

國立清華大學第 24 屆新進人員研究獎得獎人簡介

張筱涵老師在 2019 年八月加入清華大學生命科學院生物資訊與結構生物研究所，從事病原體演化與傳播的研究。張老師是清大的校友，於 2006 年畢業於生命科學系，2008 年畢業於生物科技所，在拿到碩士學位之後，到美國哈佛大學攻讀個體與演化生物的博士，接著在哈佛公衛學院從事博士後研究。張筱涵老師的研究結合基因體學、統計學、與流行病學的方法，從多個面向研究傳染疾病，以研究的成果能幫助制定出更好的防疫策略為目標。

在 2020 年新冠肺炎疫情爆發之初，張筱涵老師的團隊即投入相關研究，利用數學模型與資料分析的方式來探討有效的防疫策略。其中，張筱涵老師的研究找出在資源有限的情況下，最佳的口罩分配方式；也結合臉書人潮移動資料，量化限制旅行對控制疫情的幫助，並將結果呈現在簡單易懂的儀表板中，供公共衛生單位參考。

非常感謝此獎項的肯定，未來會持續在傳染疾病研究上努力，期能有更好的研究表現。

Prof. Hsiao-Han Chang joined the College of Life Sciences at National Tsing Hua University in August 2019. Her research focuses on the evolution and spread of pathogens. Prof. Chang is NTHU alumnus: she received her bachelor's degree from the Department of Life Science in 2006 and her master's degree from the Institute of Biotechnology in 2008. Prof. Chang then went to Harvard University to pursue her doctoral degree in Organismic and Evolutionary Biology, followed by postdoctoral research at Harvard T.H Chan School of Public Health. Prof. Chang's research combines tools from genomics, statistics, and epidemiology and studies infectious diseases from multiple aspects to provide insights into disease control strategies.

Since the COVID-19 pandemic, Prof. Chang's group used mathematical models and statistical analysis to explore different intervention strategies. For example, her group identified the optimal allocation strategy for facemasks when resources are limited. Also, they combined human mobility data from Facebook Data for Good to quantify the impact of travel restrictions on disease transmission and summarized the results in an easy-to-understand dashboard for policy makers to use.

Prof. Chang wants to thank National Tsing Hua University for this award, and will continue doing the best research in the field of infectious diseases.