

**Cesar S.C Wong
(Associate Professor)**



QUALIFICATIONS: Doctor of Philosophy (Biology), the Hong Kong University of Science and Technology 2002
Master of Applied Science (Medical Laboratory Science), Charles Sturt University, Australia 1996
Bachelor of Applied Science (Medical Laboratory Science), Charles Sturt University, Australia 1990 (Distinction)
Diploma (Medical Laboratory Science), Hong Kong Polytechnic University, 1985

BRIEF OUTLINE OF EXPERIENCE AND POSTS HELD:

2020- Associate Professor, Department of Health Technology and Informatics, Hong Kong Polytechnic University

2019- Director, Biomedical Technology Cluster, Hong Kong Science and Technology Parks Corporation

2012- Associate Professor, Department of Health Technology and Informatics, Hong Kong Polytechnic University

2016- Guest Professor, Department of Molecular Imaging, Faculty of Medicine, Zhejiang University, China

2013- Adjunct Associate Professor, Department of Clinical Oncology, Faculty of Medicine, The Chinese University of Hong Kong

2013- Adjunct Associate Professor, School of Public Health and Primary Care, Faculty of Medicine, The Chinese University of Hong Kong

2014- Honorary Scientific Officer (Molecular Pathology), Department of Pathology, Queen Elizabeth Hospital

2010-2013	Adjunct Assistant Professor, School of Public Health and Primary Care, Faculty of Medicine, The Chinese University of Hong Kong
2004-2010	Assistant Professor, Department of Clinical Oncology, Faculty of Medicine, The Chinese University of Hong Kong
1991-2004	Medical Technologist, Department of Pathology, Queen Elizabeth Hospital, Hong Kong
1985-1991	Medical Laboratory Technician, Department of Pathology, Queen Elizabeth Hospital, Hong Kong

RESEARCH INTERESTS:

- To develop biomarkers with diagnostic, prognostic and therapeutic significance for Asian common cancers such as colorectal cancer, cervical cancer, nasopharyngeal cancer and their pre-malignant states.
- To develop novel non-invasive molecular and immunocytochemical tests for clinical applications.

SERVICES TO PROFESSIONAL & SCIENTIFIC BODIES, CONSULTANCIES AND RESEARCH:

Accreditation Body, Innovation and Technology Commission -

- Scientific Assessor for Anatomical and Molecular Pathology accreditation in medical laboratories, the Hong Kong Laboratory Accreditation Scheme, Hong Kong Accreditation Service, Hong Kong Special Administrative Region.

Consultancies

- Scientific Consultant, Macao Laboratory Medicine Association, Macau Special Administrative Region (MSAR).
- Scientific Consultant of Anatomical Pathology and Cytology Laboratory, Department of Pathology, Kiang Wu Hospital, MSAR.

Membership of Professional Societies -

- Founding Fellow, Faculty of Science, The Royal College of Pathologists of Australasia, Australia.
- Active member, The American Association for Cancer Research, U.S.A
- Fellow, The Hong Kong Society for Molecular Diagnostic Sciences.
- One of the Founders and Secretary, The Association of Clinical Genetics and Genomics of Hong Kong.

External Research Grant -

- Founder and Organizer, Lim Peng Suan Charitable Trust Research Grant, Hong Kong, 2017.
- Member, Grant Review Board, Health and Medical Research Fund, Food and Health Bureau, The Government of the Hong Kong Special Administrative Region since July 2014.
- Project Reviewer, The Science and Technology Development Fund, The Government of the Macau Special Administrative Region, 2018.
- Member, Cancer Research Subcommittee, Cancer Education, Early Detection/Prevention & Research Committee, The Hong Kong Anti-Cancer Society, 2018

Judge -

- Initial Judging, Senior Division, Hong Kong Student Science Project Competition 2018.

AWARDS AND PATENTS:

- Bright Idea Award, Hospital Authority, 1995.
- The Second runner-up in the Special Topic Presentation of the Second China-Hong Kong-Macau Laboratory Medicine Scientific Symposium, 6th November 2010: A refined immunomagnetic enrichment assay to detect cytokeratin 20-positive circulating tumor cells in patients with colorectal cancer.
- Inventor of a United States Patent – Plasma or serum marker and process for detection of cancer (Patent no: US7,811,752 B2)
- Inventor of a China Patent, 7-9-2005 - Plasma or serum marker and process for detection of cancer (Patent no: CN1665830)
- Inventor of a provisional United States Patent, 22-8-2014 - A microdevice for continuous sorting of particles and the method of fabricating the same

REPRESENTATIVE PUBLICATIONS (JOURNAL ARTICLES: 116, AND ABSTRACTS: 82, H-INDEX: 33):

1. Chu YL, Li H, Ng PL, Kong ST, Zhang H, Lin Y, Tai WC, Yu AC, Yim AK, Tsang HF, Cho WC, **Wong SC**. The potential of circulating exosomal biomarkers in cancer. *Expert Rev Mol Diagn*, 20(7):665-78, 2020. **(Impact factor: 4.096)**
2. Xue VW, Cheung MT, Luk LL, Lee VH, Chan PT, Au TC, Yu AC, Cho WC, Tsang HF, Chan AK, **Wong SC**. Non-invasive potential circulating mRNA markers for colorectal adenoma using targeted sequencing. *Sci Rep*, 9(1):12943, 2019. **(Impact factor: 4.011)**
3. Wong YK, Lam KW, Ho KY, Yu CS, Cho WC, Tsang HF, Chu MK, Ng PW, Tai CS, Chan LW, Wong EY, **Wong SC**. The applications of big data in molecular diagnostics. *Expert Rev Mol Diagn*, 19(10):905-17, 2019. **(Impact factor: 4.096)**
4. **Wong SC**, Au TC, Chan SC, Ng LP, Tsang AH. Menstrual blood HPV DNA and *TAP1* gene polymorphisms as potential biomarkers for screening and monitoring of cervical squamous intraepithelial lesion. *J Infect Dis*, 218(11):1739-45, 2018. **(Impact factor: 5.186)**
5. Wong HL, Ng LP, Koh SP, Chan LW, Wong EY, Xue VW, Tsang HF, Chan AK, Chiu KY, Cheuk W, **Wong SC**. Hotspot *KRAS* exon 2 mutations in CD166 positive colorectal cancer and colorectal adenoma cells. *Oncotarget*, 9(29):20426-38, 2018. **(Scopus rating: 4.670)**
6. **Wong SC**, Cheung MT, Luk LL, Lee VH, Chan PT, Tsang HF, Wong EY, Xue VW, Chan AK, Chan JK. Prognostic significance of Cytokeratin 20-Positive Lymph Node Vascular Endothelial Growth Factor A mRNA and Chromodomain Helicase DNA Binding Protein 4 in pN0 Colorectal Cancer Patients. *Oncotarget*, 9(6):6737-51, 2017. **(Scopus rating: 4.670)**
7. Ma B, King AD, Leung L, Wang K, Poon A, Ho WM, Mo F, Chan CM, Chan AT, **Wong SC**. Identifying an early indicator of drug efficacy in patients with metastatic colorectal cancer - a prospective evaluation of circulating tumor cells, 18F-fluorodeoxyglucose positron-emission tomography and the RECIST criteria. *Ann Oncol*, 28(7):1576-1581, 2017. **(Impact factor: 18.274)**
8. Chan LWC, **Wong SCC**. Editorial: Cancer diagnostic and therapeutic target identification and verification based on the regulatory function of microRNAs. *Front Genet*, 8:178, 2017. **(Impact factor: 4.151)**

9. Hou J, Meng F, Chan LW, Cho WC, **Wong SC**. Circulating plasma microRNAs as diagnostic markers for NSCLC. *Front Genet*, 7:193, 2016. **(Impact factor: 4.151)**
10. Xing X, Poon RY, **Wong CS**, Yobas L. Dielectrophoretic separation of colorectal cancer cells from lymphocytes through interdigitated 3D ring array microelectrodes. *Biosensors and Bioelectronics*, 61C:434-442, 2014 **(Impact factor 10.257)**
11. Chan KC, Jiang P, Chan CW, Sun K, Wong J, Hui EP, Chan SL, Chan WC, Hui DS, Ng SS, Chan HL, **Wong CS**, Ma BB, Chan AT, Lai PB, Sun H, Chiu RW, Lo YM. Noninvasive detection of cancer-associated genomewide hypomethylation and copy number aberrations using massively parallel bisulfite sequencing of plasma DNA. *Proc Natl Acad Sci USA*, 110:18761-18768, 2013. **(Impact factor: 9.504)**
12. Chan CM, Au TC, Chan AT, Ma BB, Tsui NB, Hui EP, Chan LW, Ho WS, Yung BY, **Wong SC**. Advanced technologies for studying circulating tumor cells at the protein level. *Expert Rev Proteomics*, 10:579-589, 2013 **(Impact factor: 3.489)**
13. Chan SL, Mo FK, **Wong CS**, Chan CM, Leung LK, Hui EP, Ma BB, Chan AT, Mok TS, Yeo W. A study of circulating interleukin 10 in prognostication of unresectable hepatocellular carcinoma. *Cancer*, 118:3984-3992, 2012. **(Impact factor: 6.162)**
14. Lui VW, Yau DM, Cheung CS, **Wong SC**, Chan AK, Zhou Q, Wong EY, Lau CP, Lam EK, Hui EP, Hong B, Hui CW, Chan AS, Ng PK, Ng YK, Tsang CM, Tsui SK, Tsao SW, Chan AT. FGF8b oncogene mediates proliferation and invasion of Epstein-Barr virus -associated nasopharyngeal carcinoma cells: implication for viral-mediated FGF8b upregulation. *Oncogene*, 30:1518-1530, 2011. **(Impact factor: 6.854)**
15. **Wong SC**, Ng SS, Cheung MT, Luk LY, Chan CM, Lai PB, Ma BB, Hui EP, Lam MY, Au TC, Chan AT. Clinical significance of CDX2-positive circulating tumour cells in colorectal cancer patients. *Brit J Cancer*, 104:1000-1006, 2011. **(Impact factor: 5.922)**
16. **Wong SC**, Au TC, Chan SC, Chan CM, Lee MY, Zee BC, Pong WM, Chan AT. Menstrual blood human papillomavirus DNA detection in patients with cervical intraepithelial neoplasia and condyloma acuminatum. *J Clin Micro*, 48:709-713, 2010. **(Impact factor: 4.959)**
17. Ma BB, Hui EP, **Wong SC**, Tung SY, Yuen KK, King A, Chan SL, Leung SF, Kam MK, Yu BK, Zee B, Chan AT. Multicenter phase II study of gemcitabine and oxaliplatin in advanced nasopharyngeal carcinoma-correlation with excision repair cross-complementing-1 polymorphisms. *Ann Oncol*, 20:1854-1859, 2009. **(Impact factor: 18.274)**
18. **Wong SC**, Chan CM, Ma BB, Lam MY, Choi CG, Au TC, Chan AS, Chan AT. Advanced proteomic technologies for cancer biomarker discovery. *Expert Rev of Proteomics*, 6:123-134, 2009. **(Impact factor: 3.489)**
19. **Wong SC**, Chan CM, Ma BB, Hui EP, Ng SS, Lai PB, Cheung MT, Lo ES, Chan AK, Au TC, Lam MY, Chan AT. Clinical significance of cytokeratin 20-positive circulating tumor cells detected by a refined immunomagnetic enrichment assay in colorectal cancer patients. *Clin Cancer Res*, 15:1005-1012, 2009. **(Impact factor: 10.107)**
20. Hui EP, Sung FL, Yu BK, **Wong CS**, Ma BB, Lin X, Chan AS, Wong WL, Chan AT. Plasma osteopontin, hypoxia, and response to radiotherapy in nasopharyngeal cancer. *Clin Cancer Res*, 14:7080-7087, 2008. **(Impact factor: 10.107)**
21. Ying J, Li H, Yu J, Ng KM, Poon FF, **Wong SC**, Chan AT, Sung JJ, Tao Q. *WNT5A* exhibits tumor-suppressive activity through antagonizing the Wnt/ β -catenin signaling, and is frequently methylated in colorectal cancer. *Clin Cancer Res*, 14: 55-61, 2008. **(Impact factor: 10.107)**
22. Chiu RW, Chim SS, Wong IH, **Wong SC**, Lee CW, To KF, Tong JH, Yuen RK, Shum AS, Chan JK, Chan LS, Yuen JW, Tong YK, Fung-Weier J, Ferlatte C, Leung TN, Lau TK, Lo KW, Lo YM.

- Hypermethylation of tumor suppressor genes in human placenta. *Am J Pathol*, 170: 941-950, 2007. **(Impact factor: 4.069)**
23. Yau DM, Choi EP, **Wong CS**, Mok TS. Implication of epidermal growth factor receptor (EGFR) expression and mutation in radiosensitization of hepatocellular carcinoma (HCC) cell lines by gefitinib. *Clin Cancer Res*, 11(Part 2 Suppl. S):9043S, 2005. **(Impact factor: 10.107)**
 24. **Wong SC**, Chan JK, Lee KC, Lo ES, Tsang DN. Development of a quantitative assay for SARS coronavirus and correlation of *GAPDH* mRNA to SARS coronavirus in clinical specimens. *J Clin Pathol*, 58:276-280, 2005. **(Impact factor: 2.894)**
 25. **Wong SC**, Lo ES, Lee KC, Chan JK, Hsiao WL. Prognostic and diagnostic significance of β -catenin nuclear immunostaining in colorectal cancer. *Clin Cancer Res*, 10: 1401-1408, 2004. **(Impact factor: 10.107)**
 26. **Wong SC**, Lo ES, Cheung MT. An optimized protocol for extraction of non-viral mRNA from human plasma frozen for three years. *J Clin Pathol*, 57:766-768, 2004. **(Impact factor: 2.894)**
 27. **Wong SC**, Lo ES, Cheung MT, Ng EK, Tse CW, Lai PB, Lee KC, Lo YM. Quantification of plasma β -catenin mRNA in colorectal cancer and adenoma patients. *Clin Cancer Res*, 10: 1613-1617, 2004. **(Impact factor: 10.107)**
 28. **Wong SC**, Lo SF, Lee KC, Yam JW, Chan JK, Hsiao WL. Expression of frizzled-related protein and Wnt-signalling molecules in invasive human breast tumours. *J Pathol*, 196: 145-153, 2002. **(Impact factor: 6.253)**
 29. Ng EK, Tsui NB, Lam MY, Chiu RW, Yu SC, **Wong SC**, Lo ES, Rainer TH, Johnson PJ, Lo YM. Presence of filterable and nonfilterable mRNA in the plasma of cancer patients and healthy individuals. *Clin Chem*, 48: 1212-1217, 2002. **(Impact factor: 7.292)**
 30. **Wong SC**, Chan JK, Lee KC, Hsiao WL. Differential expression of p16/p21/p27 and cyclin D1/D3, and their relationships to cell proliferation, apoptosis, and tumour progression in invasive ductal carcinoma of the breast. *J Pathol*, 194: 35-42, 2001. **(Impact factor: 5.979)**
 31. Chan JK, **Wong CS**. Loss of E-cadherin is the fundamental defect in diffuse-type gastric carcinoma and infiltrating lobular carcinoma of the breast. *Adv Anat Pathol*, 8: 165-172, 2001. **(Impact factor: 2.358)**

BOOK CHAPTER

Wong SC, Chan CM. Development of a novel tissue-specific method to detect cytokeratin 20 positive - circulating tumor cells in metastatic colorectal cancer. **Biotechnology in Hong Kong, Volume 3, Chapter 1**

RESEARCH GRANTS (Principal Investigator or Co-Principal Investigator):

External Competitive Grants -

- Enterprise Support Scheme, Innovation and Technology Fund, Hong Kong Special Administrative Region Government, 2020: Improving early phase clinical trial matching services using Big Data analytics for patients in Hong Kong. (Co-Principal Investigator: HK\$4,868,424)
- Research Impact Fund, Research Grants Council, Hong Kong Special Administrative Region Government, 2018, 2020: Accelerating Precision Medicine Translation: Development of the First Evidence-based Clinical Exceptional Responder Gene-Drug Sensitivity Resource for Cancer. (Co-Principal Investigator: HK\$9,996,000)

- General Research Fund, Research Grants Council, Hong Kong Special Administrative Region Government, 2019: The diagnostic significance of circulating tumor cells and therapeutic implication of targeting circulating tumor cells in colorectal cancer. (HK\$897,465)
- Innovation and Technology Fund, Hong Kong Special Administrative Region Government, 2018: Humanized CDH17 monoclonal antibody targeted therapy against malignant gastrointestinal cancers: Proof of concept study. (HK\$2,300,000)
- Novel Research Grant, The Hong Kong Anti-Cancer Society, 2016: Diagnostic significance of plasma targeted mRNAs using NanoString nCounter technology in colorectal cancer patients. (HK\$179,900)
- Health and Medical Research Fund, Food and Health Bureau, Hong Kong Special Administrative Region Government, 2014: The diagnostic and prognostic usefulness of a targeted plasma RNA sequencing developed non-invasive marker panel in colorectal cancer. (HK\$935,302)
- Collaborative Research Fund, Hong Kong Special Administrative Region, 2014: Micro-PET for pre-clinical molecular imaging research in Hong Kong. (Co-Principal Investigator: HK\$4,000,000)
- Novel Research Grant, The Hong Kong Anti-Cancer Society, 2009: The clinical significance of mononuclear and red cells β 3-integrin mRNA in colorectal cancer patients. (HK\$181,736)
- Competitive Earmarked Grant, Research Grants Council, Hong Kong Special Administrative Region, 2006: Prognostic significance of plasma β -catenin mRNA in colorectal cancer patients. (HK\$776,920)
- Novel Research Grant, The Hong Kong Anti-Cancer Society, 2006: Value of CK20 mRNA and CEA mRNA in the non-plasma portion of the blood for diagnosis and monitoring of colorectal cancer. (HK\$150,000)
- Ho Hung Chiu Medical Education Foundation Research Grant, 2004: Identification of genetic markers with diagnostic and/or prognostic significance in NK/T cell lymphomas by Comparative Genomic Hybridization microarray. (Co-Principal Investigator; HK\$168,000)
- Ho Hung Chiu Medical Education Foundation Research Grant, 2002: Potential of non-invasive method in colorectal cancer detection. (HK\$155,000)