Guangdong-Hong Kong-Macau University Alliance Summit on Post-pandemic Challenges in Public Health

粵港澳高校公共衞生聯盟
後疫情挑戰高峰論壇

12th-13th May 2023　二〇二三年五月十二至十三日

Lecture Theatre 2, G/F, Yasumoto International Academic Park (YIA), The Chinese University of Hong Kong

香港中文大學康本國際學術園地下2號演講廳

Keynote Presentation 主題報告	Prof. Hongbing SHEN	Academician of Chinese Academy of Engineering Director General, Chinese Center for Disease Control and Prevention 中國工程院院士 中國疾病預防控制中心主任
Keynote Presentation 主題報告	Prof. Wannian LIANG 梁萬年教授	Executive Vice-Dean, Vanke School of Public Health, Tsinghua University 清華大學萬科公共衛生與健康學院常務副院長
Keynote Presentation 主題報告	Prof. Tangchun WU 鄔堂春教授 ⌨	Academician of Chinese Academy of Engineering Dean of Tongji Medical College, Huazhong University of Science and Technology 中國工程院院士 華中科技大學同濟醫學院院長
Topic 1 報告一	Prof. Siyan ZHAN 詹思延教授	Dean, School of Public Health, Peking University 北京大學公共衛生學院院長
Topic 2 報告二	Prof. Na HE 何納教授	Dean, School of Public Health, Fudan University 復旦大學公共衛生學院院長
Topic 3 報告三	Prof. Chen MAO 毛琛教授 ⌨	Deputy Dean, School of Public Health, Southern Medical University 南方醫科大學公共衛生學院副院長
Topic 4 報告四	Prof. Chris MOK 莫家斌教授	Assistant Professor, JC School of Public Health and Primary Care, The Chinese University of Hong Kong 香港中文大學賽馬會公共衛生及基層醫療學院助理教授
Topic 5 報告五	Prof. Haidong KAN 闞海東教授 ⌨	Deputy Dean, School of Public Health, Fudan University 復旦大學公共衛生學院副院長
Topic 6 報告六	Prof. Yu GAO 高宇教授	Professor, Department of Environmental Health, School of Public Health, Shanghai Jiao Tong University 上海交通大學公共衛生學院環境與健康系教授
Topic 7 報告七	Prof. Hualiang LIN 林華亮教授	Director, Department of Epidemiology, Sun Yat-sen University 中山大學公共衛生學院流行病學系主任
Topic 8 報告八	Prof. Shelly TSE 謝立亞教授	Director, Centre for Occupational and Environmental Health Studies, JC School of Public Health and Primary Care, The Chinese University of Hong Kong 香港中文大學賽馬會公共衛生及基層醫療學院職業及環境健康教研中心總監
Topic 9 報告九	Prof. Fan WU 吳凡教授	Deputy Dean, Shanghai Medical College, Fudan University 復旦大學上海醫學院副院長
Topic 10 報告十	Prof. Xiaoming SHI 施小明教授 ⌨	Director, National Institute of Environmental Health, Chinese Center for Disease Control and Prevention 中國疾病預防控制中心環境與健康相關產品安全所所長
Topic 11 報告十一	Prof. Eng-kiong YEOH 楊永強教授 ⌨	Director, Centre for Health Systems and Policy Research, JC School of Public Health and Primary Care, The Chinese University of Hong Kong 香港中文大學賽馬會公共衛生及基層醫療學院醫療體系及政策研究所總監
Topic 12 報告十二	Prof. Min XIA 夏敏教授	Dean, School of Public Health, Sun Yat-sen University 中山大學公共衛生學院院長
Topic 13 報告十三	Prof. An PAN 潘安教授	Dean, School of Public Health, Tongji Medical College, Huazhong University of Science and Technology 華中科技大學公共衛生學院院長
Topic 14 報告十四	Prof. Wei LI 李衛教授	Director, Medical Research & Biometrics Center, National Center for Cardiovascular Diseases, Fuwai Hospital, Chinese Academy of Medical Sciences & Peking Union Medical College 中國醫學科學院北京協和醫學院阜外醫院國家心血管病中心醫學統計部主任
Topic 15 報告十五	Prof. Gengsheng HE 何更生教授	Deputy Dean, School of Public Health, Fudan University 復旦大學公共衛生學院副院長
Topic 16 報告十六	Prof. Martin WONG 黃至生教授	Professor, JC School of Public Health and Primary Care, The Chinese University of Hong Kong 香港中文大學賽馬會公共衛生及基層醫療學院教授

⌨ Online presentation 線上演講

12th May 2023 (Friday)
2023年5月12日（星期五）

09:30-10:00 Registration 登記

10:00-10:30 Opening 開幕

Welcome Message　致歡迎辭
Speaker:　Professor Rocky TUAN　段崇智教授
　　　　　　Vice-Chancellor, The Chinese University of Hong Kong
　　　　　　香港中文大學校長

Welcome Message　致歡迎辭
Speaker:　Professor Samuel WONG　黃仰山教授
　　　　　　Director, JC School of Public Health and Primary Care,
　　　　　　The Chinese University of Hong Kong
　　　　　　香港中文大學醫學院賽馬會公共衛生及基層醫療學院院長

Opening Remarks　開幕致辭
Speaker:　Professor Chung-mau LO, BBS, JP　盧寵茂教授，BBS，JP
　　　　　　Secretary for Health, HKSAR
　　　　　　香港特別行政區政府醫務衛生局局長

Group photo　大合照

10:30-11:10 Keynote Presentation　主題報告
Topic:　Reflections on the high-quality development of disease control
　　　　　and prevention system of China in the post-COVID-19 era
　　　　　新冠疫情後我國疾控體系高質量發展的思考
Speaker:　Professor Hongbing SHEN　沈洪兵教授
　　　　　Academician of Chinese Academy of Engineering
　　　　　Director General, Chinese Center for Disease Control and Prevention
　　　　　中國工程院院士
　　　　　中國疾病預防控制中心主任

11:10-11:25 Tea Break 茶歇

Theme　1　　　Infectious diseases
報告主題一　　　傳染病

11:25-12:25 Topic 1　報告一
Topic:　Development and Practice of Vaccine Safety Active Surveillance Platform
　　　　　疫苗安全性主動監測平台建設與實踐
Speaker:　Professor Siyan ZHAN　詹思延教授
　　　　　Dean, School of Public Health, Peking University
　　　　　北京大學公共衛生學院院長

Topic 2　報告二
Topic:　Epidemiology of Aging-related NCDs in People Living with HIV
　　　　　HIV感染者衰老相關慢性病流行病學
Speaker:　Professor Na HE　何納教授
　　　　　Dean, School of Public Health, Fudan University
　　　　　復旦大學公共衛生學院院長

12th May 2023 (Friday)
2023年5月12日（星期五）

Topic 3　報告三 🖥️

Topic: Epidemiological research based on the healthcare big data: Opportunities and challenges
基於健康醫療大數據的流行病學研究：機遇和挑戰

Speaker: Professor Chen MAO　毛琛教授
Deputy Dean, School of Public Health, Southern Medical University
南方醫科大學公共衛生學院副院長

Topic 4　報告四

Topic: Is COVID-19 still a threat to us?
我們還是活在新冠的威脅下嗎？

Speaker: Professor Chris MOK　莫家斌教授
Assistant Professor, JC School of Public Health and Primary Care,
The Chinese University of Hong Kong
香港中文大學賽馬會公共衛生及基層醫療學院助理教授

12:25-12:45 ⭘ Panel discussion　　Theme 1　Infectious diseases
專家小組討論　　　報告主題一　傳染病

12:45-14:30 ⭘ Lunch (Please refer to PP.38-39 for nearby restaurants)
午膳　（可參考第38至39頁到鄰近餐廳）

14:30-15:10 ⭘ Keynote Presentation　主題報告

Topic: Building a Resilient Public Health System
構建有韌性的公共衛生體系

Speaker: Professor Wannian LIANG　梁萬年教授
Executive Vice-Dean, Vanke School of Public Health, Tsinghua University
清華大學萬科公共衛生與健康學院常務副院長

Theme　2	Environmental challenges
報告主題二	環境挑戰

15:10-16:10 ⭘ **Topic 5　報告五** 🖥️

Topic: Air Pollution, Climate Change and Public Health
under the Background of Two-Carbon Goals in China
雙碳背景下的空氣污染、氣候變化與公共衛生

Speaker: Professor Haidong KAN　闞海東教授
Deputy Dean, School of Public Health, Fudan University
復旦大學公共衛生學院副院長

Topic 6　報告六

Topic: Maternal environmental exposures and Child Health Outcomes:
Laizhou Wan Birth Cohort (LWBC)
母親孕期環境污染物暴露與兒童健康：基於萊州灣出生隊列

Speaker: Professor Yu GAO　高宇教授
Professor, Department of Environmental Health, School of Public Health,
Shanghai Jiao Tong University
上海交通大學公共衛生學院環境與健康系教授

12th May 2023 (Friday)
2023年5月12日（星期五）

Topic 7　報告七

Topic:　Ambient air pollution associated with incidence and progression trajectory of cardiometabolic diseases: A multi-state analysis of a prospective cohort
空氣污染與心血管代謝性疾病及共病發生發展關聯的多狀態動態軌跡分析

Speaker:　Professor Hualiang LIN　林華亮教授
Director, Department of Epidemiology, Sun Yat-sen University
中山大學公共衛生學院流行病學系主任

Topic 8　報告八

Topic:　Spatiotemporal variation of working environment safety towards SARS-CoV-2 in Hong Kong, Nanjing and Wuhan
比較香港、南京和武漢三城市工作環境中對SARS-CoV-2職安健時空變化的相關研究

Speaker:　Professor Shelly TSE　謝立亞教授
Director, Centre for Occupational and Environmental Health Studies,
JC School of Public Health and Primary Care, The Chinese University of Hong Kong
香港中文大學賽馬會公共衛生及基層醫療學院職業及環境健康教研中心總監

16:10-16:30　Panel discussion　　Theme 2　Environmental challenges
專家小組討論　　報告主題二　環境挑戰

16:30-16:45　Tea Break 茶歇

Theme　3　　**Policy and health services challenges**
報告主題三　　政策及衛生服務的挑戰

16:45-17:30　Topic 9　報告九

Topic:　Challenges of social governance on public health in megacities - Shanghai practices
超大城市公共衛生治理的挑戰——上海實踐

Speaker:　Professor Fan WU　吳凡教授
Deputy Dean, Shanghai Medical College, Fudan University
復旦大學上海醫學院副院長

Topic 10　報告十　💻

Topic:　Reflections on environmental health and business architecture in China: Inspirations from the COVID-19 pandemic
我國環境健康工作與業務架構思考：基於新冠疫情的啟示

Speaker:　Professor Xiaoming SHI　施小明教授
Director, National Institute of Environmental Health,
Chinese Center for Disease Control and Prevention
中國疾病預防控制中心環境與健康相關產品安全所所長

Topic 11　報告十一　💻

Topic:　Preparedness, Readiness, Response to Public Health Threats
突發公共衛生事件：準備、防範和應對

Speaker:　Professor Eng-kiong YEOH　楊永強教授
Director, Centre for Health Systems and Policy Research,
JC School of Public Health and Primary Care, The Chinese University of Hong Kong
香港中文大學賽馬會公共衛生及基層醫療學院醫療體系及政策研究所總監

17:30-17:50　Panel discussion　　Theme 3　Policy and health services challenges
專家小組討論　　報告主題三　政策及衛生服務的挑戰

💻 Online presentation 線上演講

13ᵗʰ May 2023 (Saturday)
2023年5月13日（星期六）

09:30-10:00 ○ Registration 登記

10:00-10:40 ○ Keynote Presentation　主題報告 💻
Topic:　　Air pollution and cardiopulmonary disease -
evidence, mechanism, prevention and action
空氣污染與心肺疾病
Speaker:　Professor Tangchun WU　鄔堂春教授
Academician of Chinese Academy of Engineering
Dean of Tongji Medical College, Huazhong University of Science and Technology
中國工程院院士
華中科技大學同濟醫學院院長

10:40-10:55 ○ Tea Break 茶歇

Theme　4　　**Non-communicable diseases**
報告主題四　　**非傳染性疾病**

10:55-12:10 ○ Topic 12　報告十二
Topic:　　The association and research progress of
nutrition diet-gut microbiota-cardiovascular disease
營養膳食—腸道菌群—心血管疾病之間的關聯與研究進展
Speaker:　Professor Min XIA　夏敏教授
Dean, School of Public Health, Sun Yat-sen University
中山大學公共衛生學院院長

Topic 13　報告十三
Topic:　　Lifestyle and cardiometabolic diseases: new results of an old topic
生活方式與代謝性心血管疾病防控：老話題、新進展
Speaker:　Professor An PAN　潘安教授
Dean, School of Public Health, Tongji Medical College,
Huazhong University of Science and Technology
華中科技大學公共衛生學院院長

Topic 14　報告十四
Topic:　　Introduction of the PURE study: Prospective Urban & Rural Epidemiology Study
前瞻性城鄉流行病學研究(PURE)介紹
Speaker:　Professor Wei LI　李衛教授
Director, Medical Research & Biometrics Center,
National Center for Cardiovascular Diseases, Fuwai Hospital,
Chinese Academy of Medical Sciences & Peking Union Medical College
中國醫學科學院北京協和醫學院阜外醫院國家心血管病中心醫學統計部主任

💻 Online presentation 線上演講

13th May 2023 (Saturday)
2023年5月13日（星期六）

Topic 15　報告十五

Topic:　New strategies for prevention of life-style related diseases
through alterations of diet and microbiota
基於「腸道菌群—代謝表型」新策略研究膳食對生活方式相關疾病的預防作用機制

Speaker:　Professor Gengsheng HE　何更生教授
Deputy Dean,　School of Public Health, Fudan University
復旦大學公共衛生學院副院長

Topic 16　報告十六

Topic:　The use of microbial biomarkers to predict colorectal tumours -
results from an Asia Pacific guideline on diagnosis of colorectal neoplasia
亞太區臨床指引的最新發佈：使用微生態標記預測大腸腫瘤

Speaker:　Professor Martin WONG 黃至生教授
Professor, JC School of Public Health and Primary Care,
The Chinese University of Hong Kong
香港中文大學賽馬會公共衞生及基層醫療學院教授

| 12:10-12:30 | ○ | Panel discussion　Theme 4 Non-communicable diseases
專家小組討論　　報告主題四 非傳染性疾病 |
| 12:30-12:35 | ○ | Closing Remarks 閉幕 |
| 12:35-12:45 | ○ | Signing of MOU 簽署合作備忘錄 |

Speaker Biography & Abstract
講者介紹及報告摘要

Professor Hongbing SHEN 沈洪兵教授

Academician of Chinese Academy of Engineering
Director General, Chinese Center for Disease Control and Prevention
中國工程院院士
中國疾病預防控制中心主任

Biography 講者介紹

Academician, Chinese Academy of Engineering (CAE);
Deputy Director, the National Disease Control and Prevention Administration of China;
Director General, Chinese Center for Disease Control and Prevention;
Vice Presidents, China Anti-Cancer Association;
Professor of Epidemiology, Nanjing Medical University, China.

Prof. Shen has been engaged in epidemiological research for more than 30 years. His research interest mainly focuses on cancer epidemiology, prevention and treatment strategies for high-risk populations, birth cohort, and health and medical big data sciences. He has made tremendous contributions in the field of cancer genetic prediction and precision prevention. He has been awarded several science and technology awards, such as the Second Prize of National Natural Science of China, Ho Leung Ho Lee Science and Technology Progress Award, etc. He has published more than 300 papers in international journals including *Nat Genet*, *Lancet Respir Med* etc.

中國工程院院士，國家疾病預防控制局副局長，中國疾病預防控制中心主任，中國抗癌協會副理事長，南京醫科大學流行病學教授。

從事流行病學研究30餘年，在腫瘤流行病學以及高危人群防治策略、出生隊列、健康醫療大數據等方面開展了系列研究，為腫瘤基因預測和精準預防做出重要貢獻。在*Nat Genet*，*Lancet Respir Med*等國際重要刊物發表代表性學術論文多篇；作為第一完成人獲國家自然科學獎二等獎、何梁何利科技進步獎、國家教學成果二等獎等多項科技和教學獎勵。

Abstract 題目摘要

Reflections on the high-quality development of disease control and prevention system of China in the post-COVID-19 era
新冠疫情後我國疾控體系高質量發展的思考

Since the outbreak of the COVID-19, Chinese Disease Control and Prevention system has made tremendous contributions to contain the epidemic and protect people's health of China. Undoubtedly, some of its limitations and problems were revealed as well. The Chinese government attaches great importance to disease control and prevention, formulates the national reform policy document of the disease control and prevention system, and actively promotes its high-quality development. The reform measures of disease control and prevention in the United States, Britain, South Korea and other countries in post-COVID-19 era were summarized. The progress of the national and local level reform in China was reviewed. In the new era, we need to reflect the functional orientation of disease control and prevention departments, the key and difficult points in structural and institutional reform, as well as the building of core competence and essential capacity of disease control and prevention.

新冠疫情爆發以來，我國的疾病預防控制體系對疫情防控和保護人民健康做出了巨大的貢獻，但不可否認，也暴露出諸多短板弱項。中國政府高度重視疾病預防控制工作，制定中央疾病預防控制體系改革文件，積極推動我國疾控體系高質量發展。通過綜述借鑒疫情後美國、英國、韓國等國疾控體系的改革舉措，梳理國家和地方已經推動的疾控體系改革進展，重新思考我國疾病預防控制機構的職能定位、體制機制改革的重點難點、以及疾控核心能力和重要能力建設。

Professor Wannian LIANG 梁萬年教授

Executive Vice-Dean, Vanke School of Public Health, Tsinghua University
清華大學萬科公共衛生與健康學院常務副院長

Biography 講者介紹

Prof. Liang Wannian, currently serves as the Executive Vice-Dean of Vanke School of Public Health, and the Dean of Institute for Healthy China at Tsinghua University. He holds a Ph. D in medicine and is a Vanke Chair Professor and a doctoral supervisor at Tsinghua University. He is mainly engaged in research work in the fields of managerial epidemiology, health management, epidemiology and biostatistics, community health service management and general practice. Prior to his current roles, he used to be the Vice President of Capital Medical University, a full-time Deputy Director of the State Council Healthcare Reform Office and Director-General of System Reform Department of the National Health Commission.

Dr. Liang enjoys Special Government Allowance from the State Council and has won many titles and awards such as young and middle-aged expert with outstanding contributions at the national level, national outstanding individual in fighting COVID-19 and national model of earthquake relief. He is currently the leader of the National Health Commission's COVID Response Expert Group, a member of the World Health Organization's International Health Regulations Emergency Committee, a member of the Expert Committee of the *Tsinghua-Lancet Commission Report on Health and Poverty Alleviation in China*, and Editor-in-Chief of the journal *Global Transitions*.

梁萬年，現任清華大學萬科公共衛生與健康學院常務副院長、健康中國研究院院長、清華大學萬科講席教授、醫學博士、博士生導師。主要從事管理流行病學、衛生管理學、流行病與衛生統計學、社區衛生服務管理、全科醫學等領域的研究工作。曾任首都醫科大學副校長、國務院醫改辦專職副主任、國家衛生健康委員會體制改革司司長等職。國務院「政府特殊津貼」獲得者，國家級有突出貢獻的中青年專家，曾獲全國抗擊新冠肺炎疫情先進個人、全國抗震救災模範稱號。現兼任國家衛生健康委疫情應對處置工作專家組組長、世界衛生組織《國際衛生條例》突發事件委員會委員、清華大學–《柳葉刀》「中國健康扶貧」特邀報告專家委員會委員、《Global Transitions》期刊總編輯。

Abstract 題目摘要

Building a Resilient Public Health System
構建有韌性的公共衛生體系

In the critical period of building a public health system, it is important to ensure its robustness and resiliency, to deal with both emerging and traditional health challenges. And that will require the following: revised health concepts, a better mechanism for public health investment, personnel training and capacity building, redefined core functions of the Chinese CDC and an improved framework for public health development.

在公共衛生體系建設的關鍵時期，構建強大有韌性的公共衛生體系，應對突發和傳統公共衛生挑戰需從以下幾個方面著手：健康理念的變革、公共衛生投入機制的完善、人才培養和能力建設、疾病控制系統的核心功能定位以及醫防融合等。

Professor Tangchun WU 鄔堂春教授

Academician of Chinese Academy of Engineering
Dean of Tongji Medical College, Huazhong University of Science and Technology
中國工程院院士
華中科技大學同濟醫學院院長

Biography 講者介紹

Dr. Tangchun Wu is tenured professor of Occupational and Environmental Health, School of Public Health, dean of Tongji Medical College, Huazhong University of Science & Technology (HUST), and National Outstanding Young Investigator, the Yangzi Scholarship and Principal Investigator (PI) of a 973 Program (the National Key Basic Research and Development Program). He graduated with a major in Preventive Medicine in 1988 and received his PhD in 1993 from Tongji Medical University. Dr. Wu's research is mainly focused on effects of air pollution, genetic, epigenetic and their interaction on heat shock proteins, and such environment-related diseases as cardiovascular disease and lung cancer. Currently he is leading a project to investigate health hazards caused by ambient particulate matter and serves as PI of the Dongfeng-Tongji Cohort (sample size: 40,000) and Huazhong Prospective Cohort for Chronic Diseases (sample size: 120,000) supported by National Key Program of Research and Development of China. He has published over 400 original papers (290 of them published in SCI-collected journals such as *Nature*, *JAMA*, *J Clin Oncol*, *Circulation*, *Lancet Glob Health*, *Cir Res*, *Environ Health Perspect*, *PloS Med*, *GUT* and *Nature Genetics*). His results had given the evidence for modifying WHO, IRAC and many countries' criteria and guidance. Dr. Wu has served as Chair, co-Chair, or keynote speaker at International Conferences on Occupational and Environmental Health, and Cell Stress. He had also served as selected, present, past President of Cell Stress Society International and editors of Environ Health Perspect etc. Dr. Wu is the recipient of the National Second Awards of both Natural Science and Scientific Advancement for his research. He was selected as academician of Chinese Academy of Engineering in 2021.

鄔堂春，華中科技大學教授，中國工程院院士，同濟醫學院院長，湖北省科協副主席，教育部環境與健康重點實驗室主任。曾任國際細胞應激學會主席，現為中國醫師學會副會長兼公共衛生醫師分會會長、中華預防醫學會（環境衛生學會、呼吸病防控分會）副主任委員、*Environ Health Perspect*編委、《中華預防醫學雜誌》副主編等。長期從事空氣污染與健康的研究，在揭示空氣污染病因、闡明發病機制和制定預防對策等方面做出了傑出貢獻，在*JAMA*、*Nature*、*J Clin Oncol*、*Circulation*等期刊上發表論文 400餘篇，許多著名期刊（*Ca Cancer J Clin*、*JAMA*）等高度評價其研究工作，獲國家自然科學二等獎、國家科學技術進步二等獎。指導研究生1人獲全國優博、3人獲提名獎。注重把學科和科研優勢轉化為本科教學資源優勢，主持獲國家教學成果二等獎2項。先後獲得國家傑青、長江學者特聘教授、973項目、國家重點研發計劃首席科學家和基金委創新群體負責人。

Abstract 題目摘要

Air pollution and cardiopulmonary disease -
evidence, mechanism, prevention and action
空氣污染與心肺疾病

Cardiopulmonary diseases are the leading causes of morbidity and mortality worldwide and are caused by the environments, genes and their interaction. There are a lot of environmental pollution from air, water, soil, and such life styles as BMI, sleep, exercise which are very common in human environments. Both short-term and long-term exposure to particular matters (particles ≤2.5 μm in aerodynamic diameter, PM2.5) is a public health concern. Humans are exposed to combustion-related fine particulate matter from multiple sources, such as ambient air pollution, household air pollution, second-hand cigarette smoke. Firstly, I will briefly introduce that the associations of outdoor air pollution with risk of cardiovascular and all-cause mortality. Secondly, I will thoroughly introduce that the associations of household air pollution from cooking and warming with risk of cardiovascular and all-cause mortality in rural and urban China, and its prevention policy. Thirdly, I will introduce the role of such DNA methylation, miRNA as epigenetics caused by coke oven emissions, particular matter, and metals in aging and acute coronary syndrome (the most severe cardiovascular disease). Fourthly, I will introduce the association of such sleep, exercise, BMI with the risk of these diseases and prevention. Finally, as human are exposed to many kinds of environmental pollution, I will report the possible application of Dongfeng-tongji cohort et al for the future study (complex exposure and outcomes) of such cardiopulmonary diseases as cardiovascular diseases and use integrated exposure–response approach to explore the potential mechanism. The work was supported by the Natural National Scientific Foundation of China [91643202 and 81390542] and the National Key Research and Development Program (2016YFC0900800)

Professor Siyan ZHAN 詹思延教授

Dean, School of Public Health, Peking University
北京大學公共衛生學院院長

Biography 講者介紹

Professor Zhan graduated from Beijing Medical University in 1986, now the Peking University Health Sciences Centre (PUHSC), and obtained postgraduate training in the Chinese University of Hong Kong. Her major is Epidemiology, especially pharmacoepidemiology.

Prof. Zhan is the Dean, School of Public Health, Peking University, the Director of Center for Clinical Epidemiology, Peking University Third Hospital. She is the member of IEA and ISPE, as well the Chairman of The Professional Committee of Pharmacoepidemiology of CPA and Chairman of China Epidemiology Association. She is also the editor-in-chief of *Chinese Journal of Pharmacoepidemiology* and deputy editor-in-chief of *Chinese Journal of Epidemiology*. As a principal investigator, Prof. Zhan has already completed many projects of drug safefy supported by the national natural science foundation of China (NSFC), CFDA and global fund. She has published more than 200 papers in pharmcoepidemiology field and won many national prizes. She is also the editor-in-chief, the current Textbook of Epidemiology, Textbook of Clinical Epidemiology and Textbook of Pharmacoepidemiology in China.

教育和工作經歷：北京醫科大學本科（6年制）和碩士、香港中文大學博士畢業。1989年碩士畢業後留校任教至今，2001年晉陞教授，2004年獲得博士生導師資格，2016年獲聘正高級專業技術二級崗位。目前擔任北京大學公共衛生學院院長、流行病與衛生統計學系主任，北京大學第三醫院臨床流行病學研究中心主任（雙聘），北京大學人工智慧研究院智慧公眾健康研究中心主任，北京大學循證醫學中心副主任，北京大學醫學部藥品上市後安全性研究中心主任。

目前擔任中國藥學會常務理事、藥物流行病學專委會主任委員；中華預防醫學會流行病學分會主任委員、公共衛生教育分會副主任委員、循證預防醫學專業委員會副主任委員；國務院學位委員會第八屆學科評議組（公共衛生與預防醫學）專家、國家食藥監局藥品註冊審評專家諮詢委員會（藥品安全及風險管理專家諮詢委員會）委員、國家免疫規劃專家諮詢委員會委員。擔任《藥物流行病學雜誌》主編、《中華流行病學雜誌》副主編、《Science Bulletin》醫學部副主編、《Pharmacoepidemiology & Drug Safety》編委和Associate Editor，《Clinical Epidemiology》編委等多家國內外雜誌編委；擔任《流行病學》統編教材第7版和第8版主編、長學制《臨床流行病學》第2、3版主編，《藥物流行病學》第2版聯合主編；主譯《循證醫學教學與實踐》、《藥物流行病學教程》、《觀察性療效比較研究的方案制定》。近年來承擔科技部、國自然等多項課題，作為第一完成人獲中華預防醫學會科學技術獎三等獎（2013）、中國藥學會科學技術三等獎（2013），北京市科技進步成果三等獎（2013）、華夏科技成果二等獎（ 2013）。 2016年獲第17屆吳階平 – 保羅楊森獎、2017年獲北京市優秀教師稱號、2020年北京市教工委優秀黨務工作者、2020年北京市抗擊新冠肺炎疫情先進個人、享受國務院政府特殊津貼；2021年作為教材主編獲首屆全國教材建設獎（二等獎）、寶鋼優秀教師特等獎提名獎。

Abstract 題目摘要

Development and Practice of Vaccine Safety Active Surveillance Platform
疫苗安全性主動監測平台建設與實踐

Post-marketing active surveillance of vaccines safety can comprehensively and continuously collect adverse events after immunization, and timely detect and verify vaccine safety signals. It is not only an important supplement to AEFI, but also a necessary component of the WHO certification system. In the era of big data, active monitoring can be performed through longitudinal links to multi-source electronic medical databases, with rapid data transmission and regular updates, making it possible to detect vaccine safety signals in near real-time. The purpose of this presentation is to introduce the development status of post-marketing active surveillance of vaccine safety and relevant resources in China, explore platform construction and method optimization applicable to China, and share our experiences in China.

疫苗上市後安全性主動監測能夠全面、持續的收集免疫接種後不良事件，及時發現並驗證疫苗安全性信號，不僅是AEFI的重要補充，也是WHO認證體系的必要成分。隨著信息時代的到來，主動監測可通過縱向鏈接多源電子醫療數據庫開展分析，數據的快速傳輸與定期更新，使得接近實時的發現疫苗安全性信號成為可能。本講旨在介紹疫苗上市後安全性主動監測的發展現狀及我國相關資源，探索適用於我國的平台構建與方法優化，以期為我國開展相關工作提供思路。

Professor Na HE 何納教授

Dean, School of Public Health, Fudan University
復旦大學公共衛生學院院長

Biography 講者介紹

Na He, PhD., Professor of Epidemiology and Dean of School of Public Health, Fudan University, China. Dr. He has long research and implementation experience in HIV epidemiology, prevention and intervention. Currently his major research interests is in the epidemiology and intervention of comorbid aging-related non-communicable chronic diseases (NCDs) among people living with HIV (PLWH). Dr. He has been PI for over 30 research grants including National key research and development project and NIH/R01 projects, and leads the CHART cohort, an ongoing prospective cohort of HIV and Aging in China, which employs systems epidemiological methods to investigate associates, biomarkers, mechanisms and interventions of aging and aging-related chronic comorbidities in PLWH. He has over 400 peer-reviewed publications on domestic and international journals including *Lancet HIV, JAMA, EBioMedicine, CID, CMI* and *EID*. Dr. He holds key positions in a number of national academic and scientific societies in China, including as a Member of Disciplinary Evaluation Group of National Academic Committee of State Council, President of Chinese Public Health Education Association, Vice President of Chinese Epidemiological Association, and Vice Director of Public Health Branch of Chinese Medical Association. Dr. He received Bachelor of Medicine and MSc in epidemiology from Shanghai Medical University, and PhD in epidemiology from UCLA.

何納，流行病學教授、復旦大學公共衛生學院院長，長期從事艾滋病流行病學研究與防治實踐，主持國家重點研發計劃、國家科技重大專項、國家自然科學基金重點專項、NIH/R01項目等，在*Lancet HIV*、*JAMA*、*EBioMedicine*、*CID*、*CMI*、*EID*等國內外期刊發表論著400餘篇；兼任國務院學位委員會學科評議組成員、中華預防醫學會公共衛生教育分會主委、中華預防醫學會流行病學分會副主委、中華醫學會公共衛生分會副主委。何納於上海醫科大學獲得醫學學士和醫學碩士學位，於UCLA獲流行病學博士學位。

Abstract 題目摘要

Epidemiology of Aging-related NCDs in People Living with HIV
HIV感染者衰老相關慢性病流行病學

Combination antiretroviral therapy (cART) has significantly improved life expectancy of people living with HIV (PLWH), with an obvious ageing trend in HIV population. Meanwhile, persistent immunodeficiency, inflammatory activation, side-effect of antiretroviral drugs, psychiatric stress, sleep disorder and unhealthy lifestyle all together induced early/premature and accelerated ageing, as well as high risks non-communicable chronic diseases (NCDs) such as cardiovascular and cerebral diseases, malignant tumors, chronic liver diseases and chronic kidney diseases, which have become the major causes of death in HIV population. This presentation provides a brief overview of the Comparative HIV and Ageing Research in Taizhou (CHART) cohort which aims to understand the epidemiology, mechanisms and intervention strategy of comorbid NCDs among PLWH in China.

隨著聯合抗逆轉錄病毒治療的廣泛應用，HIV感染者的壽命獲得顯著延長，HIV感染者群體總體呈現老齡化趨勢。與此同時，長期免疫缺陷、持續炎性激活、抗病毒藥物副作用以及精神心理緊張、睡眠障礙、不良生活方式等，導致HIV感染者呈現出較同年齡正常人群早老和加速衰老，心腦血管病、惡性腫瘤、慢性肝病和慢性腎病等慢性非傳染性疾病顯著增高，並成為該群體主要死因。近年來，本團隊建立了國內唯一的HIV與衰老研究前瞻性隊列並全面系統地描述了中國HIV感染者慢性病流行病學，同時採用多組學技術方法研究慢性合併癥生物標誌物、發病機制與干預策略等。

Professor Chen MAO 毛琛教授

Deputy Dean, School of Public Health, Southern Medical University
南方醫科大學公共衛生學院副院長

Biography 講者介紹

Chen Mao, Professor, Deputy Dean of School of Public Health, Southern Medical University, he has been awarded "Chang Jiang Scholars Program" as a young scholar and appointed Distinguished Professor of "Pearl River Scholar" in Guangdong Province. He is the principal of the National Research Institute of and Talent Training Demonstration Base of Healthcare Big Data approved by the National Health Commission, and the principal of the Engineering Research Center of the Ministry of Education. He won the 9th Shulan Medical Youth Award and the 24th Guangdong Youth Medal. He has committed to carrying out epidemiological research based on the healthcare big data, and has published more than 90 articles as first or corresponding author in *BMJ, Ann Intern Med, Chinese Medical Journal,* and other well-known journals. Three articles were selected as ESI highly cited papers and three articles were recommended by F1000. The H-index is 34. As principal investigator, he has 5 national research projects including the National Natural Science Foundation of China.

毛琛，二級教授，南方醫科大學公共衛生學院副院長、流行病學系主任；教育部青年長江學者、珠江學者特聘教授；國家衛健委國家健康醫療大數據研究院和人才培訓示範基地負責人，教育部工程研究中心負責人；獲樹蘭醫學青年獎、廣東省青年五四獎章。致力於開展基於健康醫療大數據的流行病學研究，以通訊/第一作者在*BMJ*、*Ann Intern Med*、《中華醫學雜誌》等發表論文90餘篇，3篇入選ESI高被引，3篇獲F1000推薦，H指數34；主持國自然面上項目等國家級課題5項。

Abstract 題目摘要

Epidemiological research based on the healthcare big data:
Opportunities and challenges
基於健康醫療大數據的流行病學研究：機遇和挑戰

Data has shown explosive growth with the development and application of emerging information technologies such as the Internet of Things and mobile Internet. In 2015, promoting the application and development of healthcare big data was included in the national development strategy, marking that healthcare big data has become a basic strategic resource. During the COVID-19 pandemic, healthcare big data has played a huge role in epidemic research and identification, identification of infected people, tracing of close contacts, and resumption of work and production. Large scale, multiple types, rapid updates, great value, and authenticity characterize healthcare big data. However, there are multiple challenges in computation, data analysis, study design, and bias. In response to the development strategy of healthcare big data applications, the team prepared to build the National Research Institute of and Talent Training Demonstration Base of Healthcare Big Data approved by the National Health Commission and has built a big data supercomputing platform. In addition, as Shenzhen is one of the regions with the highest level of medical and health informatization in China, it has realized the information connectivity of social health system, electronic medical record system, and cause of death monitoring system in the health management of the elderly, hypertension, diabetes, etc. Based on the above system, the team establish the Shenzhen Health Data Cohort. Relying on the established healthcare big data research platform, through multi-level and all-round data mining, the team has achieved a series of research results on the epidemiology of infectious diseases and non-communicable diseases. Among them, based on the big data of public health and travel monitoring, we clarified the secondary risk of close contacts and the transmission risk of asymptomatic infected persons in different settings, providing scientific support for optimizing and adjusting epidemic prevention and control policies. In addition, we elucidated the health effects of fish oil on the risk of cardiovascular disease and mortality in the real world based on a large population cohort, providing a scientific basis for the primary prevention of cardiovascular diseases.

隨著物聯網、移動互聯網等新興信息技術的發展應用，數據呈現爆發式增長。2015年，促進健康醫療大數據的應用和發展被納入國家發展戰略，標誌著健康醫療大數據成為基礎性戰略資源。新冠肺炎疫情期間，健康醫療大數據在疫情研判、感染者識別、密切接觸者追蹤、復工復產等方面發揮了巨大作用。健康醫療大數據具有規模大、類型多、更新快、價值大和真實性的特徵。然而，在計算、數據分析、研究設計、偏倚等方面存在多重挑戰。為響應健康醫療大數據應用發展戰略，團隊籌建國家健康醫療大數據研究院（國家衛健委批准建設；全國三家同級機構之一）和人才培訓示範基地並建成大數據超算平台。另外，鑑於深圳是全國醫療健康信息化水平最高的地區之一，在老年人、高血壓、糖尿病等健康管理方面實現了社康系統、電子病歷系統、死因監測系統等的信息聯通，團隊基於上述系統建立基於國家基本公共衛生服務項目的深圳隊列。依托建成的健康醫療大數據研究平台，通過多層次、全方位數據挖掘，團隊取得了一系列傳染病與慢性病流行病學研究成果。其中，基於公共衛生及行程監測大數據，闡明了不同場景中新冠密切接觸者續發風險及無症狀感染者傳播風險，為優化調整疫情防控政策提供科學支持；另外，基於超大規模人群隊列，闡明了真實世界中魚油對心血管疾病發病及死亡風險的健康效應，為心血管疾病的一級預防提供科學依據。

Professor Chris MOK 莫家斌教授

Assistant Professor, JC School of Public Health and Primary Care,
The Chinese University of Hong Kong
香港中文大學賽馬會公共衛生及基層醫療學院助理教授
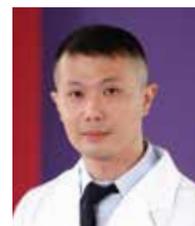
Biography 講者介紹

Dr Chris Ka Pun, Mok graduated from his bachelor's degree and PhD from the Department of Chemistry, HKUST in 2002 and Department of Microbiology, HKU in 2011 respectively. He was subsequently promoted as the research assistant professor in HKU-Pasteur Research Pole in 2013. Dr Mok is currently the assistant professor in The Jockey Club School of Public Health and Primary Care, The Chinese University of Hong Kong. as well as the honorary assistant professor of The University of Hong Kong and the visiting scientist of Nanyang Technological University. His group focuses on the virology and immunology of emerging infectious diseases including influenza and coronavirus. He is currently serving as the associate editors of *Virology Journal* and *Frontier of Immunology.*

莫家斌博士於2002年學士畢業於香港科技大學化學系，2011年獲取香港大學微生物學博士學位，並於2013年升任香港大學–巴斯德研究中心研究助理教授，現為香港中文大學賽馬會公共衛生及基層醫療學院助理教授，香港大學名譽助理教授及南洋理工大學客座科學家。莫博士長期從事於包括流感和冠狀病毒的病毒學和免疫學相關研究。迄今發表SCI論文超過80篇。目前擔任*Virology Journal*和*Frontier of Immunology*的副主編。

Abstract 題目摘要

Is COVID-19 still a threat to us?
我們還是活在新冠的威脅下嗎？

The new severe acute respiratory coronavirus 2 (SARS-CoV-2), which is the causative agent of a life-threatening disease COVID-19, overwhelms the whole world with its high transmissibility and wide range of severity. Moreover, it has been found that the recently identified Omicron variants earn new mutations and lead to significant immune evasion from the current vaccines. Although anti-viral drugs can minimize the chance of disease progression and majority of people in the world have received various types of COVID-19 vaccine, there is still concern that if the new Omicron variants may cause a new round of pandemic in the coming future. Here, I will discuss the recent findings from our group and others that are important for us to understand the situation in post COVID-19 era.

「2019冠狀病毒病」是由「嚴重急性呼吸綜合症冠狀病毒2」引起的疾病，其高傳播性和致病性對全世界產生深遠影響。此外，最近出現的 Omicron 變種被發現對當前的疫苗有着顯著免疫逃避。儘管抗病毒藥物及疫苗可以最大限度地減少感染引發重症的機會，但大眾仍然擔心新的 Omicron 變種可能會在未來引起新一輪的大流行。本報告將重點討論我們以及其他課題組最近的研究成果，這些發現對我們了解後新冠時代的情況至關重要。

Professor Haidong KAN 闞海東教授

Deputy Dean, School of Public Health, Fudan University
復旦大學公共衛生學院副院長

Biography 講者介紹

KAN Haidong is the Deputy Dean of School of Public Health, Fudan University and a Changjiang-Scholar professor of the Ministry of Education. He is a member of the National Environmental and Health Expert Advisory Committee, Associate Editor of Environmental Health Perspectives and International Journal of Epidemiology. He is the recipient of the NEJM Notable Article Award, Wu Jieping-Paul Janssen Medical Pharmacy Award, CMB Distinguished Professor Award and US Environmental Protection Agency Science and Technology Achievement Award.

闞海東，復旦大學公共衛生學院副院長、教育部長江學者特聘教授。任國家環境與健康專家諮詢委員會委員、Environmental Health Perspectives雜誌副主編、International Journal of Epidemiology雜誌副主編。曾獲《新英格蘭醫學雜誌》年度最佳論文獎、吳階平－保羅·楊森醫學藥學獎、CMB傑出教授獎、美國環保署科學技術成就獎等。

Abstract 題目摘要

Air Pollution, Climate Change and Public Health
under the Background of Two-Carbon Goals in China
雙碳背景下的空氣污染、氣候變化與公共衛生

Climate change may be the greatest health challenge facing mankind in the 21st century, and air pollution is also an important global public health problem. China has proposed the "Two-Carbon" goals of achieving carbon peaking by 2030 and carbon neutrality by 2060, which will not only have a profound impact on China's air pollution and climate conditions, but will also comprehensively affect the health of the Chinese population. This talk will focus on the research status and future trends of air pollution, climate change and public health under the background of the "Two-Carbon" goals, in order to provide ideas and suggestions for future research in the field.

氣候變化是21世紀人類面臨的最大健康挑戰，空氣污染也是全球重要的公共衛生問題。我國提出2030年前實現碳達峰、2060年前實現碳中和的「雙碳」目標，不僅會對我國空氣污染和氣候狀況產生深遠影響，也會全面影響人群健康。報告將圍繞「雙碳」目標背景下的空氣污染、氣候變化與公共衛生的研究現狀和未來趨勢展開論述，以期為後續更好地開展環境與健康研究提供思路和建議。

Professor Yu GAO 高宇教授

Professor, Department of Environmental Health,
School of Public Health, Shanghai Jiao Tong University
上海交通大學公共衛生學院環境與健康教授

Biography 講者介紹

Yu Gao Ph.D, professor and master's supervisor in the Department of Environmental Health, School of Public Health, Shanghai Jiao Tong University, and Adjunct Professor in the Chinese University of Hong Kong. Dr. Gao had received her undergraduate degree from Beijing University, School of Public Health, and Ph.D degree from Shanghai Second Medical University. Her areas of specialization include exposures to environmental pollutants in early life stages and child growth and development. She also involves in the causal inference research, molecular epidemiology and risk assessment to explore the causal relationship and risk prediction for the effects of environmental pollutants on health outcomes. She is the principal investigator on two national natural Science Foundation of China, and has published about 50 research articles in the influential journals such as *JAMA Environ Health Perspect.*, *Environ Int., Environ Sci Technol.*, and *Environ Res.*

高宇，上海交通大學公共衛生學院環境與健康系教授和碩士生導師，香港中文大學客座教授。本科畢業於北京大學公共衛生學院，博士畢業於上海第二醫科大學。她的研究主要關注生命早期環境污染物暴露與子代健康，此外還致力於採用因果推論，健康風險評估，以及分子流行病學等研究手段，應用於環境暴露與健康效應方面研究。她主持兩項國家自然科學基金和3項上海市自然科學基金，在*JAMA network*，*Environmental health perspective*，*Environmental International*等一區雜誌發表論文約50篇。

Abstract 題目摘要

Maternal environmental exposures and Child Health Outcomes: Laizhou Wan Birth Cohort (LWBC)
母親孕期環境污染物暴露與兒童健康：基於萊州灣出生佇列

The Laizhou Wan Birth Cohort (LWBC) was a prospective birth cohort study conducted between September 2010 and December 2013 to assess the effects of environmental exposures on the health of parents and their children living in the south coast of Laizhou Wan (Bay), Shandong Province, in East China. In total, 773 mother-infant pairs met the eligibility criteria and participated in the study, and their children were followed-up at birth, 1, 2, 5 and 7 years old. Multiple environmental pollutants such as polybrominated diphenyl ethers (PBDE), heavy metals, pesticides (including organophosphates and pyrethroids), phenols, and per- and polyfluoroalkyl substances (PFAS) were measured in pregnant women. The ubiquitous exposure to PFAS in pregnant women has been found in LWBC, especially with very high level for perfluorooctanoic acid (PFOA), and moreover, PFAS can transfer across the placenta during pregnancy, making them a potential threat to fetuses during the most sensitive early stages of life. In this report, we take prenatal exposure to PFAS and child health outcomes as an example to introduce our cohort and the main findings.

萊州灣出生隊列(LWBC)是於2010到2013年在山東省萊州灣地區開展的前瞻性研究，旨在評估生命早期環境暴露對母子健康的影響。我們從母親孕晚期開始招募，總共招募773對母嬰，對兒童在分娩、1歲、2歲、5歲和7歲時進行了隨訪。檢測了孕婦體內多種環境污染物的水平，如多溴二苯醚、重金屬、殺蟲劑、酚類以及全氟和多氟烷基物質(PFAS)。其中發現孕婦普遍暴露於PFAS，尤其是全氟辛酸(PFOA)含量很高，而且PFAS可通過胎盤轉移到胎兒體內，對胎兒構成威脅，並可持續影響兒童生長發育。在本報告中，我們主要圍繞PFAS等污染物為代表，介紹我們的隊列情況及主要發現。

Professor Hualiang LIN 林華亮教授

Director, Department of Epidemiology, Sun Yat-sen University
中山大學公共衛生學院流行病學系主任

Biography 講者介紹

Dr. Hualiang Lin is a professor and doctoral supervisor at the School of Public Health, Sun Yat-sen University, as well as the director of Department of Epidemiology and assistant dean of School of Public Health. In 2017, Prof. Lin was introduced as Outstanding Young and Middle-aged Talents through "Hundred Talents Program" of Sun Yat-sen University. In 2018, he was awarded Outstanding Young Medical Talents by Health Commission of Guangdong Province. His research focuses on the role of air pollution and its interaction with genetic susceptibility in the development and progression of chronic diseases, and proposes a new method to control the concentration threshold of air pollution. Prof. Lin has been authorized to obtain one national invention patent and edited one English monograph. In recent years, he has published more than 60 high-level papers in prestigious international journals such as *Lancet Public Health*, *Environmental Health Perspectives* and *PLOS Medicine*, with over 7000 citations. In 2021, Prof. Lin was selected as one of the top 100,000 scientists worldwide.

林華亮，中山大學公共衛生學院教授、博士生導師、流行病學系主任、院長助理。2017年通過中山大學「百人計劃」中青年傑出人才引進，2018年獲得廣東省衛健委傑出青年醫學人才稱號。主要從事大氣污染及其與基因易感性交互作用在慢性病發生發展中的作用研究，並提出了大氣污染控制濃度閾值的新方法。曾獲國家發明專利授權1項，主編英文專著1部。 近年來在*Lancet Public Health*、*Environmental Health Perspectives*、*PLOS Medicine*等國際權威期刊發表高水平論著60 餘篇，引用超過7000次。2021年入選「全球頂尖前10萬科學家排名榜」。

Abstract 題目摘要

Ambient air pollution associated with incidence and progression trajectory of cardiometabolic diseases: A multi-state analysis of a prospective cohort
空氣污染與心血管代謝性疾病及共病發生發展關聯的多狀態動態軌跡分析

Along with the rapid population ageing, multimorbidity has gradually become an important global public health concern. Previous studies have shown that cardiometabolic multimorbidity, including ischemic heart disease, stroke, and type 2 diabetes, is one of the most common multimorbidity profiles, which is closely associated with adverse health outcomes. Mounting evidence has shown that ambient air pollution is associated with the increased risk of development and progression of individual cardiometabolic diseases. However, the association between ambient air pollution and cardiometabolic multimorbidity is poorly understood. In addition, there are different transitions in the progression trajectories of cardiometabolic multimorbidity, and the impacts of air pollution on different disease transition stages remain unclear. Based on the UK Biobank, a large prospective cohort, this study used multi-state model to explore the role of air pollution in the temporal trajectories of cardiometabolic multimorbidity. The results indicated that long-term exposure to ambient air pollution was significantly associated with all transition stages of cardiometabolic multimorbidity. In addition, ambient air pollution had diverse impacts on disease-specific transitions even within the same transition phase. For example, the associations of ambient air pollutants with the transition from type 2 diabetes to cardiometabolic multimorbidity were stronger than those with the transitions from ischemic heart disease and stroke to cardiometabolic multimorbidity. Clean air might be helpful for the prevention and management of cardiometabolic diseases and cardiometabolic multimorbidity.

隨著人口老齡化進程的加速,共病逐漸成為全球重要的公共衛生問題。既往研究顯示心血管代謝性共病(包括缺血性心臟病、腦卒中以及2型糖尿病)是最常見聚集的共病模式之一,與不良結局事件發生風險密切相關。目前已有許多研究表明空氣污染暴露可增加單一心血管代謝性疾病發生發展的風險,然而,很少有研究評估空氣污染對心血管代謝性共病的關聯。此外,心血管代謝性共病的發生發展歷經多個階段,空氣污染對其不同發展階段的影響尚不清楚。基於英國生物銀行大型前瞻性佇列,本研究利用多狀態模型評估空氣污染物長期暴露對心血管代謝性共病發生發展全過程不同階段的影響,研究結果顯示空氣污染暴露與心血管代謝性共病發生發展的所有階段均存在顯著關聯。進一步研究發現,空氣污染物在同一階段對不同疾病的影響存在差異。例如,相較缺血性心臟病和腦卒中,空氣污染物暴露促進2型糖尿病進展為共病的風險更大。清潔空氣可能有助於心血管代謝性疾病及共病的防控和管理。

Professor Shelly TSE 謝立亞教授

Director, Centre for Occupational and Environmental Health Studies,
JC School of Public Health and Primary Care, The Chinese University of Hong Kong
香港中文大學賽馬會公共衛生及基層醫療學院職業及環境健康教研中心總監

Biography 講者介紹

Prof. Shelly Tse obtained her Bachelor of Medicine major in Prevention Medicine from Fudan University and then got PhD in Public Health at The Chinese University of Hong Kong. She received further training in the National Cancer Institute, National Institutes of Health of USA in 2012. Shelly's research interest includes circadian rhythm and health impact, occupational and environmental exposures and cancer epidemiology, and dust exposure and adverse health effects. In the past 10 years, Shelly has continuously awarded research grants from NCI/NIH of USA to support the breast cancer molecular epidemiolgy study, PI of several porjects funded by the NSFC, GRF/RGC, HMRF projects, etc. Shelly is the key international collaborator of WHO/IARC on lung cancer SYNERGY project. In addtion, Shelly received the Second Class Award of State Scientific and Technological Progress Award (SSTPA) in 2014 on industrial dusts, mechanisms and prevention (#4). Shelly serves as the National Secretary of ICOH of the P. R. of China (2022-2024), Chairman of the Quality Assurance Sub-committee (2020-2024), Visiting Professor of Nanjing Medical University Shanghai Jiaotong University, etc. Shelly received research grants more than HK$42M as Principal Investigator and published research papers more than 200.

謝立亞教授畢業於復旦大學預防醫學專業並取得醫學學士學位，後獲香港中文大學頒授博士學位，並於美國國立衛生研究院國家癌症研究所醫學深造。謝教授現兼任國際職業衛生協會(ICOH)的中國國家秘書(2022–24)、香港職業安全健康局(OSHC)質素保證小組委員會主席(2020–24)、南京醫科大學及上海交通大學客席教授等重要服務職務。謝教授的主要研究興趣包括晝夜節律與職安健、職業及環境癌症流行病學，以及粉塵暴露與健康的研究等。近10來謝教授持續獲得美國NCI/NIH資助合作乳腺癌項目。同時，謝教授亦主持過國家自然科學基金委(NSFC)、香港政府研究資助局(GRF/RGC)、醫療衛生研究基金(HMRF)，以及香港衛生署和醫管局等資助項目，謝教授亦是WHO/IARC肺癌SYNERGY研究項目的重要國際合作者。謝教授曾于2014/15年度榮獲國家科技進步獎二等獎(矽肺機制及防治,第四位)，主持的科研經費資助超過4200萬港幣, 已發表英文學術論文近200篇。

Abstract 題目摘要

Spatiotemporal variation of working environment safety towards
SARS-CoV-2 in Hong Kong, Nanjing and Wuhan
比較香港、南京和武漢三城市工作環境中對
SARS–CoV–2職安健時空變化的相關研究

This multi-city collaborative study aims to characterize spatiotemporal variation of working environment safety towards SARS-CoV-2 for non-healthcare workers in Hong Kong, Nanjing and Wuhan. During the first year survey from 07/2020 to 04/2021, 6684 non-healthcare workers were recruited from Hong Kong, Nanjing and Wuhan of China and responded a standard questionnaire of prevention measures towards infectious control. Workplace safety index towards SARS-Cov-2(WSI-SC2) was developed and validated using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA). The WSI-SC2 was validated in the second year survey among 12956 and the spatiotemporal variation of WSI-SC2 was examined from 3 cities in two different years. Fourteen variables were identified in the WSI-SC2 index, with three sub-indices named "Workplace infection control measures and prevention", "Company occupational safety and health management and commitment" and "Worker's personal preventive behavior and awareness towards infectious control". WSI-SC2 obtained a good internal consistency reliability (Cronbach's alpha coefficients ranged: 0.76-0.91), good composite reliability (composite reliability ranged: 0.70-0.95) and satisfactory fit of the model (GFI=0.95; SRMR=0.05; RMSEA=0.07). The novel index was stable in the second year independent survey of three cities. This multi-city large study developed a novel and validated tool that could horizontally measure the workplace safety towards SARS-Cov-2 in non-healthcare workers.

本項多城市合作旨在研究香港、南京和武漢的非醫護工作者對SARS-CoV-2的工作環境安全的時空變化。在2020年7月至2021年4月的第一年調查中，我們從香港、南京和武漢招募了6684名非醫護工作者並收集有關COVID-19預防措施的問卷， 使用探索性因數分析（EFA）和驗證性因數分析（CFA）開發並驗證了針對SARS-CoV-2（WSI-SC2）的工作場所安全指數。在第二年的對12956名非醫護工作者的調查中驗證了WSI-SC2，並檢測了兩個不同年份來自3個城市的WSI-SC2的時空變化。在WSI-SC2指數中確定了14個變數，其中3個範疇指標分別為「工作場所感染控制措施和預防」、「公司職業安全與健康管理和承諾」和「工人的個人預防行為和感染控制意識」。WSI-SC2具有良好的內部一致性信度（Cronbach's alpha係數範圍： 0.76-0.91）、良好的組合信度值（範圍：0.70-0.95）和令人滿意的模型擬合（GFI=0.95；SRMR=0.05；RMSEA=0.07）。該新指數在第二年對三個城市進行的獨立調查中保持穩定。這項多城市的大型研究創建了一種新的、經過驗證的工具，可以水準測量非醫護工作者對SARS-Cov-2的工作場所安全。

Professor Fan WU 吳凡教授

Deputy Dean, Shanghai Medical College, Fudan University
復旦大學上海醫學院副院長

Biography 講者介紹

Dr. Fan Wu, chief physician and doctoral supervisor, currently serves as the Deputy Dean of Shanghai Medical College of Fudan University; Director of Shanghai Institute of Infectious Diseases and Biosecurity; Director of WHO Collaborating Center for Healthy City; Vice Chairwoman of the National Medical Professional Degree Postgraduate Education Steering Committee; President of Shanghai Preventive Medicine Association; and Chairwoman of the Health Statistic Committee of Chinese Health Information Association.

She has served as the Founding Director of National Center for Chronic and Noncommunicable Disease Control and Prevention, Chinese Center for Disease Control and Prevention (the China CDC) while simultaneously serving as the Director of Shanghai CDC, President of the "Shanghai Preventive Medicine Association and the Deputy Director of the Shanghai Municipal Health Commission.

Dr. Wu was a visiting professor at the Vanderbilt School of Medicine at Vanderbilt University in the USA, as well as the School of Public Health at the Chinese University of Hong Kong. Having published over 60 SCI papers in top international journals such as the New England Journal, she has won acclaim and awards throughout her career. The multiple awards she has received include the first prize of "Shanghai Science and Technology Progress", "Shanghai Excellent Teaching Achievement Award", "Shanghai Preventive Medicine Science and Technology Award", "Shanghai Decision Consultation Research Achievement Award", "Shanghai Women's Innovation Award", "Young Outstanding Contributing Scientist of the MOH", "The Most Beautiful Science & Tech Personnel" and "Exemplary Individual in Covid-19 Prevention and Control".

During the onset of the Covid-19 Pandemic, Dr. Wu was a member of the China-WHO Joint Investigation group on COVID-19, while also serving as scientific advisor and councilor of Shanghai municipal leading group for control and prevention of COVID-19.

吳凡，醫學博士，主任醫師，博士生導師，享受國務院特殊津貼專家。現任復旦大學上海醫學院副院長，兼任上海市重大傳染病和生物安全研究院院長，世界衛生組織健康城市合作中心主任，全國醫學專業學位研究生教育指導委員會副主任委員，上海市預防醫學會會長，中國衛生信息與健康大數據學會健康統計專業委員會主任委員。

曾歷任中國疾控中心慢病中心首任主任，上海市疾控中心主任兼任上海市預防醫學研究院院長，上海市衛生健康委副主任等職。

受聘美國范德堡大學醫學院、香港中文大學公共衛生學院客座教授。在新英格蘭雜誌等國際頂尖期刊發表SCI論文60餘篇。作為第一完成人獲國家教學成果獎一等獎、上海市優秀教學成果獎特等獎、上海市決策諮詢研究成果一等獎、上海市科技進步一等獎1項等多項獎項。榮獲國家突出貢獻中青年專家榮譽稱號、上海市仁心醫師獎、上海市最美科技工作者等榮譽。

新冠疫情防控期間擔任上海市防控領導小組專家組成員，中國-世界衛生組織新型冠狀病毒肺炎防控聯合專家考察組成員。

Abstract 題目摘要

Challenges of social governance on public health in megacities: Shanghai Practice
超大城市公共衞生治理的挑戰–上海實踐

During the COVID-19 pandemic, the world's Megacities have faced unprecedented challenges in balancing socioeconomic development with pandemic prevention and control. Megacities such as Shanghai and Hongkong, which are characterized by large population, high density and frequent mobility, have experienced exponential spread of COVID-19, especially during the Omicron wave. Shanghai adopted a pandemic prevention and control strategy of "early detection, rapid tracing, precise targeting, complete control and humane care". We have summarized five mechanisms, including evidence-based decision-making mechanisms, cross-sectoral collaboration mechanisms, flat hierarchical linkage mechanisms, society-wide prevention and control mechanisms, and intelligent precise governance mechanisms, through which we have figured out five dimensions of social governance experience—"Speed, Strength, Precision, Warmth, Happiness". The COVID-19 is far from over, and in the future, further exploration and improvement are needed in areas such as monitoring, early warning and prediction of emerging and re-emerging infections disease pathogens, well-coordination of a tiered diagnosis and treatment system with emergency treatment, improving the function of community health management and maintenance, and effective use of information technology.

全球超大城市在新冠疫情期間面臨著前所未有的挑戰，即如何平衡好社會經濟發展與疫情防控。上海、香港等超大城市具有人口多、密度高、流動頻繁的特點，均經歷了新冠疫情的指數級傳播，尤其是在奧密克戎階段。上海採取了「早、快、準、全、暖」（及早發現、快速追蹤、精準靶向、全數控制、人文關懷）的疫情防控策略，從中總結了循證決策機制、跨部門協作機制、扁平化上下聯動機制、群防群控機制以及智能精準治理機制，摸索出「速度、力量、精度、溫度、幸福度」五個維度的社會治理經驗。新冠遠未結束，未來在新發、再發傳染病病原監測、預警預測，分級診療體系協同應急救治，完善社區健康維護功能，高效利用信息技術等方面需進一步探索完善。

Professor Xiaoming SHI 施小明教授

Director, National Institute of Environmental Health
Chinese Center for Disease Control and Prevention
中國疾病預防控制中心環境與健康相關產品安全所所長

Biography 講者介紹

Xiaoming Shi is the Professor and Director of the National Institute of Environmental Health (NIEH) of the Chinese Center for Disease Control and Prevention (China CDC), the recipient of the National Science Fund for Distinguished Young Scholars, and a member of the 13th and 14th National Committees of the Chinese People's Political Consultative Conference (CPPCC). He has long been engaged in research in geriatric epidemiology, environmental epidemiology, and chronic disease epidemiology. He has chaired over 10 national scientific research projects, including the Key Projects of the National Natural Science Foundation and the National Key Research and Development Program of China. Prof. Shi has published over 150 papers in peer-reviewed journals such as *BMJ, Nature Aging, Lancet Planet Health, Lancet Public Health, JACC, and Environ Health Persp*. He has received numerous distinctions and awards, including the Second Prize of the Chinese Medical Science and Technology Award (1/10), 20th Wu-Janssen Medical & Pharmaceutical Award, the National Talents Project, the National Outstanding Young and Middle-aged Expert with great achievements, and special government allowances from the State Council. He concurrently serves as a member of the Expert Committee on New Pollutant Control, a member of the United Nations Investment and Commercial Life Science and Human Health Committee (CCLH) of the China Association for Science and Technology, and the Chairman of the National Environmental Health Standards Committee.

施小明，醫學博士，研究員，博士生導師。中國疾病預防控制中心環境所所長，國家傑出青年科學基金獲得者，第十三屆全國政協委員。主要研究方向為老年流行病學、環境流行病學、慢性病流行病學。主持國家自然科學基金重點項目、國家重點研發計劃等10餘項科研項目。在*BMJ*、*Nature Aging*、*Lancet Planet Health*、*Lancet Public Health*、*JACC*、*EHP*等國際權威期刊發表SCI文章150餘篇。獲中華醫學科技獎二等獎（1/10）。入選國家百千萬人才工程，授予有突出貢獻中青年專家。 獲第二十屆吳楊獎，獲國務院政府特殊津貼。 受聘於新污染物治理專家委員會委員、中國科協聯合國資商生命科學與人類健康專委會（CCLH）委員、國家環境健康標準專業委員會主任委員等。

Abstract 題目摘要

Reflections on environmental health and business architecture in China: Inspirations from the COVID-19 pandemic
我國環境健康工作與業務架構思考：基於新冠疫情的啟示

In recent years, to tackle outstanding environmental problems such as air, water, and soil pollution, the Chinese government has adopted a series of major measures. Especially since the 18th CPC National Congress, a comprehensive deployment has been carried out in terms of national strategic decision-making, laws, regulations, and action plans, and remarkable results have been achieved. China's air and water quality have been improving continuously. Environmental health work has been promoted all around, and a collaborative work pattern has been further formed between national and local departments. Environmental health monitoring, standards, and risk assessment systems have been established and gradually improved. Major progress has been made in the key areas of environmental health investigations, scientific research and talent development, discipline development, and foreign exchanges.

In the face of COVID-19's major challenges, the environmental health departments responded scientifically, gave full play to the professional guidance role of health protection and scientific disinfection, and strengthened the team's ability and emergency response mechanism. Meanwhile, flaws and weaknesses in environmental health work have emerged, such as insufficient attention to traditional environmental health problems, insufficient depth of scientific research, a lack of scientific and technological support, and insufficient application and transformational ability of achievements. The application, health risk prediction, and early warning technology of environmental risk factors have not yet been effectively implemented, and the disinfection and infection control institutions and teams are not perfect.

At present, the development of environmental health work has both challenges and opportunities. Overall, the situation of environmental pollution in China is still severe. The goal of carbon peak and carbon neutrality introduces new requirements, the task of new pollutant control remains difficult, and scientific and technological supports for the Healthy China and Beautiful China strategies is still in high demand. Therefore, it is suggested that we seize the opportunity of the reform of the national disease prevention and control system to strengthen the coordination mechanism at the national level dealing with environmental health issues in the future. We need to intensify the construction of environmental health monitoring and risk assessment technology system, environmental health and disinfection standard system, environmental health and disinfection work system. The early warning of environmental pathogen monitoring, environmental health risk factors, climate change, and health should also be reinforced. We will promote the implementation of National Human Biological Monitoring Projects (NHBP China) and the construction of key laboratories and platforms. We will further strengthen the construction of environmental health talents, the development of key disciplines, and cooperation and exchange at home and abroad.

近年來，針對突出的空氣污染、水污染和土壤污染等環境問題，我國政府採取了一系列重大舉措。特別是十八大以來，從國家戰略決策、法律、法規、行動計劃方面進行了總體部署，並取得了顯著成效。我國空氣質量持續向好，水環境質量不斷改善；環境健康工作全面推進，國家和地方工作部門協同共進的工作格局進一步形成；環境健康監測、標準和風險評估體系建成並逐步完善；環境健康專項調查、科研攻關及人才建設、學科發展、對外交流等重點工作取得重大進展。

面對新冠疫情的重大考驗，環境健康工作部門科學應對，充分發揮了健康防護和科學消毒的專業指導作用，隊伍能力和應急機制得到進一步加強。同時暴露出環境健康工作的短板弱項，如對傳統環境健康問題的關注度不夠、科研深度、科技支撐和成果應用轉化能力不足、環境危險因素健康風險預測預警技術應用尚未真正落地、消毒與感染控制機構和隊伍不健全等。

當前環境健康工作發展挑戰與機遇並存。總體上看，我國環境污染形勢仍然嚴峻，碳達峰碳中和目標提出新的工作要求，新污染物治理任務依然很重，健康中國和美麗中國戰略的科技支撐需求很大。據此，建議未來抓住國家疾病預防控制體系改革的契機，強化國家層面應對環境健康問題的協調機制；加強環境健康監測和風險評估技術體系、環境健康和消毒標準體系、環境衛生和消毒工作體系建設；強化環境病原體監測預警、環境危險因素健康風險預警、氣候變化與健康等職能；推進國家人體生物監測等重點項目實施、重點實驗室和平台建設；進一步加強環境健康人才隊伍建設、重點學科發展和國內外合作交流。

Professor Eng-kiong YEOH 楊永強教授

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Biography 講者介紹

Professor Yeoh is Professor of Public Health, Director of the Centre for Health Systems and Policy Research at the JC School of Public Health and Primary Care (School), and Co-Director of the CUHK Institute of Health Equity. His research is in health systems, services and policy with an interest in applying systems thinking in studying how the complex components of health systems interact and interrelate to improve health. He is currently the Principal Investigator of 2 HMRF commissioned studies (i) investigating Hong Kong's early detection, assessment and response system to COVID-19, and (ii) studying epidemic intelligence required for a risk assessment system critical for the control of COVID-19. He has published a report funded by the WHO R&D Blueprint Novel Coronavirus on the key lessons for policy from a comparative study of government responses in six middle/ high income jurisdictions. In health systems research, he completed a commissioned study by the Macao Health Bureau to assess their population healthcare needs so as to inform the planning of services and resources necessary to meet the changing health needs of Macao population. He is also evaluating the new primary care initiative – an innovative district health system in Hong Kong. He has completed a study to evaluate the impact of a government elderly healthcare voucher schemes on healthcare utilization, and a study to review, develop and pilot integrated health service models for an ageing population. He has been commissioned by the Social Welfare Department to evaluate two pilot projects on (i) Residential Care Service Voucher for the Elderly and (ii) Support for Elderly Persons Discharged from Public Hospitals after Treatment with an aim to enhance the residential care and transitional care services for the elderly. In addition, he has been funded by the Hong Kong Jockey Club Charities Trust to conduct 2 studies (i) to better understand factors for intergenerational cohesion and population health, and (ii) delineating the health support needed by ethnic minorities. He has led 3 health policy research projects for our Hong Kong Foundation, namely An Investment for the Celebration of Aging, Fit for Purpose: A Health System for the 21st Century, and Strategic Purchasing: Enabling Health for All.

He also supports the work in health system of the Western Pacific Region of World Health Organization undertaking commissioned research & has completed consultancy reports on governance and hospital planning. He has served as Temporary Advisor to provide technical support for strengthening health systems.

Professor Yeoh was Secretary for Health, Welfare and Food of the Government of the Hong Kong Special Administrative Region between 1999 and 2004. From 1990-1999, Professor Yeoh was head & the first Chief Executive of the Hong Kong Hospital Authority.

Abstract 題目摘要

Preparedness, Readiness, Response to Public Health Threats
突發公共衞生事件：準備、防範和應對

The aim of this study is to inform policy decision makers how Hong Kong's system of early detection, assessment and response (S-EDAR) to COVID-19 can be enhanced for control during the course of the pandemic at different transmission scenarios, and to inform future preparedness and response plans. This is a multi-stage mixed methods study to synthesise the evidence and different sources of knowledge viz: 1) literature and document review, 2) key informant interviews to explore the views of relevant stakeholders, 3) expert workshops to discuss the components and implementation strategies for S-EDAR and further review by international experts, and finally 4) a Group Delphi, as the final part of the study, to rate the component statements of S-EDAR for relevance and feasibility to achieve a consensus framework.

The consensus framework for S-EDAR with 12 domains and 69 statements has been formulated and structured into three sections: A) Preparedness Plan, B) Readiness, and C) Response System. "Preparedness plan" highlights the elements and components needed for government, health system and civil society together for public health emergencies, including organizations, structure, legislation, community mobilization, coordination mechanisms, assessments of capacity, facilities, manpower, technologies, medical devices and products, resources and logistics. "Readiness" is a stage to promptly activate and adapt the preparedness plan, including mobilization of surge capacity, and scale-up according to the situational level of the public health emergency. "Response system" emphasizes response actions to be taken at government, healthcare and community levels.

This consensus framework S-EDAR will be a robust evolutionary system to enable preparedness, readiness and timely response in the control of COVID-19 and emerging infectious diseases. It will be updated and expanded in the extended study by Delphi method to highlight readiness, and health system and community resilience based on the lessons learnt in the trajectory of different waves in the protracted pandemic.

*This is a commissioned study funded by the Health and Medical Research Fund.

這項研究旨在告知政策制定者如何加強有關香港就新型冠狀病毒（COVID-19）的及早發現、評估和應變系統（S-EDAR），以便控制大流行不同的傳播情況，並為未來的準備和應變計劃提供見解。這是一項多段式混合研究，綜合證據和不同的知識來源，即（1）文獻綜述，（2）關鍵知情人訪談，以探索相關持份者的觀點，（3）專家研討會，以討論S-EDAR的組成部分和實施策略，並由國際專家進一步審查，及（4）Delphi專家小組作為研究的最後部分，評估 S–EDAR 的組件陳述的相關性和可行性，以達成共識框架。

S–EDAR的共識框架包含12個領域和69個陳述，並分為三個部分：（A）準備計劃，（B）整備，和（C）應變系統。「準備計劃」強調了政府、醫療系統和公民社會共同應對公共衞生突發事件所需的要素和組成部分，包括組織、結構、立法、社區動員、協調機制、能力評估、設施、人力、技術、醫療設備和產品、資源和後勤。「整備」是指迅速啟動和調整準備計劃的階段，包括調動增援能力，並根據突發公共衞生事件的情況擴大規模。「應變系統 」強調在政府、醫療衞生和社區層面採取的應對行動。

S-EDAR共識框架將是一個堅固並會逐步發展的系統，可以為控制新型冠狀病毒病和新出現的傳染病做好準備和及時反應。S-EDAR將在德爾菲法（Delphi method）的延長研究中更新和擴展，強調整備，以及衞生系統和社區受傳染病爆發不同階段教訓後的復原能力。

* 這是一項由醫療衞生研究基金資助的委託研究。

Professor Min XIA 夏敏教授

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中山大學公共衛生學院院長

Biography 講者介紹

Prof. Min Xia, a PhD supervisor in human Nutrition, is currently the Dean of School of Public Health, Sun Yat-sen University, and the Director of Guangdong Provincial Key Laboratory of Food, Nutrition and Health. Prof. Xia's research is dedicated to early risk prediction and prevention of cardiovascular diseases. Though the integration of prospective cohorts, multi-omics studies and genetic models, Prof Xia's group has identified a series of novel biomarkers for cardiovascular disease, delineated the molecular basis that link nutrition metabolism with the progression of atherosclerosis, and developed targeted lifestyle interventions to delay the onset and progression of cardiometabolic diseases. Prof. Xia has leaded several key projects from National Key R&D Program, National Natural Science Foundation of China, and Guangdong Province. He has co-authored more than 50 papers in leading journals, such as *Circulation, Circulation Research, Diabetes Care*, and *Hepatology*, in the field of cardiometabolic disorder. Due to his outstanding findings, Prof. Xia has received several awards, such as the "The first prize of the Guangdong Natural Science Award", and "The Higher Education Outstanding Scientific Research Output Awards (Science and Technology)".

夏敏教授/博士生導師，現任中山大學公共衛生學院院長，廣東省營養膳食與健康重點實驗室主任。長期從事心血管疾病早期風險預測及營養防治研究。作為項目負責人主持科技部國家重點研發計劃、國家自然科學基金和省部級重點項目。在*Circulation*、*Circulation Research*、*Diabetes Care*、*Hepatology*等心血管和代謝領域權威期刊發表多篇學術論文。研究成果榮獲廣東省自然科學一等獎、教育部高等學校科學研究優秀成果獎。

Abstract 題目摘要

The association and research progress of nutrition diet-gut microbiota-cardiovascular disease
營養膳食—腸道菌群—心血管疾病之間的關聯與研究進展

Over the past decades, the prevalence and incidence of cardiovascular diseases have been on constant rise across China, resulting in a heavy burden for the residents, communities, and also healthcare providers. Therefore, there is an urgent need for the establishment of an effective prevention and treatment strategy for cardiovascular diseases. Recently, mounting evidence suggest that dysbiosis of gut microbiota plays a crucial role in the progression of cardiovascular disease. This study will focus on the complex link between dietary nutrition, microbial metabolism and the progression of cardiovascular diseases.

近年來，我國居民心血管疾病持續高發，給國民健康造成了極大威脅。如何有效防控心血管病已成為全國迫切需要解決的重大公共衛生問題。最新研究進展指出，腸道微生態組成及其功能改變在心血管疾病發生發展中發揮重要作用。

Professor An PAN 潘安教授

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Biography 講者介紹

Dr. An Pan is a professor at the School of Public Health, Tongji Medical College, Huazhong University of Science and Technology. His research mainly focuses on the determinants and consequences of obesity and chronic metabolic diseases, like type 2 diabetes and cardiovascular disease. He has published over 360 papers with citations over 22000 and an H-index of 79, including papers on *NEJM, JAMA, BMJ*, and *Lancet Diabetes & Endocrinol*. Dr. Pan has been supported by the NSFC regular and key projects, National key Research & Development project, and are establishing cohort studies for type 2 diabetes and gestational diabetes mellitus to investigate their causes and consequences. Dr. Pan currently serves as an associate editor for the *Am J Clin Nutr*, and on the editorial board for several international and Chinese journals. Dr. Pan is also the vice chair for the Nutritional Epidemiology Council of the Chinese Nutrition Society, and member of the Epidemiology Council of the Chinese Preventive Medicine Association. He was a commissioner for the Lancet Commission on Obesity and the lead author for the *Lancet Obesity in China* Series. He is currently a commissioner for the Lancet Commission on Diagnostic Criteria of Clinical Obesity and EAT-Lancet 2.0 Commission.

潘安，華中科技大學同濟醫學院公共衛生學院教授，博導，院長。擔任營養學領域權威期刊*Am J Clin Nutr*雜誌副主編，*Chin Med J*、*China CDC Weekly*、中華流行病學雜誌、中華預防醫學雜誌、中華疾病控制雜誌等多個國內外期刊編委，中國營養學會營養流行病分會和基礎營養分會副主委，中華預防醫學會流行病學分會委員，*Lancet* Commission on Obesity、*Lancet* Commission on Diagnostic Criteria of Clinical Obesity、EAT-Lancet 2.0 等多個柳葉刀委員會委員，*Lancet Diabetes & Endocrinol* 雜誌國際顧問委員會成員。

主要從事慢性病流行病學和營養流行病學研究工作，先後主持國家基金委重點和面上項目、科技部重點研發計劃課題、湖北省傑青等科研項目，發表SCI論文360多篇，其中第一作者或者通訊作者文章（含共同）160餘篇，包括*N Engl J Med*、*JAMA*（4篇）、*BMJ*（2篇）等。論文總被引用次數>22000次，H-index為79。連續5年入選科睿唯安的全球高被引科學家。獲霍英東教育基金會高等學校青年科學獎、樹蘭醫學青年獎等榮譽。

Abstract 題目摘要

Lifestyle and cardiometabolic diseases: new results of an old topic
生活方式與代謝性心血管疾病防控：老話題、新進展

It has been widely accepted that healthy lifestyles are related to better health outcomes. In the past 15 years, our group has also contributed to the field by showing that individual lifestyle factor (e.g. red meat and sugar-sweetened beverage intakes, smoking) was associated with diabetes and cardiovascular disease in various cohorts. However, there are some challenges and advances in the field. First, many previous studies using only baseline data while lifestyle factors could change over time; second, health behaviors cannot be fully separated but are interrelated, and thus integrated effect should be considered; third, the underlying mechanisms are still unknown. In this presentation, I will use some examples to show that: 1) repeated measures of body weight are important to understand its dynamic changes with mortality risk *(BMJ 2019; Int J Obes 2021; JAMA Netw Open 2022)*; 2) healthy lifestyle score was inversely associated with diabetes, cardiovascular disease and mortality in different cohorts *(Diabetologia 2020; J Epidemiol Community Health 2020; Engineering 2022; Mayo Clin Proc 2023)*, as well as life expectancy *(Circulation 2018; J Gerontol 2020)*; 3) among people with diabetes, we further reported that healthy lifestyle score was inversely related to macrovascular and microvascular outcomes *(PLoS Med 2023; Atherosclerosis 2023)*, and some protein biomarkers or metabolites could partly explain the association but the exact mechanisms are still needed. Finally, I will also discuss about healthy inequity issue and whether healthy lifestyles could help alleviate the issue *(BMJ 2021; Age Ageing 2022)*.

健康生活方式可以促進健康，這是大家都基本接受的概念。我們課題組也長期從事營養膳食和環境暴露與代謝性心血管疾病的關聯。但是該領域仍存在一些客觀問題極需各院落實：

1. 既往很多研究僅關注了單次生活方式，以肥胖為例，成年後體重不是一成不變的，我們利用中國 、美國、新加坡等佇列研究共同探討成年後不同生命時期的體重變化與死亡的關聯。
2. 我們深入研究了整體生活方式評分與代謝性心血管疾病的關聯，包括在一般人群、糖尿病前期人群、高血壓人群等。
3. 在糖尿病患者中，健康生活方式可以顯著降低發生心血管病和微血管併發症的風險，且一些蛋白生物標誌物和代謝物發揮部分仲介作用。
4. 最後，我們將用實例來討論健康不公平的問題，中美英三國的佇列數據也證實了健康不公平現象的存在，同時，生活方式在健康不公平中的作用非常有限。

Professor Wei LI 李衛教授

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Biography 講者介紹

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External advisor of CDE & CMDE of NMPA, involving many drug & medical device clinical trial
panel meeting and NMPA guideline writing;
External advisor of National Science & Technology Commission;
Member of China Clinical Trial Statistics Working Group (CCTS);
Conducting more than 100 multicenter clinical trials, as the head of data management and
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Published dozens of SCI English articles as first and correspondent author, and published 3
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曾獲國家科技進步一等獎、三等獎，及國家發明專利
在國際頂尖醫學雜誌發表多篇通訊作者文章

Abstract 題目摘要

Introduction of Prospective Urban and Rural Epidemiological Study (PURE)
前瞻性城鄉流行病學研究(PURE)介紹

The prospective urban and rural epidemiological study (PURE) is a cohort study that tracks the change of lifestyle, risk factors and chronic diseases. About 50,000 urban and rural participants aged 35-70 years were recruited by cluster sampling in 12 provinces of China during 2005-2009. And information on individuals, families, and communities was collected comprehensively through questionnaires and physical examinations. The outcomes of participants, such as new CVD, cancer and death, has been collected by ongoing long term follow-up. Till now, many papers have been published in Lancet、New England Journal of Medicine, European Heart Journal and so on.

前瞻性城鄉流行病學研究（PURE），是一項追踪生活方式、危險因素和慢病變化的隊列研究。該研究於2005–2009年在中國12個省市自治區以城鄉1：1對照、整群抽樣方式入選了50000例35–70歲的人群，通過問捲和體檢詳細收集了個體、家庭和社區的信息。通過長期隨訪，採集了新發CVD、癌症和死亡等結局信息。目前，課題組針對睡眠、膳食、體力活動、空氣污染等與結局的關係已發表高水平文章數十篇。

Professor Gengsheng HE 何更生教授

Deputy Dean, School of Public Health, Fudan University
復旦大學公共衛生學院副院長

Biography 講者介紹

Prof. He Gengsheng has long been engaged in dietary, nutrition and health research. Currently her research work mainly focuses on nutrition-related chronic diseases such as obesity, metabolic syndrome and type 2 diabetes. She has participated in several global health projects such as Sino-Swiss international cooperation project of the National Natural Science Foundation, CMB and China-UK Global Health Support Program. She has published over 100 peer reviewed manuscripts including Journal of *Hazardous Materials*, and *Science of the total environment et* al.

何更生教授，主要從事膳食、營養與健康的研究。現任復旦大學公共衛生學院副院長、公共衛生安全教育部重點實驗室副主任。目前主要開營養膳食與代謝性疾病如肥胖，糖尿病等基礎和人群研究。主持國家自然科學基金國際合作和面上項目，參與國家重點食品安全研發計劃項目等。國內外期刊發表論文100餘篇；主編和參編教材及參考書籍十餘本。

Abstract 題目摘要

New strategies for prevention of life-style related diseases through alterations of diet and microbiota
基於「腸道菌群–代謝表型」新策略
研究膳食對生活方式相關疾病的預防作用機制

Cardiovascular disease is an important public health problem that causes premature death of adults worldwide. Dietary factors are one of the main changeable lifestyles. The quality of carbohydrate in the diet is the key to the prevention and treatment of cardiovascular diseases, but its mechanism of action as a regulator of intestinal microbiota is still unclear. A parallel dietary intervention was conducted. Among the people with obesity/normal body weight and low inflammation, it is clear that long-term intake of whole-grain rye can improve the metabolism of glucose and lipid and inflammatory state of the body, and change the abundance and species distribution of fecal intestinal flora; The pathway of whole-grain rye intervention regulating the metabolism of glucose and lipid and the level of inflammation through intestinal flora was revealed. The sensitive phenotype and marker metabolite group of whole grain - intestinal flora - glucose and lipid metabolism were found and verified in the high-risk population of metabolic chronic disease. Based on the new perspective of "metabolic phenotype", the results evaluated the effect of new diet and lifestyle on the metabolism of glucose and cholesterol in the body and the related mechanisms by drawing a network map of diet-enteromicrobiota-metabolic phenotype, providing theoretical and practical basis for precise prevention and personalized intervention of chronic metabolic diseases.

心血管疾病是引起全球成年人過早死亡的重要公共衛生問題。膳食因素是主要的可改變的生活方式之一。膳食結構中碳水化合物質量是心血管疾病防治的關鍵，但其作為腸道微生物群的調節劑，作用機制尚不清楚。基於我們已有中瑞合作項目在中國人群中開展了黑麥膳食干預研究。在肥胖/體重正常低度炎症人群中，明確了長期攝入全穀物黑麥可改善機體醣脂代謝及炎症狀態，並改變糞便腸道菌群的豐度與種類分佈；揭示了全穀物黑麥干預通過腸道菌群調節機體醣脂代謝及炎症水平的作用通路；發現了全穀物—腸道菌群—醣脂代謝的敏感表型及標誌性代謝物群組，並在代謝性慢病高危人群中驗證。基於「代謝表型」新視角，通過繪製膳食—腸道菌群—代謝表型的網絡圖譜，全面評估了新型膳食與生活方式對機體糖、膽固醇代謝的作用及相關機制，為慢性代謝性疾病的精準預防及個性化干預提供理論及實踐依據。

Professor Martin WONG 黃至生教授

Professor, JC School of Public Health and Primary Care
The Chinese University of Hong Kong
香港中文大學賽馬會公共衛生及基層醫療學院教授

Biography 講者介紹

BMedSc (Hons), MSc (Hons), MBChB, MD (CUHK), MPH, MBA, FRACGP, FRSPH, FHKCFP, FHKAM (Fam Med), DCH (Ire), FESC, FACC, FAcadTM, FFPH, FHKAN (Hons), FRCP (Glasgow), FRCP (Edinburgh)

Professor, JC School of Public Health and Primary Care, Faculty of Medicine;
Director, Centre for Health Education and Health Promotion;
Professor (by courtesy), Department of Sports Science and Physical Education, The Chinese University of Hong Kong

Professor Martin C. S. Wong is a specialist in Family Medicine and a researcher in the field of cancer screening and prevention of chronic diseases. He has been the Co-Chairman of the Grant Review Board, Health and Medical Research Fund, the Health Bureau (HHB); member of the Research Council of HHB; Convener of the Advisory Group on Hong Kong Reference Framework for Care of Diabetes and Hypertension in Primary Care Settings; and the Editor-in-Chief of the Hong Kong Medical Journal. He has over 350 publications in peer-reviewed journals and ranked the top 0.07% in his research field by expertscape. His research work was published in international journals including *Nature* series, *Lancet Hematology*, *JAMA Oncology*, *Gastroenterology*, *Gut*, *European Heart Journal*, and *European Urology*.

In 2016, he was conferred as an Honorary Fellow by the Hong Kong Academy of Nursing to recognize his achievements in the profession and contributions to primary care. He was appointed as Fellows of various Academies, Royal Colleges and professional societies. He is currently taking adjunct appointments as Professor of the Peking Union Medical College in March 2019; Professor of Global Health by the Peking University, and Professor of Public Health in the Fudan University.

黃至生醫生，香港中大醫學院賽馬會公共衛生及基層醫療學院教授，其學術研究領域包括癌症預防及篩查。他擔任多個政府及非牟利機構董事或榮譽顧問。黃醫生曾任香港政府醫療衛生研究基金評審撥款委員會主席、食物及衛生局研究局委員、香港基層醫療統籌署高血壓及糖尿病框架召集人、香港醫學雜誌總編輯等。他著作超過400份國際文獻，並在其研究領域上排名全球0.07%。

2016年，黃教授獲香港護理專科學院頒授榮譽院士，2018年，獲美國心臟科學院、歐洲心臟學學院、及英國公共衛生學院分別頒授三個院士銜。黃教授現在分別兼任「北京協和醫學院」，「北京大學」公共衛生學院，及「復旦大學」教授。

Abstract 題目摘要

The use of microbial biomarkers to predict colorectal tumours -
results from an Asia Pacific guideline on diagnosis of colorectal neoplasia
亞太區臨床指引的最新發佈：使用微生態標記預測大腸腫瘤

Screening for colorectal cancer (CRC) has been proven effective to reduce CRC related mortality. The recent decade witnessed a trend in the use of non-invasive biomarkers for diagnosis of colorectal neoplasia. In this speech, we will present a joint official guideline of the Asian Pacific Association of Gastroenterology (APAGE) and the Asian Pacific Society of Digestive Endoscopy (APSDE). We will report evidence for the application of stool based microbial markers, which are sensitive to detect both CRC and adenomatous polyps. Certain microbial panels bear potential to be a primary screening tool for both CRC and advanced colorectal neoplasia, as well as a detection test for recurrent polyps. These include a combination of Fusobacterium nucleatum, Lachnoclostridium gene marker (m3) and Clostridium hathewayi. In addition, modulation of gut microbiota may assist prevention of CRC. The strengths and limitations of these tests will be highlighted with several recommendations for future research.

大腸癌篩查能有效地減少因腸癌引致的死亡率。在過去十年間，以「非侵入性生物標誌物」篩查大腸癌變得越來越普遍。 香港中文大學（中大）醫學院與亞太胃腸病學會（Asian Pacific Association of Gastroenterology，APAGE）、亞太消化內鏡學會（Asian Pacific Society of Digestive Endoscopy，APSDE）以及來自全球十多位專家學者於2022至2023年合作，為使用「非侵入性生物標誌物」進行大腸癌篩查制定以證據為本的臨床指引。研究早前已於國際著名醫學期刊《英國醫學雜誌—Gut》發表。我們會報告使用腸道微生物診斷大腸腫瘤的醫學實証，並發現腸道微生態對偵測大腸癌及大腸腺性腫瘤有較高的靈敏度，並可作為大腸癌篩查及腫瘤復發的第一線工具。此微生物組包括具核梭桿菌、毛梭菌基因標記（m3）和哈氏梭菌的組合。另外，大腸微生態的改變可減少罹患大腸癌的風險。報告將討論各樣檢查工具的優勢及可改善空間，並提出未來在此範疇的研究方向。
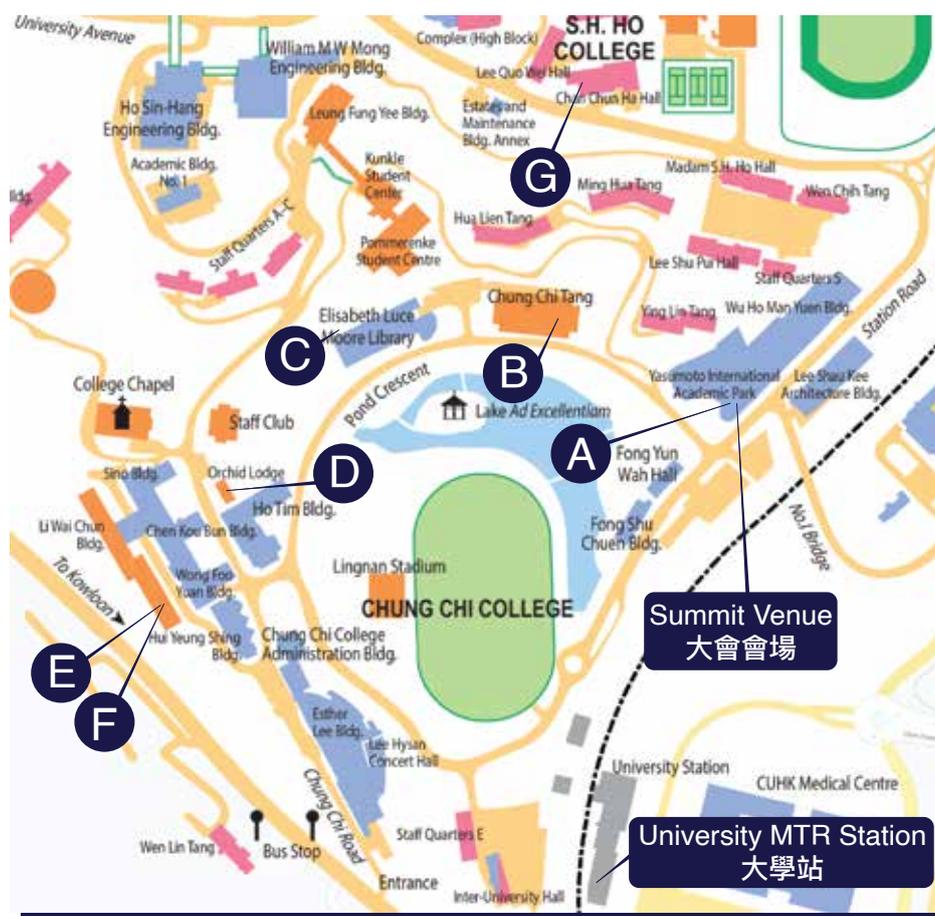
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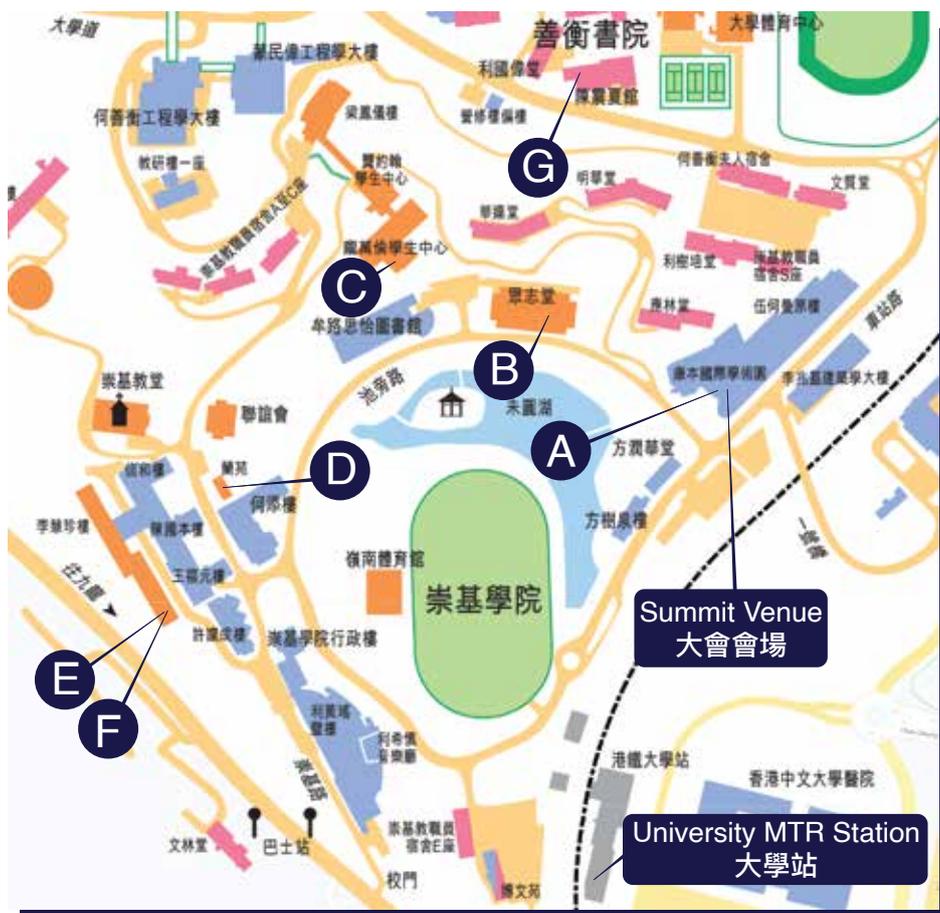
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