

**Jiawang Zhang**  
**Publications**

Sheng Y, Ma R, Yu C, Wu Q, Zhang S, Paulsen K, **Zhang J**, Ni H, Huang Y, ..., Qian Z. **Role of c-Myc haploinsufficiency in the maintenance of HSCs in mice.** *Blood*. 2021 Feb 4;137(5):610-623. doi: 10.1182/blood.2019004688. PMID: 33538795.

Zhang L, Mack R, Breslin P, **Zhang J.** **Molecular and cellular mechanisms of aging in hematopoietic stem cells and their niches.** *J Hematol Oncol*. 2020 Nov 23;13(1):157. doi: 10.1186/s13045-020-00994-z. PMID: 33228751; PMCID: PMC7686726.

Sheng Y, Ma R, Yu C, Wu Q, Zhang S, Paulsen K, **Zhang J**, Ni H, Huang Y, ..., Qian Z. **Role of c-Myc haploinsufficiency in the maintenance of HSCs.** *Blood*. 2020 Aug 21;blood.2019004688. doi: 10.1182/blood.2019004688. Epub ahead of print. PMID: 32822452.

Zhang L, Li J, Xu H, Shao X, Fu L, Hou Y, Hao C, Li W, ..., **Zhang J**, Zhang J. **Myc-Miz1 signaling promotes self-renewal of leukemia stem cells by repressing Cebpa and Cebpδ.** *Blood*. 2020 Apr 2;135(14):1133-1145. doi: 10.1182/blood.2019001863. PMID: 32040550.

Li J, Zhang L, Yin L, Ma N, Wang T, Wu Y, Wang M, Yang X, ..., **Zhang J**, Zhang J. **In Vitro Expansion of Hematopoietic Stem Cells by Inhibition of Both GSK3 and p38 Signaling.** *Stem Cells Dev*. 2019 Nov 15;28(22):1486-1497. doi: 10.1089/scd.2019.0119. Epub 2019 Oct 29. PMID: 31552804.

Joshi K, Zhang L, Breslin S J P, **Zhang J.** **Leukemia Stem Cells in the Pathogenesis, Progression, and Treatment of Acute Myeloid Leukemia.** *Adv Exp Med Biol*. 2019;1143:95-128. doi: 10.1007/978-981-13-7342-8\_5. PMID: 31338817.

Zhang W, Zhao JM, Lin J, Hu CZ, Zhang WB, Yang WL, Zhang J, **Zhang JW**, Zhu J. **Adaptive Fibrogenic Reprogramming of Osteosarcoma Stem Cells Promotes Metastatic Growth.** *Cell Rep*. 2018 Jul 31;24(5):1266-1277.e5. doi: 10.1016/j.celrep.2018.06.103. PMID: 30067981.

Li J, Volk A, Zhang J, Cannova J, Dai S, Hao C, Hu C, Sun J, Xu Y, ..., **Zhang J.** **Sensitizing leukemia stem cells to NF-κB inhibitor treatment in vivo by inactivation of both TNF and IL-1 signaling.** *Oncotarget*. 2017 Jan 31;8(5):8420-8435. doi: 10.18632/oncotarget.14220. PMID: 28039479; PMCID: PMC5352411.

Liang K, Volk AG, Haug JS, Marshall SA, Woodfin AR, Bartom ET, Gilmore JM, Florens L, ..., **Zhang J**, ..., Shilatifard A. **Therapeutic Targeting of MLL Degradation Pathways in MLL-Rearranged Leukemia.** *Cell*. 2017 Jan 12;168(1-2):59-72.e13. doi: 10.1016/j.cell.2016.12.011. Epub 2017 Jan 5. PMID: 28065413; PMCID: PMC5351781.

Xin J, You D, Breslin P, Li J, Zhang J, Wei W, Cannova J, Volk A, Gutierrez R, ..., **Zhang J.** **Sensitizing acute myeloid leukemia cells to induced differentiation by inhibiting the RIP1/RIP3 pathway.** *Leukemia*. 2017 May;31(5):1154-1165. doi: 10.1038/leu.2016.287. Epub 2016 Oct 17. PMID: 27748372; PMCID: PMC5457287.

Xin J, Breslin P, Wei W, Li J, Gutierrez R, Cannova J, Ni A, Ng G, Schmidt R, ..., **Zhang J.** **Necroptosis in spontaneously-mutated hematopoietic cells induces autoimmune bone marrow failure in mice.**

Haematologica. 2017 Feb;102(2):295-307. doi: 10.3324/haematol.2016.151514. Epub 2016 Sep 15. PMID: 27634200; PMCID: PMC5286937.

Li J, Zhang J, Tang M, Xin J, Xu Y, Volk A, Hao C, Hu C, Sun J, ..., **Zhang J. Hematopoietic Stem Cell Activity Is Regulated by Pten Phosphorylation Through a Niche-Dependent Mechanism.** Stem Cells. 2016 Aug;34(8):2130-44. doi: 10.1002/stem.2382. Epub 2016 May 19. PMID: 27096933.

Jiang X, Hu C, Arnovitz S, Bugno J, Yu M, Zuo Z, Chen P, Huang H, ..., **Zhang J, ..., Chen J. miR-22 has a potent anti-tumour role with therapeutic potential in acute myeloid leukaemia.** Nat Commun. 2016 Apr 26;7:11452. doi: 10.1038/ncomms11452. PMID: 27116251; PMCID: PMC5477496.

Kothari AN, Arffa ML, Chang V, Blackwell RH, Syn WK, **Zhang J**, Mi Z, Kuo PC. **Osteopontin-A Master Regulator of Epithelial-Mesenchymal Transition.** J Clin Med. 2016 Mar 23;5(4):39. doi: 10.3390/jcm5040039. PMID: 27023622; PMCID: PMC4850462.

Shang N, Arteaga M, Zaidi A, Cotler SJ, Breslin P, Ding X, Kuo P, Nishimura M, **Zhang J**, Qiu W. **FAK Kinase Activity Is Required for the Progression of c-MET/ $\beta$ -Catenin-Driven Hepatocellular Carcinoma.** Gene Expr. 2016;17(1):79-88. doi: 10.3727/105221616X691604. Epub 2016 May 2. PMID: 27142958; PMCID: PMC5064945.

Li Z, Chen P, Su R, Li Y, Hu C, Wang Y, Arnovitz S, He M, ..., **Zhang J, ..., Chen J. Overexpression and knockout of miR-126 both promote leukemogenesis.** Blood. 2015 Oct 22;126(17):2005-15. doi: 10.1182/blood-2015-04-639062. Epub 2015 Sep 11. PMID: 26361793; PMCID: PMC4616234.

Cannova J, Breslin S J P, **Zhang J. Toll-like receptor signaling in hematopoietic homeostasis and the pathogenesis of hematologic diseases.** Front Med. 2015 Sep;9(3):288-303. doi: 10.1007/s11684-015-0412-0. Epub 2015 Aug 22. PMID: 26297301.

You D, Xin J, Volk A, Wei W, Schmidt R, Scurti G, Nand S, Breuer EK, Kuo PC, Breslin P, ..., **Zhang J. FAK mediates a compensatory survival signal parallel to PI3K-AKT in PTEN-null T-ALL cells.** Cell Rep. 2015 Mar 31;10(12):2055-68. doi: 10.1016/j.celrep.2015.02.056. Epub 2015 Mar 19. PMID: 25801032; PMCID: PMC7001526.

Driver J, Weber CE, Callaci JJ, Kothari AN, Zapf MA, Roper PM, Borys D, Franzen CA, ..., **Zhang J, ..., Mi Z. Alcohol inhibits osteopontin-dependent transforming growth factor- $\beta$ 1 expression in human mesenchymal stem cells.** J Biol Chem. 2015 Apr 17;290(16):9959-73. doi: 10.1074/jbc.M114.616888. Epub 2015 Feb 24. PMID: 25713073; PMCID: PMC4400371.

Weber CE, Kothari AN, Wai PY, Li NY, Driver J, Zapf MA, Franzen CA, Gupta GN, ..., **Zhang J, ..., Mi Z. Osteopontin mediates an MZF1-TGF- $\beta$ 1-dependent transformation of mesenchymal stem cells into cancer-associated fibroblasts in breast cancer.** Oncogene. 2015 Sep 10;34(37):4821-33. doi: 10.1038/onc.2014.410. Epub 2014 Dec 22. PMID: 25531323; PMCID: PMC4476970.

Liu X, Zhang J, Li J, Volk A, Breslin P, **Zhang J**, Zhang Z. **The synergistic repressive effect of NF- $\kappa$ B and JNK inhibitor on the clonogenic capacity of Jurkat leukemia cells.** PLoS One. 2014 Dec 19;9(12):e115490. doi: 10.1371/journal.pone.0115490. PMID: 25526629; PMCID: PMC4272284.

Shang N, Arteaga M, Zaidi A, Stauffer J, Cotler SJ, Zeleznik-Le NJ, **Zhang J**, Qiu W. **FAK is required for c-Met/ $\beta$ -catenin-driven hepatocarcinogenesis**. *Hepatology*. 2015 Jan;61(1):214-26. doi: 10.1002/hep.27402. Epub 2014 Nov 25. PMID: 25163657; PMCID: PMC4280291.

Volk A, Li J, Xin J, You D, Zhang J, Liu X, Xiao Y, Breslin P, Li Z, ..., **Zhang J**. **Co-inhibition of NF- $\kappa$ B and JNK is synergistic in TNF-expressing human AML**. *J Exp Med*. 2014 Jun 2;211(6):1093-108. doi: 10.1084/jem.20130990. Epub 2014 May 19. PMID: 24842373; PMCID: PMC4042653.

Kim SI, Lee SY, Wang Z, Ding Y, Haque N, **Zhang J**, Zhou J, Choi ME. **TGF- $\beta$ -activated kinase 1 is crucial in podocyte differentiation and glomerular capillary formation**. *J Am Soc Nephrol*. 2014 Sep;25(9):1966-78. doi: 10.1681/ASN.2013030252. Epub 2014 Mar 20. PMID: 24652804; PMCID: PMC4147968.

Zhang J, Seet CS, Sun C, Li J, You D, Volk A, Breslin P, Li X, Wei W, ..., **Zhang J**. **p27kip1 maintains a subset of leukemia stem cells in the quiescent state in murine MLL-leukemia**. *Mol Oncol*. 2013 Dec;7(6):1069-82. doi: 10.1016/j.molonc.2013.07.011. Epub 2013 Aug 20. PMID: 23988911; PMCID: PMC3898829.

Li NY, Weber CE, Wai PY, Cuevas BD, **Zhang J**, Kuo PC, Mi Z. **An MAPK-dependent pathway induces epithelial-mesenchymal transition via Twist activation in human breast cancer cell lines**. *Surgery*. 2013 Aug;154(2):404-10. doi: 10.1016/j.surg.2013.05.012. PMID: 23889968.

Jiang X, Huang H, Li Z, Li Y, Wang X, Gurbuxani S, Chen P, He C, ..., **Zhang J**, ..., Chen J. **Blockade of miR-150 maturation by MLL-fusion/MYC/LIN-28 is required for MLL-associated leukemia**. *Cancer Cell*. 2012 Oct 16;22(4):524-35. doi: 10.1016/j.ccr.2012.08.028. PMID: 23079661; PMCID: PMC3480215.

Li Z, Huang H, Chen P, He M, Li Y, Arnovitz S, Jiang X, He C, ..., **Zhang J**, Chen J. **miR-196b directly targets both HOXA9/MEIS1 oncogenes and FAS tumour suppressor in MLL-rearranged leukaemia**. *Nat Commun*. 2012 Feb 21;3:688. doi: 10.1038/ncomms1681. Erratum in: *Nat Commun*. 2018 Apr 10;9:16192. PMID: 22353710; PMCID: PMC3514459.

Xiao Y, Li H, Zhang J, Volk A, Zhang S, Wei W, Zhang S, Breslin P, **Zhang J**. **TNF- $\alpha$ /Fas-RIP-1-induced cell death signaling separates murine hematopoietic stem cells/progenitors into 2 distinct populations**. *Blood*. 2011 Dec 1;118(23):6057-67. doi: 10.1182/blood-2011-06-359448. Epub 2011 Oct 11. PMID: 21989986.

Rajasekaran K, Chu H, Kumar P, Xiao Y, Tinguely M, Samarakoon A, Kim TW, Li X, ..., **Zhang J**, Malarkannan S. **Transforming growth factor-beta-activated kinase 1 regulates natural killer cell-mediated cytotoxicity and cytokine production**. *J Biol Chem*. 2011 Sep 9;286(36):31213-24. doi: 10.1074/jbc.M111.261917. Epub 2011 Jul 19. PMID: 21771792; PMCID: PMC3173069.

Toth G, Zraly CB, Thomson TL, Jones C, Lapetino S, Muraskas J, **Zhang J**, Dingwall AK. **Congenital anomalies and rhabdoid tumor associated with 22q11 germline deletion and somatic inactivation of the SMARCB1 tumor suppressor**. *Genes Chromosomes Cancer*. 2011 Jun;50(6):379-88. doi: 10.1002/gcc.20862. Epub 2011 Mar 15. PMID: 21412926; PMCID: PMC3075385.

Fu CT, Zhu KY, Mi JQ, Liu YF, Murray ST, Fu YF, Ren CG, Dong ZW, ..., **Zhang JW**, Liu TX. **An evolutionarily conserved PTEN-C/EBPalpha-CTNNA1 axis controls myeloid development and transformation**. *Blood*. 2010 Jun 10;115(23):4715-24. doi: 10.1182/blood-2009-11-255778. Epub 2010 Apr 6. PMID: 20371743.

Niu C, **Zhang J**, Breslin P, Onciu M, Ma Z, Morris SW. **c-Myc is a target of RNA-binding motif protein 15 in the regulation of adult hematopoietic stem cell and megakaryocyte development.** *Blood*. 2009 Sep 3;114(10):2087-96. doi: 10.1182/blood-2009-01-197921. Epub 2009 Jun 19. PMID: 19542301; PMCID: PMC2744570.

Guo Y, Niu C, Breslin P, Tang M, Zhang S, Wei W, Kini AR, Paner GP, Alkan S, ..., **Zhang J**. **c-Myc-mediated control of cell fate in megakaryocyte-erythrocyte progenitors.** *Blood*. 2009 Sep 3;114(10):2097-106. doi: 10.1182/blood-2009-01-197947. Epub 2009 Apr 16. PMID: 19372257; PMCID: PMC2744571.

Popovic R, Riesbeck LE, Velu CS, Chaubey A, **Zhang J**, Achille NJ, Erfurth FE, Eaton K, Lu J, ..., Zeleznik-Le NJ. **Regulation of mir-196b by MLL and its overexpression by MLL fusions contributes to immortalization.** *Blood*. 2009 Apr 2;113(14):3314-22. doi: 10.1182/blood-2008-04-154310. Epub 2009 Feb 2. PMID: 19188669; PMCID: PMC2665896.

Tang M, Wei X, Guo Y, Breslin P, Zhang S, Zhang S, Wei W, Xia Z, Diaz M, ..., **Zhang J**. **TAK1 is required for the survival of hematopoietic cells and hepatocytes in mice.** *J Exp Med*. 2008 Jul 7;205(7):1611-9. doi: 10.1084/jem.20080297. Epub 2008 Jun 23. PMID: 18573910; PMCID: PMC2442639.

**Zhang J**, Li L. **Stem cell niche: microenvironment and beyond.** *J Biol Chem*. 2008 Apr 11;283(15):9499-503. doi: 10.1074/jbc.R700043200. Epub 2008 Feb 13. PMID: 18272517.

Hofmeister CC, **Zhang J**, Knight KL, Le P, Stiff PJ. **Ex vivo expansion of umbilical cord blood stem cells for transplantation: growing knowledge from the hematopoietic niche.** *Bone Marrow Transplant*. 2007 Jan;39(1):11-23. doi: 10.1038/sj.bmt.1705538. PMID: 17164824.

**Zhang J**, He XC, Tong WG, Johnson T, Wiedemann LM, Mishina Y, Feng JQ, Li L. **Bone morphogenetic protein signaling inhibits hair follicle anagen induction by restricting epithelial stem/progenitor cell activation and expansion.** *Stem Cells*. 2006 Dec;24(12):2826-39. doi: 10.1634/stemcells.2005-0544. Epub 2006 Sep 7. PMID: 16960130.

**Zhang J**, Grindley JC, Yin T, Jayasinghe S, He XC, Ross JT, Haug JS, Rupp D, Porter-Westpfahl KS, ..., Li L. **PTEN maintains haematopoietic stem cells and acts in lineage choice and leukaemia prevention.** *Nature*. 2006 May 25;441(7092):518-22. doi: 10.1038/nature04747. Epub 2006 Apr 23. PMID: 16633340.

**Zhang J**, Li L. **BMP signaling and stem cell regulation.** *Dev Biol*. 2005 Aug 1;284(1):1-11. doi: 10.1016/j.ydbio.2005.05.009. PMID: 15963490.

He XC, **Zhang J**, Li L. **Cellular and molecular regulation of hematopoietic and intestinal stem cell behavior.** *Ann N Y Acad Sci*. 2005 May;1049:28-38. doi: 10.1196/annals.1334.005. PMID: 15965105.

He XC, **Zhang J**, Tong WG, Tawfik O, Ross J, Scoville DH, Tian Q, Zeng X, He X, ..., Li L. **BMP signaling inhibits intestinal stem cell self-renewal through suppression of Wnt-beta-catenin signaling.** *Nat Genet*. 2004 Oct;36(10):1117-21. doi: 10.1038/ng1430. Epub 2004 Sep 19. PMID: 15378062.

**Zhang J**, Li L. **25-year mystery unveiled: Hematopoietic stem cell niche is found.** *Discov Med*. 2003 Dec;3(19):55-8. PMID: 20705042.

**Zhang J**, Niu C, Ye L, Huang H, He X, Tong WG, Ross J, Haug J, Johnson T, ..., Li L. **Identification of the haematopoietic stem cell niche and control of the niche size.** *Nature*. 2003 Oct 23;425(6960):836-41. doi: 10.1038/nature02041. PMID: 14574412.

Akashi K, He X, Chen J, Iwasaki H, Niu C, Steenhard B, **Zhang J**, Haug J, Li L. **Transcriptional accessibility for genes of multiple tissues and hematopoietic lineages is hierarchically controlled during early hematopoiesis.** *Blood*. 2003 Jan 15;101(2):383-9. doi: 10.1182/blood-2002-06-1780. Epub 2002 Sep 5. PMID: 12393558.