

## Professor Stephen Kwok-Wing TSUI

### Academic Qualifications

1992 - 1995 Doctor of Philosophy in Biochemistry, The Chinese University of Hong Kong (CUHK)  
1981 - 1985 Bachelor of Science (Chemistry), CUHK

### Previous Academic Positions Held

2004 - 2009 Professor, Department of Biochemistry, CUHK  
2000 - 2004 Associate Professor, Biochemistry Department, CUHK  
1997 - 2000 Assistant Professor, Biochemistry Department, CUHK

### Present Academic Positions

Professor, School of Biomedical Sciences, CUHK  
Associate Director in Research, School of Biomedical Sciences, CUHK  
Programme Director, MSc in Genomics and Bioinformatics, CUHK  
Director, Hong Kong Bioinformatics Centre, CUHK  
Director, Centre for Microbial Genomics and Proteomics, CUHK  
Chairperson, Grand Review Board, Health and Medical Research Fund  
Member, Biology and Medicine Panel, Research Grants Council

### Previous Relevant Research Work

Next generation sequencing, bioinformatics, transcriptomics, gene network analysis, molecular biology

### Post-graduate Student Supervision

Graduated: 34 PhD and 6 MPhil students; now under his supervision: 8 PhD students.

### Funding Records and Experience in Coordinating Large-scale Projects (as PI or co-PI)

PC of 1 RGC RIF grant; PC of 1 RGC CRF Equipment grant; PI of 7 RGC GRF grant; PA of 8 RFCID grants; PA of 6 HMRF grants; Co-PI of 5 RGC TBRS grants; Co-PI of 1 CRF project; PI of 2 ITF grant. Total external funding of over HK\$75,000,000 directly allocated to the research team.

### Publications Records

Publications in refereed journals: 282 (Citations > 17,700; *H*-index: 46; Source: ISI Web of Knowledge)

### Five most representative publications in recent five years

1. Wang L, Xiong Q, Saelim N, Wang L, Nong W, Wan ATY, Shi M, Liu X, Cao Q, Hui JHL, Sookrung N, Leung TF, Tungtrongchitr A, **Tsui SKW**. Genome assembly and annotation of *Periplaneta americana* reveal a comprehensive cockroach allergen profile. **Allergy** 2023; 78:1088-1103 (**IF=12.4**).
2. Hong C, Cao Q, Zhang Z, **Tsui SKW**, Yip KYL. (2022). Reusability report: Capturing properties of biological objects and their relationships using graph neural networks. **Nat Mach Intell** 4:222-226 (**IF=23.8**).
3. Xiong Q, Wan ATY, Liu X, Fung CSH, Xiao X, Malainual Nat, Hou J, Wang L, Wang M, Yang KY, Cui Y, Leung ELH, Nong W, Shin SK, Au SWN, Jeong KY, Chew FT, Hui JHL, Leung TF, Tungtrongchitr A, Zhong N, Liu Z, **Tsui SKW**. Comparative genomics reveals insights into the divergent evolution of astigmatic mites and household pest adaptations. **Mol Biol Evol** 2022; 39:msac097 (**IF=10.7**).
4. He Y, Shi M, Wu X, Ma J, Ng KT, Xia Q, Zhu L, Fu PP, Man K, **Tsui SKW**, Lin G. Mutational signature analysis reveals widespread contribution of pyrrolizidine alkaloid exposure to human liver cancer. **Hepatology**. 2021; 74:264-280 (**IF=13.5**).

5. Yang Z, Wan AT, Liu XY, Xiong Q, Liu ZG, **Tsui SKW**. Identification, functional annotation, and stability analysis of miRNA in *Dermatophagoides pteronyssinus*. **Allergy** 2020; 75:1237-1240 (**IF=12.4**).

#### Five representative publications beyond the recent five-year period

1. Chan TF, Ji KM, Yim AKY, Liu XY, Zhou JW, Li RQ, Yang KY, Li J, Li M, Law PTW, Wu YL, Cai ZL, Qin H, Bao Y, Leung RKK, Ng PKS, Zou J, Zhong XJ, Ran PX, Zhong NS, Liu ZG, **Tsui SKW**. The draft genome, transcriptome and microbiome of *Dermatophagoides farinae* reveal a broad spectrum of dust mite allergens. **J Allergy Clin Immunol** 2015; 135:539-548 (**IF=14.2**).
2. Chan TM, Leung KS, Lee KH, Wong MH, Lau CK, **Tsui SKW**. Subtypes of associated protein-DNA (TF-TFBS) patterns. **Nucleic Acid Res** 2012; 40:9392-9403 (**IF=14.9**).
3. Leung KS, Wong KC, Chan TM, Wong MH, Lee KH, Lau CK, **Tsui SKW**. Discovering protein-DNA binding sequence patterns using association rule mining. **Nucleic Acids Res** 2010; 38:6324-6337 (**IF=14.9**).
4. Chim SS\*, **Tsui SKW\***, et al. Genomic characterization of the SARS-coronavirus of the Amoy Gardens outbreak in Hong Kong. **Lancet** 2003; 362:1807-1808 (\*co-first authors) (**IF=168.9**).
5. **Tsui SKW**, Chim SSC, Lo YMD and the Chinese University of Hong Kong Molecular SARS Research Group. Coronavirus genomic-sequence variations and the epidemiology of the severe acute respiratory syndrome. **N Engl J Med** 2003; 349:187-188 (**IF=158.5**).

#### Patents

1. Title: "Compositions and methods for diagnosing and treating severe acute respiratory syndrome (SARS)", US Patent No.: 7,371,525 B2 (2008-05-13).
2. Title: "Genomic markers of hepatitis B virus in hepatocellular carcinoma", US Patent No.: 7,439,020 B2 (2008-10-21).

#### Awards

1. Excellent Research Award from Food and Health Bureau on the project titled "Whole Exome Sequencing to Dissect the Genetic Factors behind Developmental Delay and Learning Disabilities" (12 June 2019).
2. Second Class Award of the Guangdong Science and Technology Progress Award from the "Research and Applications of the Mechanism of Dust-mite-associated Allergy (March 2019).