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EDUCATION AND POSITIONS HELD

- Medical Innovation Award, Taipei Veterans General Hospital, Taiwan, 1999
- Resident doctor and clinical fellow training, Department of Ophthalmology, Taipei Veterans General Hospital, Taiwan, 1994-1999
- Ph.D., Institute of Clinical Medicine, National Yang-Ming University, Taiwan, 1999-2002
- Attending Physician, Department of Ophthalmology, Taipei Veterans General Hospital, Taiwan, 2000-present
- Postdoctoral fellow, City of Hope, Bone Marrow Transplant/Stem Cell Lab, CA, USA, 2002
- Assistant Professor, Department of Medicine (Medical School??), National Yang-Ming University, Taiwan, 2002-2006
- Chief, the section of Ophthalmology, Tauyuan Veterans Hospital, 2003-2004
- Attending physician, Department of Medical Research & Education, Taipei Veterans General Hospital, Taiwan, 2005-present
- Associate professor, Medical School, National Yang-Ming University, Taiwan, 2006-present
- Visiting Researcher, Molecular Biochemistry, the Scripps Research Institute, CA, USA, 2007

HONORS

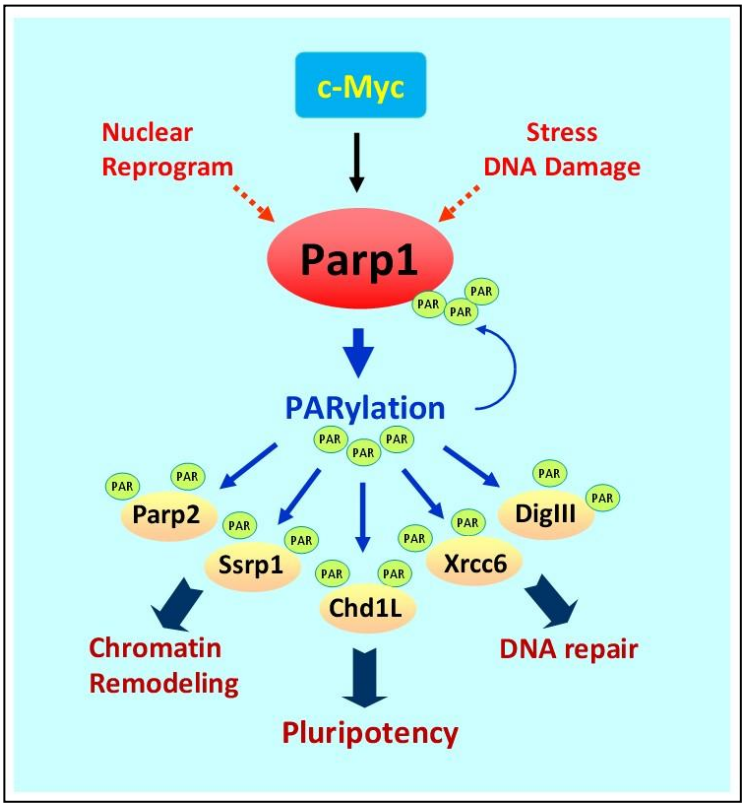
- Medical Innovation Award, Taipei Veterans General Hospital, Taiwan, 1999
- Best Presentation and Publication Award, The Association and Society of Ophthalmologists, Taiwan, 2001
- Scholarship for MD & PhD program, Academia Sinica, Taiwan, 2001-2002
- Best Presentation and Publication Award, Association of Asian Ophthalmologists, Japan, 2002
- Best Paper Award, International Stem Cell Meeting, Taipei, Taiwan, 2003
- Young Investigator Award, Molecular Imaging Society, Colone, Germany, 2005
- Best Clinical Service Award, TVGH and Executive Yuan, 2006
- Reviewer, Neuroscience section, National Science Foundation (NSF), USA, 2007
- Invited speaker, Stem Cell Section, World Ophthalmology Congress (WOC), 2008

- Medical Innovation Award, Taipei Veterans General Hospital, Taiwan, 2008
- Invited speaker, the Annual Meeting of Taiwan Stem Cell Association, 2008
- The Section Chairman of Cancer Stem Cell, the 69th Annual Meeting of the Japanese Cancer Association (JCA), Osaka, Japan, 2009
- 李鎮源教授藥理學研究傑出獎, 2011
- 國科會傑出青年研究獎, 2012
- 台北榮民總醫院醫療創新獎第一名, 2012
- 台北榮民總醫院醫師學術論文獎第二名, 2012

RESEARCH INTERESTS

Induced pluripotent stem cells (iPSCs) are a recently developed technology that holds promise for stem cell biology and regenerative medicine. Nuclear reprogramming induced by transcription factors is the resetting of epigenetic landmarks; it leads to the global reversion of the somatic epigenomes to an ESC-like state. However, the mechanisms involved in the posttranslational interaction and modification in reprogramming nuclear remain undetermined. Although the importance of nuclear proteins in epigenetic events has been addressed, little information is available on the functional proteins and mechanisms that regulate reprogramming and maintain pluripotency. Therefore, it is important to identify novel nuclear factors involved in the regulation of nuclear reprogramming using a proteomic approach, in order to elucidate the complexity of the molecular network in the nucleus during the cellular reprogramming process. We recently discovered that Parp1 and PARylation may act as the major regulator of reprogramming processes and maintenance of stem cell pluripotency, and these regulated networks were in part activated by endogenous c-Myc. Further studies on identifying the PARylation complex, Parp1-related posttranslational modifications, and it cellular functions are critical to have a better insight into the mechanism networks during nuclear reprogramming, pluripotency, and tumorigenicity. Therefore, elucidating the fundamental mechanisms of Parp1-related epigenetic regulation involved in embryonic development, stem-like properties, and pluripotent programming is necessary for the validation of our results in the future.

We also have successfully isolated cancer stem cells and tumor initiating cells from different malignant tumor tissues. We further focused on the TIC-targeted therapies with gene delivery method; we have developed a non-virus vector-based system to deliver



target genes with elevated efficiency.