

Professor, director of Hematologic Tumor Molecular Genetics Laboratory, National Key Laboratory of Biotherapy and Cancer Center, West China Medical School, Sichuan University.

My studies focus on the molecular mechanism of the self-renewal and transformation of hematopoietic stem cells. My previous work uncovered the critical role of mTOR pathway in HSC under physiological, pathological and aging conditions. We studied the functions of chromosome large deletions on hematopoietic malignancies and identified the first tumor suppressor MLL3 in Chromosome 7q in leukemia.

### **Education and Training**

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- 2010-2014 **Research Fellow**, Cold Spring Harbor Spring Laboratory, NY, USA and Memorial Sloan Kettering Cancer Center, NY, USA. Mentor: Dr. Scott W. Lowe
- 2003-2009 **PhD**, Cell and Developmental Biology Program, University of Michigan-Ann Arbor, MI, USA. Mentors: Drs. Pan Zheng and Yang Liu.
- 1995-1999 **BS**, Peking University, Beijing, China

### **Selected Publication**

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1. Liu Y.\*, **Chen C\***, Scuoppo C., Lowe SW. The function of big chromosome deletions in tumorigenesis. 2016, *Nature*, 531:471-5. (\*: co-first author)
2. Ye P.\*, Liu Y.\*, **Chen C**, Liu Y., Zheng P. An mTOR-Mdm2-Drosha Pathway for miRNA Biogenesis in Hematopoiesis and Cellular Response to Glucose Deprivation. *Molecular Cell*. 2015 Feb 19;57(4):708-20.. (\*: co-first author)
3. **Chen C**, Liu Y, Rappaport AR, Kitzing T, Schultz N, Zhao Z, Shroff AS, Dickins RA, Vakoc CR, Bradner JE, Stock W, LeBeau MM, Shannon KM, Kogan S, Zuber J, Lowe SW. MLL3 functions as a chromosome 7q tumor suppressor in acute myeloid leukemia. *Cancer Cell* 2014 May 12; 25(5): 652-665.  
Comment in: Will B. and Steidl U. Combinatorial Haplo-Deficient Tumor Suppression in 7q-Deficient Myelodysplastic Syndrome and Acute Myeloid Leukemia. *Cancer Cell* 2014 May 12; 25(5): 555-557
4. **Chen C**, Liu Y, 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. *Genes Dev*. 2013 Sep 15;27(18):1974-85.  
Comment in: Lokody I. Metabolism: IDH2 drives cancer in vivo. *Nat Rev Cancer*. 2013 Oct 17. doi: 10.1038/nrc3619.
5. **Chen C**, Liu Y, Liu Y, Zheng P. mTOR Activation Underlies Hematopoietic Stem Cell Defects in Autoimmune Diseases and Inflammation in the Mice. *Journal of Clinical Investigation* 2010 Nov 1;120(11):4091-101.

Comment in: Emerson SG and Garrett RW. Pharmacologic eigenvalues: beating the rap on bone marrow failure. *Journal of Clinical Investigation* 2010 Nov;120(11):3813-5

6. **Chen C**, Liu Y, Liu Y, Zheng P. 2009. mTOR Regulation and Therapeutic Rejuvenation of Aging Hematopoietic Stem Cells. *Science Signaling* 2009 Nov 24;2(98): ra75.

Comment in: Adler EM. 2009: signaling breakthroughs of the year. *Science Signaling* 2010 Jan 5;3(103):eg1

7. Wang LZ, Liu RH, Li W, **Chen C**, Katoh H, Chen GY, McNally BA, Lin L, Zhou P, Zuo T, Cooney KA, Liu Y, Zheng P. 2009. Somatic Single-hits Inactivate the X-linked Tumor Suppressor FOXP3 in the Prostate. *Cancer Cell* 2009 Oct 6;16(4):336-46.
8. **Chen C**, Liu Y, Liu Y, Zheng P. mTOR-mitochondria-ROS axis and stemness of the hematopoietic stem cells. *Cell Cycle* 2009 Apr 15;8(8):1158-60.
9. **Chen C**, Liu Y, 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. *J Exp Med*. 2008 Sep 29;205(10):2397-408.

## Honors

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2015	National Science Fund for Excellent Young Scholar
2014	National "Young Talent 1000"
2014	Sichuan "Talent 1000"
2014	Keystone Symposia Future of Science Fund Scholarship
2011-2014	Leukemia & Lymphoma Society Career Development Program Award
2009	Nominee of Best Thesis Award, University of Michigan-Ann Arbor
2007	Rackham Conference Travel Grant, University of Michigan-Ann Arbor
2003	PIBS Fellowship, University of Michigan-Ann Arbor
1998	Ouyang Ailun Scholarship, Peking University

## Selected Presentations

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2015	"Deciphering the Role of Large Chromosome Deletions in Hematological Malignancies" , Acute Leukemia XV, Munich, Germany. (Invited speaker)
2014	"Cancer-associated IDH2 mutants drive an acute myeloid leukemia that is susceptible to Brd4 inhibition", Keystone Symposia Cancer Epigenetics, Santa Fe, NM (Awarded poster)
2012	"shRNA platforms for identifying driver mutations and therapeutical targets in AML", CSH-Asia Differentiation Therapy and Advances in Leukemia, Suzhou, China (selected oral)
2008	"mTOR pathway on the aging of hematopoietic stem cells", Molecular Genetics of Aging at Cold Spring Harbor Laboratory (selected oral)