

PhD Students' Publications with Impact Factor > 10 in 2022-23 and 2023-24

CUHK Graduate Division of Public Health

01

Association of nirmatrelvir-ritonavir with post-acute sequelae and mortality in patients admitted to hospital with COVID-19: a retrospective cohort study.
The Lancet Infectious Diseases.

By **Huwen Wang**, Yuchen Wei, Chi Tim Hung, Guozhang Lin, Xiaoting Jiang, Conglu Li, et al.

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Articles

Association of nirmatrelvir-ritonavir with post-acute sequelae and mortality in patients admitted to hospital with COVID-19: a retrospective cohort study

Huwen Wang, Yuchen Wei, Chi Tim Hung, Guozhang Lin, Xiaoting Jiang, Conglu Li, Katherine Min Jia, Carrie Ho Kwan Yam, Tsz Yu Chow, Janice Ying-en Ho, Yawen Wang, Shi Zhao, Zihao Guo, Kehang Li, Aimin Yang, Chris Ka Pun Mok, David S C Hui, Eng Kiong Yeoh, Ka Chun Chong

Summary

Background Studies have established the short-term efficacy of nirmatrelvir-ritonavir in managing COVID-19, yet its effect on post-COVID-19 condition, especially in patients admitted to hospital, remains understudied. This study aimed to examine the effect of nirmatrelvir-ritonavir on post-COVID-19 condition among patients admitted to hospital in Hong Kong.

Methods This retrospective cohort study used real-world, territory-wide inpatient records, vaccination records, and confirmed COVID-19 case data from the Hong Kong Hospital Authority and Department of Health, The Government of the Hong Kong Special Administrative Region. Patients aged 18 years and older who tested positive for SARS-CoV-2 between March 11, 2022, and Oct 10, 2023, and who were admitted to hospital with COVID-19 were included. The treatment group included patients prescribed nirmatrelvir-ritonavir within 5 days of symptom onset, excluding

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Centre for Health Systems and Policy Research, School of Public Health and Primary Care

02

Estimating the serial interval of Marburg virus human-to-human transmission from a case cluster seeded by a cross-border traveller.
Journal of Travel Medicine.

By **Zihao Guo**, **Shi Zhao**, Shengzhi Sun, Kai Wang, Jinjun Ran, Daihai He, Yuchen Wei, **Huwen Wang**, Jie Sun, Ka Chun Chong, et al.

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Rapid Communication

Rapid Communication

Estimating the serial interval of Marburg virus human-to-human transmission from a case cluster seeded by a cross-border traveller

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The Marburg virus disease (MVD) is a zoonotic disease caused by the Marburg virus, which belongs to the filoviridae family. The MVD is highly virulent with a case fatality ratio

Similar to the Ebola virus, which also belongs to the filoviridae family, pre-symptomatic transmission amongst MVD patients is highly unlikely and we assumed the SI of MVD

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03

Predictive evolutionary modelling for influenza virus by site-based dynamics of mutations. *Nature Communications.*

By **Jingzhi Lou**, Weiwen Liang, **Lirong Cao**, Inchi Hu, **Shi Zhao**, Zigui Chen, Renee Wan Yi Chan, Peter Pak Hang Cheung, **Hong Zheng**, **Caiqi Liu**, **Qi Li**, Marc Ka Chun Chong, Yexian Zhang, Eng-kiong Yeoh, Paul Kay-Sheung Chan, Benny Chung Ying Zee, Chris Ka Pun Mok & Maggie Haitian Wang

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Article

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Predictive evolutionary modelling for influenza virus by site-based dynamics of mutations

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Jingzhi Lou^{1,2,14}, Weiwen Liang^{3,14}, Lirong Cao^{1,4,14}, Inchi Hu⁵, Shi Zhao^{6,16}, Zigui Chen⁷, Renee Wan Yi Chan^{8,9}, Peter Pak Hang Cheung¹⁰, Hong Zheng¹, Caiqi Liu¹, Qi Li¹, Marc Ka Chun Chong^{1,14}, Yexian Zhang^{2,4}, Eng-kiong Yeoh^{1,11}, Paul Kay-Sheung Chan^{7,12}, Benny Chung Ying Zee^{1,14}, Chris Ka Pun Mok^{1,13} & Maggie Haitian Wang^{1,14} ✉

Influenza virus continuously evolves to escape human adaptive immunity and generates seasonal epidemics. Therefore, influenza vaccine strains need to be updated annually for the upcoming flu season to ensure vaccine effectiveness. We develop a computational approach, both-1, to forecast virus evolution and select representative virus for influenza vaccine. The method involves mod-

04

The joint effect of long-term exposure to multiple air pollutants on non-accidental and cause-specific mortality: A longitudinal cohort study. *Journal of Hazardous Materials.*

By **Xianglin Wei**, Kin Fai Ho, Tsung Yu, Changqing Lin, Ly-yun Chang, Dezhong Chen, Tony Tam, Bo Huang, Alexis K.H. Lau, Xiang Qian Lao

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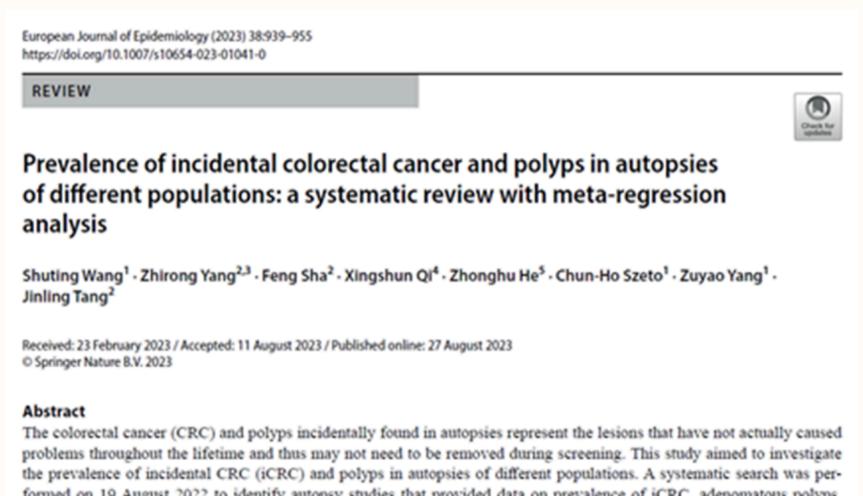


05

Prevalence of incidental colorectal cancer and polyps in autopsies of different populations: a systematic review with meta-regression analysis. *European Journal of Epidemiology.*

By **Wang S.**, Yang Z., Sha F. et al.

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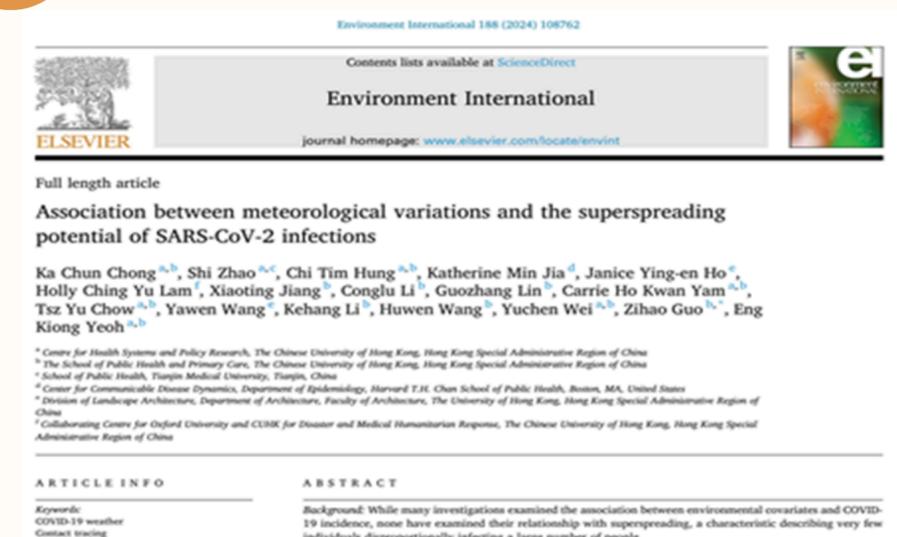


06

Association between meteorological variations and the superspreading potential of SARS-CoV-2 infections. *Environment International.*

By Ka Chun Chong, **Shi Zhao**, Chi Tim Hung, Katherine Min Jia, Janice Ying-en Ho, Holly Ching Yu Lam, Xiaoting Jiang, Conglu Li, Guozhang Lin, Carrie Ho Kwan Yam, Tsz Yu Chow, **Yawen Wang**, **Kehang Li**, **Huwen Wang**, Yuchen Wei, Zihao Guo, Eng Kiong Yeoh.

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07

Gestational and Postpartum Exposure to PM_{2.5} Components and Glucose Metabolism in Chinese Women: A Prospective Cohort Study. *Environ Sci Technol.* Published online May 10, 2024. doi:10.1021/acs.est.4c03087

By **Chen Yujing**, Wang Y, Chen Q, et al.

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08

The Associations of Prenatal Exposure to Fine Particulate Matter and Its Chemical Components with Allergic Rhinitis in Children and the Modification Effect of Polyunsaturated Fatty Acids: A Birth Cohort Study. *Environ Health Perspect.* 2024;132(4):47010. doi:10.1289/EHP13524

By **Chen Yujing**, Guo C, Chung MK, et al.

Published: April 2024

Research

The Associations of Prenatal Exposure to Fine Particulate Matter and Its Chemical Components with Allergic Rhinitis in Children and the Modification Effect of Polyunsaturated Fatty Acids: A Birth Cohort Study

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BACKGROUND: Polyunsaturated fatty acids (PUFAs) have been shown to protect against fine particulate matter <2.5 μm in aerodynamic diameter (PM_{2.5})-induced hazards. However, limited evidence is available for respiratory health, particularly in pregnant women and their offspring.
OBJECTIVES: We aimed to investigate the association of prenatal exposure to PM_{2.5} and its chemical components with allergic rhinitis (AR) in children and explore effect modification by maternal erythrocyte PUFAs.
METHODS: This retrospective birth cohort study involved 657 mother-child pairs from Guangzhou, China. Prenatal exposure to residential PM_{2.5} was

09

Exposure to Neighborhood Greenness and Hypertension Incidence in Adults: A Longitudinal Cohort Study in Taiwan. *Environmental Health Perspectives.*

By **Yi Qian Zeng**, Ka Chun Chong, Ly-yun Chang, **Xue Liang**, Li-Hao Guo, Guanghui Dong, Tony Tam, and Xiang Qian Lao.

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Research

Exposure to Neighborhood Greenness and Hypertension Incidence in Adults: A Longitudinal Cohort Study in Taiwan

Yi Qian Zeng,¹ Ka Chun Chong,^{1,2} Ly-yun Chang,³ Xue Liang,¹ Li-Hao Guo,⁴ Guanghui Dong,⁴ Tony Tam,⁵ and Xiang Qian Lao^{6,7}

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BACKGROUND: There are few studies on the health effects of long-term exposure to neighborhood greenness in a longitudinal setting, especially in Asian countries with high population densities.
OBJECTIVES: This study investigates the association between long-term exposure to neighborhood greenness and hypertension among adults in Taiwan.
METHODS: We selected 125,537 participants (≥ 18 years of age) without hypertension from Taiwan who had joined the standard medical examination program between 2001 and 2016. Neighborhood greenness was estimated using the normalized difference vegetation index (NDVI), derived from satellite images at a resolution of 250 m². The 2-y average NDVI value within a 500-m circular buffer around participants' residences was calculated. A time-varying Cox regression model was used to investigate the association between neighborhood greenness and incident hypertension. Mediation analyses were performed to examine whether the association was explained by air pollution, leisure-time physical exercise, or body mass index (BMI).
RESULTS: Compared with living in areas within the first quartile of neighborhood greenness, living in areas within the second, third, and fourth quartiles of neighborhood greenness was found to be associated with a lower risk of hypertension, with hazard ratios (HRs) and 95% confidence intervals (CIs) of 0.95 (95% CI: 0.91, 1.00), 0.95 (95% CI: 0.90, 0.99), and 0.93 (95% CI: 0.88, 0.97), respectively. Each 0.1-unit increase in the NDVI was