

## The predictive role of non-homologous end-joining system in gastrointestinal and urologic cancers in Taiwan

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Cancers are a worldwide concern; gastrointestinal and urologic cancers represent important causes of cancer-related mortality and contribute to a significant burden of human health. The DNA repair systems are the genome caretakers, playing a critical role in the initiation and progression of carcinogenesis. However, the role of the genomic/proteomic variations of DNA repair genes in cancer susceptibility is not well revealed. In Taiwan, the leading death causing cancers include hepatocarcinoma (2<sup>nd</sup>), colorectal cancer (3<sup>th</sup>), gastric cancer (5<sup>th</sup>), pancreatic cancer (6<sup>th</sup> of the female and 8<sup>th</sup> of the male) and prostate cancer (7<sup>th</sup> of the male). To fight against these cancers, Terry Fox Cancer Research Laboratory is devoted profoundly in the translational medical studies investigating the contribution of DNA repair systems to carcinogenesis. From the results of our genomic and proteomic studies, we highlighted the association of non-homologous end-joining DNA repair system, especially the role of several genes of this pathway, XRCC4, XRCC5 and XRCC6, in the susceptibility to gastrointestinal and urologic cancers and discussed their potential contributions to personalized medicine.

### Biography

Da-Tian Bau has been trained in National Taiwan University and Academia Sinica and has been the Chairman of Terry Fox Cancer Research Lab for 6 years. He has published more than 100 SCI papers, and the reviewers for more than 30 journals, served as the editor for 6 journals and only aged 40 years now. His lab is devoted in the genomic and phenomic studies of most common cancers, including oral, breast, lung, skin, leukemia in addition to UI and UG cancers.

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