

NAME	POSITION TITLE		
Kou-Juey Wu (吳國瑞)	Director, Cancer Genome Research Center Distinguished Chair Professor Chang Gung Memorial Hospital at Linkou Taiwan		
INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
National Taiwan University, Taipei, Taiwan	M.D.	1983	Medicine
Baylor College of Medicine, Houston	Ph.D.	1992	Cell Biology

A. Personal Statement

Dr. Wu is a physician-scientist with training in gene regulation and tumor biology. His research includes the delineation of the molecular mechanism of epithelial-mesenchymal transition (EMT) mediated by hypoxia and epigenetic mechanisms of tumor progression using advanced genome sequencing technology.

B. Positions and Honors

Positions and Employment

9/92-9/94	Resident of Clinical Pathology, Department of Pathology, The Univ. of Texas Southwestern Medical Center, Dallas, TX
10/94-8/00	Post-doctoral fellow, Department of Pathology, Columbia University College of Physicians & Surgeons, New York, NY
10/00-7/03	Attending Physician, Department of Medical Genetics, National Taiwan Univ. Hospital, Taipei, Taiwan
8/03-7/06	Associate Professor, Institute of Biochemistry, National Yang-Ming Univ., Taipei, Taiwan
8/06-12/08	Professor, Institute of Biochemistry & Mol. Biology, National Yang-Ming Univ., Taipei, Taiwan
1/09-7/14	Distinguished Professor, Institute of Biochemistry & Mol. Biology, National Yang-Ming Univ., Taipei, Taiwan
3/12-1/14	Director, Cancer Research Center, National Yang-Ming Univ., Taipei, Taiwan
2/14-7/14	Director, Genome Research Center, National Yang-Ming Univ., Taipei, Taiwan
8/14-1/19	Director, Research Center for Tumor Medical Science Chair Professor, Grad. Institute of New Drug Development and Biomedical Sciences, China Medical Univ.

Awards and Other Professional Activities:

1994-1997	Fellow, Leukemia Society of America
2009	Outstanding research award of National Science Council, Taiwan
2009	4 th TienTe Lee Award- Outstanding (4 th TienTe Lee Award- Outstanding), TienTe Lee Biomedical Foundation
2009	7 th Yu-Ziang Hsu paper award (Science and Technology), Yu-Ziang Hsu Foundation
2010	2010 Hou Chin Tui Award: Basic science-Biology, Hou Chin Tui Foundation
2012	Outstanding research award of National Science Council, Taiwan
2015	Outstanding research award of Ministry of Science and Technology, Taiwan
2017	61 st Academic Award of the Ministry of Education, Taiwan

C. Selected peer-reviewed publications

- Lai, J.C., Hsu, K.W., **Wu, K.J.** (2024) Interrogation of the interplay between DNA N^6 -methyladenosine (6mA) and hypoxia-induced chromatin accessibility by a randomized empirical model (EnrichShuf). *Nucleic Acids Research*, 52, 13605-13624.
- Chen, H.F., Chang, C.T., Hsu, K.W., Peng, P.H., Lai, J.C., Hung, M.C., **Wu, K.J.** (2024) Epigenetic regulation of asymmetric cell division by the LIBR-BRD4 axis. *Nucleic Acids Research*, 52, 154-165.
- Wu, H.T., Lin, Y.T., Chew, S.H., **Wu, K.J.** (2023) Organ defects of Usp7^{K444R} mutant mouse indicate the essential role of K-63 polyubiquitination of Usp7 in organ formation. *Biomedical J.*, 46, 122-133.
- Hsu, K.W., Lai, J.C.Y., Chang, J.S., Peng, P.H., Huang, C.H., Lee, D.Y., Tsai, Y.C., Chung, C.J., Chang, H., Chang, C.H., Chen, J.L., Pang, S.T., Hao, Z., Cui, X.L., Lin, Y.T., He, C., **Wu, K.J.** (2022) METTL4-mediated Nuclear N^6 -Deoxyadenosine Methylation Promotes Metastasis through Activating Multiple Metastasis-inducing targets. *Genome Biology*, 23, 249.
- Shyu, Y.C., Cho, R.L., Liao, P.C., Huang, T.S., Yang, C.J., Lu, M.J., Huang, S.M., Lin, X.Y., Liou, C.C., Kao, Y.H., Lu, C.H., Peng, H.L., Chen, J.R., Cherng, W.J., Yang, N.I., Chen, Y.C., Pan, H.C., Jiang, S.T., Hsu, C.C., Lin, G.G., Yuan, S.S., **Wu, K.J.**, Lee, T.L., Shen, C.J. (2022) Genetic disruption of KLF1-K74 Sumoylation in hematopoietic system promotes healthy longevity in mice. *Advanced Science*, 9, e2201409.
- Huang, Y.C., Lai, J.C.Y., Peng, P.H., Wei, K.C., **Wu, K.J.** (2021) Chromatin accessibility analysis identifies GSTM1 as a prognostic marker in human glioblastoma patients. *Clinical Epigenetics*, 13, 201.
- Peng, P.H., Hsu, K.W., **Wu, K.J.** (2021) Liquid-liquid phase separation (LLPS) in cellular physiology and tumor biology. *Am. J. Cancer Res.*, 11, 3766-3776.
- Peng, P.H., Lai, J.C.Y., Hsu, K.W., **Wu, K.J.** (2021) Induction of epithelial-mesenchymal transition (EMT) by hypoxia-induced lncRNA *RP11-367G18.1* through activating the histone 4 lysine 16 acetylation (H4K16Ac) mark. *Am. J. Cancer Res.*, 11, 2618-2636.
- Peng, P.H., Hsu, K.W., Lai, J.C.Y., **Wu, K.J.** (2021) The role of hypoxia-induced long noncoding RNAs (lncRNAs) in tumorigenesis and metastasis. *Biomed. J.*, 44, 521-533.
- **Wu, K.J.** (2020) The epigenetic roles of DNA N^6 -methyladenine (6mA) modification in eukaryotes. *Cancer Letters*, 494, 40-46 (review article).
- Peng, P.H., Lai, J.C.Y., Hsu, K.W., **Wu, K.J.** (2020) Hypoxia-induced lncRNA RP11-300F4.3 promotes epithelial-mesenchymal transition and metastasis through upregulating EMT regulators. *Cancer Letters*, 483, 35-45.
- **Wu, K.J.** (2020) The role of miRNA biogenesis and DDX17 in tumorigenesis and cancer stemness. *Biomedical J.* 43, 107-114 (review article).
- Hao, Z., Wu, T., Cui, X., Zhu, P., Tan, C., Dou, X., Hsu, K.W., Lin, Y.T., Peng, P.H., Zhang, L.S., Gao, Y., Hu, L., Sun, H.L., Zhu, A., Liu, J., **Wu, K.J.**, He, C. (2020) N^6 -deoxyadenosine methylation in mammalian mitochondrial DNA. *Molecular Cell*, 78, 382-395 (doi: 10.1016/j.molcel.2020.02.018.)
- Lin, Y.T., **Wu, K.J.** (2020) Epigenetic regulation of epithelial-mesenchymal transition: focusing on hypoxia and TGF- β signaling. *J. Biomed. Sci.* 27, 39 (review article).
- Kao, S.H., Cheng, W.C., Wang, Y.T., Yeh, H.Y., Chen, Y.J., Wu, H.T., Tsai, M.H., **Wu, K.J.** (2019) Regulation of miRNA Biogenesis and Histone Modification by K63-polyubiquitinated DDX17 Controls Cancer Stem-like Features. *Cancer Research*, 79, 2549-2563.
- Kao, S.H., Wu, H.T., **Wu, K.J.** (2018) Ubiquitination by Huwe1 in tumorigenesis and beyond. *J. Biomedical Sciences*, 25, 67 (invited review).
- Wu, M.Z., Cheng, W.C., Chen, S.F., Nieh, S., O'Connor, C., Liu, C.L., Tsai, W.W., Wu, Martin, L., Lin, Y.S., **Wu, K.J.**, Lu, L.F and Izpisua Belmonte, J.C. (2017) miR25/93 mediates hypoxia-induced immunosuppression by repressing cGAS. *Nature Cell Biology*, 19, 1286-1296.
- Wu, H.T., Kuo, Y.C., Huang, C.H., Hung, J.J., Chen, W.Y., Chou, T.Y., Chen, Y., Y.J. Chen, Y.J. Chen, Cheng, W.C., Teng, S.C., **Wu, K.J.** (2016) K63-polyubiquitinated HAUSP deubiquitinates HIF-1A and dictates H3K56 acetylation to promote hypoxia-induced tumor progression. *Nature Communications*, 7, 13644.
- Wang, J.Q., Wu, M.Z., **Wu, K.J.** (2016) Analysis of Epigenetic Regulation of Hypoxia-induced Epithelial-Mesenchymal Transition in Cancer Cells by Quantitative Chromatin Immunoprecipitation. *Methods in Molecular Biology*, 1436, 23-9 (invited book chapter).

- Chen, S.Y., Teng, S.C., Cheng, T.H., **Wu, K.J.** (2016) MiR-1236 regulates hypoxia-induced epithelial-mesenchymal transition and cell migration/invasion through repressing SENP1 and HDAC3. *Cancer Letters*, 378, 59-67 (2016).
- Chen, H.F., Huang, C.H., Liu, C.J., Hung, J.J., Hsu, C.C., Teng, S.C., **Wu, K.J.** (2014) Twist1 induces endothelial differentiation of tumor cells through the Jagged1-KLF4 axis. *Nature Communications*, 5, 4697.
- Tsai, Y.P., Chen, H.F., Chen, S.Y., W.C. Cheng, H.W. Wang, Z.J. Shen, Teng, S.C., Chuan, H., **Wu, K.J.** (2014) TET1 regulates hypoxia-induced epithelial-mesenchymal transition by acting as a co-activator. *Genome Biology*, 15, 513.
- Tsai, Y.P., **Wu, K.J.** (2014) Epigenetic regulation of hypoxia-responsive gene expression: focusing on chromatin and DNA modifications. *Int. J. Cancer*, 134, 249-256. (Review article)
- Wu, C.Y., Tsai, Y.P., Wu, M.Z., Teng, S.C., **Wu, K.J.** (2012) Epigenetic reprogramming and post-transcriptional regulation during the epithelial-mesenchymal transition. *Trends in Genetics*, 28, 454-463. (Review article)
- Tsai, Y.P., **Wu, K.J.** (2012) Hypoxia-regulated target genes implicated in cancer metastasis. *J. Biomed. Sci.* 19, 102. (Review article)
- Yang, W.H., Lan, H.Y., Huang, C.H., Tai, S.K., Tzeng, C.H., Kao, S.Y., **Wu, K.J.**, Hung, M.C., and Yang, M.H. (2012) Rac1 activation mediates Twist1-induced cancer cell migration. *Nature Cell Biology*, 14, 366-374.
- Wu, M.Z., Tsai, Y.P., Yang, M.H., Huang, C.H., Chang, S.Y., Chang, C.C., Teng, S.C., **Wu, K.J.** (2011) Interplay between HDAC3 and WDR5 is essential for hypoxia-induced epithelial-mesenchymal transition. *Molecular Cell*, 43, 811-822.
- Yang, M.H., Hsu, D.S., Wang, H.W., Yang, W.H., Kao, S.Y., Tzeng, C.H., Tai, S.K., Chang, S.Y., O.K. Lee, **Wu, K.J.** (2010) Bmi1 is essential in Twist1-induced epithelial-mesenchymal transition. (co-corresponding author) *Nature Cell Biology*, 12, 982-992.
- Hung, J.J., Yang, M.H., Hsu, H.S., Hsu, W.H., Liu, J.S. **Wu, K.J.** (2009) Prognostic significance of hypoxia-inducible factor-1alpha, TWIST1, and Snail expression in resectable non-small cell lung cancer. *Thorax*, 64, 1082-1089.
- Yang, M.H., **Wu, K.J.** (2008) TWIST activation by hypoxia inducible factor-1 (HIF-1): implications in metastasis and development. *Cell Cycle*, 7, 2090-2096 (Review article).
- Yang, M.H., Wu, M.Z., Chiou, S.H., Chang, S.Y., Chen, P.M., Liu, C.J., Teng, S.C., **Wu, K.J.** (2008) Direct regulation of TWIST by HIF-1alpha promotes metastasis. *Nature Cell Biology*, 10, 295-305.
- Yang, M.H., Chang, S.Y., Chiou, S.H., Liu, C.J., Chi, C.W., Chen, P.M., Teng, S.C., **Wu, K.J.** (2007) Overexpression of NBS1 induces epithelial-mesenchymal transition and co-expression of NBS1 and Snail predicts metastasis of head and neck cancer. *Oncogene*, 26, 1459-1467.
- Yang, M.H., Chiang, W.C., Chou, T.Y., Chang, S.Y., Chen, P.M., Teng, S.C., **Wu, K.J.** (2006) Increased NBS1 Expression Is a Prognostic Marker of Aggressive Head And Neck Cancer And Overexpression of NBS1 Contributes to Transformation. *Clin. Cancer Res.*, 12, 507-515.
- Chiang, Y.C., Teng, S.C., Su, Y.N., Hsieh, F.C., **Wu, K.J.** (2003) c-MYC directly regulates the transcription of *NBS1* gene involved in DNA double-strand break repair. *J. Biol. Chem.* 278, 19286-19291.
- **Wu, K.J.**, Grandori, C., Amacker, M., Simon-Vermot, N., Polack, A., Lingner, J., Dalla-Favera, R. (1999). Direct activation of *TERT* transcription by c-MYC. *Nature Genet.* 21, 220-224.
- **Wu, K.J.**, Polack, A., Dalla-Favera, R. (1999). Coordinated regulation of iron controlling genes, H-ferritin and IRP2, by c-MYC. *Science* 283, 676-679.