

## **Biography**

Professor Chan is serving as a Professor at the Department of Chemical Pathology at The Chinese University of Hong Kong. Allen's main research interest is on the development of innovative diagnostic approaches based on circulating DNA analysis. He is an inventor of over 40 patents families on molecular diagnostics, including the methods for the noninvasive detection of Down syndrome through the analysis of the blood plasma of pregnant women. The Down syndrome test has been widely adopted as a routine clinical test globally with millions tests down every year.

Professor Chan developed a number of NGS-based approaches for the detection of cancer-derived mutations, copy number alterations and methylation aberrations in the plasma of cancer patients. He also led the first large-scale prospective study of using "liquid biopsy" to screen for early asymptomatic cancer. Through the screening of over 20,000 asymptomatic participants, he demonstrated that the detection of cancer-derived plasma Epstein-Barr virus DNA could lead to the identification of nasopharyngeal carcinoma at significantly earlier stages compared with patients without undergoing screening. This work was selected as one of the ten notable article published in New England Journal of Medicine in 2017.

Allen is also an entrepreneur and he co-founded a number of biotechnology companies with Professors Dennis Lo and Rossa Chiu. One of his companies, Cirina, merged with Grail, a US-based company established by Illumina, the largest DNA sequencing system manufacturer in 2017. The merged entity is one of the most valuable companies in the field of liquid biopsy. In addition to research, Allen is also passionate about teaching and received a total of four Teacher of the Year awards from the Faculty of Medicine, CUHK.