

Cover legend: **Thomas S.K. Wan**; a member of The Editorial Academy of  
The International Journal of Oncology



Dr Thomas S.K. Wan is the Cytogeneticist in charge of the Haematology Division, Department of Pathology, Queen Mary Hospital, Hong Kong, People's Republic of China. His laboratory is the first cytogenetics laboratory accredited by the College of American Pathologists (CAP) in the region. He is also the Honorary Associate Professor of the Department of Pathology, University of Hong Kong, and Honorary Professor of the First Clinical College, Harbin Medical University, Harbin, People's Republic of China. Dr Wan was born in Hong Kong and obtained his Bachelor of Science in Medical Technology from the National Taiwan University, Taiwan, Republic of China in 1984. He obtained his Master of Philosophy and Doctor of Philosophy degrees at the University of Hong Kong in 1992 and 1997 respectively, while working full-time in University Departments of Pediatrics and then Pathology. Dr Wan has been awarded the Membership of the Royal College of Pathologists of the UK (specialized in Clinical Cytogenetics) based on published works in 2003. This achievement is no small feat and is one that is bestowed to basic and clinical scientists whose work is considered of the highest calibre. He was awarded the Fellowship of the Royal College of Pathologists in 2008.

Dr Wan has been attached to several laboratories in the USA and Canada for research training, including Harvard Medical School, University of British Columbia, and the California Institute of Biological Research. He has been chosen by Cold Spring Harbor Laboratory, USA, based on his academic excellence from a large number of competing candidates to attend the 'Advanced Molecular Cytogenetics' course in 1999. Subsequently, he masters and starts molecular cytogenetics investigation, comprising fluorescence *in situ*

hybridisation (FISH), comparative genomic hybridisation (CGH) and multi-colour karyotyping at his institute and is now considered one of the regional experts on these advanced procedures. He has frequently been invited to deliver lectures at academic institutions and scientific conferences in Asia.

Dr Wan is one of the most experienced cancer cytogeneticist in Hong Kong. He is certainly the best qualified as well as the most prolific. With a keen interest in research, he pursued investigation on cytogenetic aberrations and telomere dynamics of immortalised human ovarian surface epithelial cells. His major contribution to clinical cytogenetics is in demonstrating an absence or low number of telomere repeats at the ends of dicentric chromosomes that implicates telomere loss as a pathogenic mechanism for chromosomal instability and establishes quantitative FISH as a tool for measuring telomere length. This work was initiated and performed by Dr Wan at Professor Peter Lansdorp's Laboratory at the University of British Columbia, Canada, and resulted in a publication in *Genes Chromosomes and Cancer*. In other projects, Dr Wan detects a high frequency of telomeric associations in transformed human ovarian surface epithelial cells and patients with myelodysplastic syndrome, showing again the significance of telomere alterations in tumour progression. In addition, he delineates telomere shortening in blood leucocytes after bone marrow transplantation to be mainly contributed by the T-suppressor compartment. He also reported telomere shortening and pericentromeric heterochromatin decondensation as the contributory mechanism to the formation of jumping translocation in acute leukemia. As a result of his outstanding study on telomere, he was awarded as 'Young Investigators Award' in the 3rd Hong Kong International Cancer Congress 1996 and his telomere research works has been featured in *Asiaweek* in 2000 (July 28 issue).

Dr Wan currently focuses on the study of hematological malignancies and pediatric solid tumours, especially on the genesis of the chromosomal aberrations in tumorigenesis. He demonstrated that genetic heterogeneity may occur between primary tumor and bone marrow metastasis in childhood neuroblastoma and atypical double minutes morphology when encountered will need confirmation by FISH study. With regard to hematological malignancies, he convincingly showed the importance of molecular cytogenetics investigations in solving complex karyotypes. He characterizes complex cytogenetic changes in acute promyelocytic leukemia

that includes variant 15;17 translocation and secondary aberrations. He describes atypical interphase FISH patterns of *BCR/ABL* gene rearrangement in chronic myeloid leukemia using various FISH probes, which are now routinely employed for leukemia diagnosis and monitoring. He applies the techniques of spectral karyotyping and multiplex FISH in deciphering complicated changes in T-lymphoblastic lymphoma and myeloid disorders. Dr Wan was the first to document a case of an acquired pericentric inversion of chromosome 9 in essential thrombocythemia. He reported der(1;18) as a novel and recurrent change in myeloid leukaemia, and the association between der(Y)t(Y;1) and myelodysplastic syndrome. Finally, he carefully analyses clinicopathologic correlates of trisomy 21 in acute myeloid leukaemia (his paper in *Leukemia Research* was cited by The Chromosome 21 consortium in *Nature* 405: 311, 2000).

Dr Wan is a member of various international professional associations: Fellow of the Royal College of Pathologists, UK; Chartered Biologist and Member of the Institute of Biology, UK; Chartered Scientist & Fellow of the Institute of Biomedical Science, UK; Member of the Association of Genetic Technologists, USA; and Active Member of the American Association for Cancer Research, USA. He is scientific advisor and consultant in many institutions and the HKSAR government. Furthermore, he serves in the editorial board of the *International Journal of Oncology*, *Journal of the Association of Genetic Technologists*, *Atlas of Genetics and Cytogenetics in Oncology and Haematology*, and *The Association of Genetic Technologists Cytogenetics Laboratory Manual* (4th edition). To date, he has authored more than 120 reports, reviews and on-line publications in international peer reviewed journals.