and disease diagnosis today. By focusing the research program at the development of a commercially viable technology that can contribute to the growth of the biomedical engineering and public health sectors in Singapore, the program team of scientists, engineers and virologists will build upon cutting-edge advances in optofluidics and biophotonics to produce revolutionary toolkits for countering pandemic threats and infections.