

## Yu Liu (刘玉), PhD

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### Key Research Interests

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- To investigate the molecular mechanisms of p53 cooperating with its neighbor genes in cancer
- To establish novel genetically defined preclinical cancer models
- To generate novel targeted therapies of cancer using high-throughput RNAi and CRISPR pooled library screening technologies with these cancer models
- To investigate impact of aneuploidy on cancers.

### Education and Training

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- 2015-present **Professor**, State Key Laboratory of Biotherapy and Cancer Center, Sichuan University, West China Hospital, Chengdu, China
- 2010-2015 **Research Fellow**, Cold Spring Harbor Spring Laboratory, NY, USA and **Research Scholar**, Memorial Sloan Kettering Cancer Center, NY, USA  
Mentor: Dr. Scott W. Lowe
- 2008-2010 **Research Fellow**, University of Michigan, Ann Arbor, USA  
Mentor: Drs. Pan Zheng and Yang Liu
- 2001-2008 **PhD**, Albert Einstein College of Medicine, Bronx, NY, USA.  
Mentors: Dr. Amy Chang
- 1997-2000 **MS**, Beijing Normal University, Beijing, China
- 1997-2000 **BS**, Beijing Normal University, Beijing, China

### Teaching and Mentoring Experience

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- 2015 Scientific Writing in English in Sichuan University
- 2011 Science 101 in Cold Spring Harbor Laboratory
- 2011 Science camp in I-CON at SUNY Stony Brook
- 2003-2008 Mentor and in lab supervisor for five rotating or exchange students
- 1998 Teaching assistant in the molecular biology and biochemistry laboratory course

### Publication

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1. **Liu, Yu\***, Chen, C. \*, Xu, Z., Scuoppo, C., Rillaan, CD., Gao, J., Spitzer, B., Bosbach, B., Kastenhuber, ER., Baslan, T., Ackermann, S., Cheng, L., Wang, Q., Niu, T., Schultz, N., Levine, RL., Mills, AA.& Lowe, SW., Deletions linked to TP53 loss drive cancer through p53-independent mechanisms. 2016, *Nature*, 531:471-5. (\* equally contribution)
2. Ye, P., \* **Liu, Yu\***, Chen, C., Liu, CG., Liu, X., Liu, Y. & Zheng, P., miRNA biogenesis regulated by the TOR pathway. 2014, *Molecular Cell*, (\* equally contribution)
3. Chen, C., **Liu, Yu**, Rappaport, AR., Kitzing, T., Schultz N., Zhao, Z., Shroff, AS., Dickins, R., Vakoc, Cr., Bradner, Je., Stock, W., LeBeau, MM., Shannon, KM., Kogan, S., Zuber, J & Lowe, SW. MLL3 is a

- haploinsufficient 7q tumor suppressor in acute myeloid leukemia. 2014, *Cancer Cell*, 25(5):652
4. Chen, C., **Liu, Yu**, Lu, C., Cross, JR., Morris JP 4th, Shroff AS, Ward PS, Bradner JE, Thompson C & Lowe SW. Cancer-associated IDH2 mutants drive an acute myeloid leukemia that is susceptible to Brd4 inhibition. 2013, *Genes Dev.*, 27(18):1974
  5. Wu, Q., **Liu, Yu**, Chen, C., Ikenoue, T., Qiao, Y., Li, CS., Li, W., Guan, KL., Liu, Y., & Zheng, P., The Tuberous Sclerosis Complex-Mammalian Target of Rapamycin Pathway Maintains the Quiescence and Survival of Naive T Cells. 2011, *J Immunol.*, 187(3):1106
  6. Chen, C., **Liu, Yu**, Liu, Y. & Zheng, P., Mammalian target of rapamycin activation underlies HSC defects in autoimmune disease and inflammation in mice. 2010, *J Clin Invest*, 120(11): 4091
  7. Chen, C., **Liu, Yu**, Liu, Y. & Zheng, P., mTOR regulation and therapeutic rejuvenation of aging hematopoietic stem cells. 2009, *Sci Signal*, 2(98):ra75
  8. Chen, C., **Liu, Yu**, Liu, Y. & Zheng, P., The axis of mTOR-mitochondria-ROS and stemness of the hematopoietic stem cells. 2009, *Cell Cycle*, 8:1158
  9. Chen, C., **Liu, Yu**, Liu, R., Ikenoue, T., Guan, KL., Liu, Y. & Zheng, P., TSC-mTOR maintains quiescence and function of hematopoietic stem cells by repressing mitochondrial biogenesis and reactive oxygen species. 2008, *J Exp Med.*, 205:2397
  10. **Liu, Yu** & Chang, A., A mutant plasma membrane protein is stabilized upon loss of Yvh1, a novel ribosome assembly factor. 2008, *Genetics*, 181(3):907
  11. **Liu, Yu** & Chang, A., Heat shock response relieves ER stress. 2008, *EMBO J.* 27(7):1049
  12. Han, S., **Liu, Yu** & Chang, A., Cytoplasmic Hsp70 promotes ubiquitination for ER-associated degradation of a misfolded mutant of the yeast plasma membrane ATPase, PMA1. 2007, *J Biol Chem.* 282:26140
  13. **Liu, Yu**, Sitaraman, S., Chang, A., Multiple degradation pathways for misfolded mutants of the yeast plasma membrane ATPase, Pma1. 2006, *J Biol Chem.* 281(42):31457
  14. **Liu, Yu**, Chang, A., Quality control of a mutant plasma membrane ATPase: ubiquitylation prevents cell-surface stability. 2006, *J Cell Sci.* 119:360
  15. Wei, Q, Holzer, M., Brueckner, MK., **Liu Yu**, Arendt, T., Dephosphorylation of tau protein by calcineurin triturated into neural living cells. 2002, *Cell Mol Neurobiol.* 22:13
  16. Wei Q, Cui L, **Liu Yu**, et al., The experiment guide for molecular biology, *China Higher Education Press Beijing and Springer-Verlag Heidelberg*, 1999.

## Honors

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2014	AACR-Millennium Fellowships in Lymphoma Research
1996	Biochemistry Scholarship, Beijing Normal University
1994	Biochemistry Scholarship, Beijing Normal University