

Seasonal sensitivity of COVID-19: perspectives from viral-host interactions

*Miyu Moriyama¹, Akiko Iwasaki¹

1. Yale University

Coronavirus disease 2019 (COVID-19) has emerged in December 2019 and continues to spread throughout over 200 countries and territories. To flatten the epidemic curve of COVID-19 cases, prolonged strict restriction of movement has been applied which has unfortunately led to severe economic crises in many countries. COVID-19 is caused by respiratory tract infection with a newly emerging coronavirus, severe acute respiratory syndrome-related coronavirus 2 (SARS-CoV2). Other members of the coronaviruses are well known to cause the common cold, which has seasonality in winter. Therefore, whether the seasonal changes impact on COVID-19 outbreak is of great importance. In this presentation, we will discuss the seasonal sensitivity of COVID-19 by focusing on the key determinants of the seasonality of other respiratory viral infections. In particular, we will highlight the effects of seasonal changes in the environmental factors on the host antiviral immune responses. Further, we will discuss the latest studies on seasonal effects on the COVID-19 pandemics.