

Jiangwen Zhang, Ph.D.

EDUCATION

Ph.D. Molecular Biology, Johns Hopkins University School of Medicine, 11/2003

M.S. Computer Science, Johns Hopkins University

B.S. Cell Biology, Wu Han University

PROFESSIONAL EXPERIENCE

Associate Professor, 01/2013-present

School of Biological Sciences, Univ of Hong Kong

Sr. Systems Biologist and Bioinformatician, 07/2005-07/2012

Harvard University FAS Center for Systems Biology, Cambridge, MA 02138

Postdoctoral Fellow in personalized medicine and bioinformatics, 11/2003-06/2005

Johns Hopkins University School of Medicine, Dept. of Oncology, Baltimore, MD, USA

PUBLICATIONS

1. **Ru B***, Sun J*, Kang Q, Tong Y, Zhang J. (2018) A framework for identifying dysregulated chromatin regulators as master regulators in human cancer. **Bioinformatics**. bty836. (*co-first author)
2. Tong Y, Sun J, Wong CF, Kang Q, Ru B, Wong CN, Chan AS, Leung SY, **Zhang J**. (2018) MICMIC: identification of DNA methylation of distal regulatory regions with causal effects on tumorigenesis. **Genome Biology**. 19:73
3. Ru B, Tong Y, **Zhang J**. (2018) MR4Cancer: a web server prioritizing master regulators for cancer. **Bioinformatics**. bty658.
4. Tong Y, Ru B, **Zhang J**. (2018) miRNACancerMAP: an integrative web server inferring miRNA regulation network for cancer. **Bioinformatics**. bty320.
5. Chen M, **Zhang J**, Berger AH, DiIombi MS, Ng C, Fung J, Bronson RT, Castillo-Martin M, Thin TH, Cordon-Cardo C, Plevin R, Pandolfi PP. (2018) Compound haploinsufficiency of DOK2 and DUSP4 cooperates to promote lung tumorigenesis. **Journal of Clinical Investigation** (accepted)
6. Ru B, Sun J, Tong Y, Wong CN, Chandra A, Tang ATS, Chow LKY, Wun WL, Levitskaya Z, and **Zhang J** (2017) CR2Cancer: a database for chromatin regulators in human cancer **Nucleic Acids Research** 46(D1):D918-D924.
7. Padmanabhan A, **Tong Y**, Wu Q, **Zhang J**, Shah NP. (2018) Transcriptomic insights into the growth phase-and sugar-associated changes in the exopolysaccharide production mechanism of a high EPS-producing *Streptococcus thermophilus* ASCC 1275. **Frontiers in Microbiology**. 9:1919
8. Chen M, **Zhang J**, Sampieri K, Clohessy JG, Mendez L, Gonzalez-Billalabeitia E, Liu XS, Lee YR, Fung J, Katon JM, Menon AV, Webster KA, Ng C, Palumbieri MD, DiIombi MS, Breitkopf SB, Teruya-Feldstein J, Signoretti S, Bronson RT, Asara JM, Castillo-Martin M, Cordon-Cardo C, Pandolfi PP. An aberrant SREBP-dependent lipogenic program promotes metastatic prostate cancer. **Nature Genetics**. 2018 Feb;50(2):206-218.
9. Bezzi M, Seitzer N, Ishikawa T, Reschke M, Chen M, Wang G, Mitchell C, Ng C, Katon J, Lunardi A, Signoretti S, Clohessy JG, **Zhang J**, Pandolfi PP. Diverse genetic-driven immune landscapes dictate tumor progression through distinct mechanisms. **Nature Medicine** 2018 Feb;24(2):165-175.
10. Chen M, Wan L, **Zhang J**, Zhang J, Mendez L, Clohessy J, Berry K, Victor J, Yin Q, Yuan Z, Wei W, Pandolfi PP. (2017) Deregulated PP1 α phosphatase activity towards MAPK activation is antagonized by a tumor suppressive failsafe mechanism. **Nat Commun**. 2018 Jan 15;9(1):159. doi: 10.1038/s41467-017-02272-y.
11. Wang SY, Lau K, Lai KP, **Zhang J**, Tse AC, Li JW, Tong Y, Chan TF, Wong CK, Chiu JM, Au DW, Wong AS, Kong RY, Wu RS (2016) Hypoxia causes transgenerational impairments in reproduction of fish. **Nat Commun**. 2016; 7: 12114.

12. To SKY, Mak ASC, Eva Fung YM, Che CM, Li SS, Deng W, Ru B, **Zhang J**, Wong AST. β -catenin downregulates Dicer to promote ovarian cancer metastasis. *Oncogene*. 2017 Jun 26. doi: 10.1038/onc.2017.185.
13. Zhao Y, Fan D, **Ru B**, Cheng KW, Hu S, **Zhang J**, Li ETS, Wang M. (2016) 6-C-(E-phenylethenyl) naringenin induces cell growth inhibition and cytoprotective autophagy in colon cancer cells. *European Journal of Cancer*. 68:38-50
14. Bao X, Wang Y, Li X, Li XM, Liu Z, Yang T, Wong CF, **Zhang J**, Hao Q, Li XD. (2014) Identification of 'erasers' for lysine crotonylated histone marks using a chemical proteomics approach. *Elife*. 2014 Nov 4;3. doi: 10.7554/eLife.02999.
15. Toso A, Revandkar A, Di Mitri D, Guccini I, Proietti M, Sarti M, Pinton S, **Zhang J**, Kalathur M, Civenni G, Jarrossay D, Montani E, Marini C, Garcia-Escudero R, Scanziani E, Grassi F, Pandolfi PP, Catapano CV, Alimonti A. Enhancing chemotherapy efficacy in Pten-deficient prostate tumors by activating the senescence-associated antitumor immunity. (2014) *Cell Rep* 2014 Oct 25;9(1):75-89. Epub 2014 Sep 25.
16. Shen Y, **Zhang J**, Calarco JA, Zhang Y. (2014) EOL-1, The Homolog of the Mammalian Dom3Z, Regulates Olfactory Learning in *C. elegans*. *J Neurosci*. 2014 Oct 1;34(40):13364-70.
17. Picard M, **Zhang J**, Hanecock S, Derbeneva O, Golhar R, Golik P, O'Hearn S, Levy SE, Potluri P, Lvova M, Davila A, Lin CS, Perin JC, Rappaport EF, Hakonarson H, Trounce I, Procaccio V, Wallace DC. (2014) Progressive increase in mtDNA 3243A>G heteroplasmy results in abrupt transcriptional remodeling. *Proc Natl Acad Sci U S A*. 2014 Sep 23;111(38):E4033-42.
18. So MY, Tian ZP, Phoon YS, Sha S, Antoniou MN, Zhang J, Wu RSS, Tan-Un KC. (2014) Gene Expression Profile And Toxic Effects In Human Bronchial Epithelial Cells Exposed To Zearalenone. *PLoS One* 2014 2;9(5):e96404. Epub 2014 May 2.
19. Seiffers R, **Zhang J**, Matthews JC, Chen A, Tamrazian E, Babaniyi O, Selig M, Hynynen M, Woolf CJ, Brown RH Jr. ATF3 expression improves motor function in the ALS mouse model by promoting motor neuron survival and retaining muscle innervation. *Proc Natl Acad Sci U S A*. 2014 Jan 13;111(4):1622-7. Epub 2014 Jan 13.
20. Kats LM, Reschke M, Taulli R, Pozdnyakova O, Burgess K, Bhargava P, Straley K, Karnik R, Meissner A, Small D, Su SM, Yen K, **Zhang J**, Pandolfi PP (2014) Proto-Oncogenic Role of Mutant IDH2 in Leukemia Initiation and Maintenance. *Cell Stem Cell*. 2014 Mar 6; 14(3):329-41
21. Dose M, Emmanuel AO, Chaumeil J, **Zhang J**, Sun T, Germar K, Aghajani K, Davis EM, Keerthivasan S, Bredemeyer AL, Sleckman BP, Rosen ST, Skok JA, Le Beau MM, Georgopoulos K, Gounari F. β -Catenin induces T-cell transformation by promoting genomic instability (2014) *Proc Natl Acad Sci U S A*. 2014 Jan 7;111(1):391-6.
22. Joshi I, Yoshida T, Jena N, Qi X, **Zhang J**, Van Etten RA, Georgopoulos K (2014) Loss of Ikaros DNA-binding function confers integrin-dependent survival on pre-B cells and progression to acute lymphoblastic leukemia. *Nat Immunol*. 2014 Mar;15(3):294-304.
23. Yoshida T, Landhuis E, Dose M, Hazan I, **Zhang J**, Naito T, Jackson AF, Wu J, Perroti EA, Kaufmann C, Gounari F, Morgan BA, Georgopoulos K (2013) Transcriptional regulation of the *Ikzf1* locus. *Blood*. 2013 Oct 31;122(18):3149-59.
24. Zhang M, Song F, Liang L, Nan H, **Zhang J**, Liu H, Wang LE, Wei Q, Lee JE, Amos CI, Kraft P, Qureshi AA, Han J. (2013) Genome-wide association studies identify several new loci associated with pigmentation traits and skin cancer risk in European Americans. *Hum Mol Genet*. 2013 Jul 15;22(14):2948-59
25. Wang G, Lunardi A, **Zhang J**, Chen Z, Ala U, Webster KA, Tay Y, Gonzalez-Billalabeitia E, Egia A, Shaffer DR, Carver B, Liu XS, Taulli R, Kuo WP, Nardella C, Signoretti S, Cordon-Cardo C, Gerald WL, Pandolfi PP (2013) *Zbtb7a* suppresses prostate cancer through repression of a Sox9-dependent pathway for cellular senescence bypass and tumor invasion. *Nat Genet*. 2013 Jul;45(7):739-46.
26. Shoag J, Haq R, Zhang M, Liu L, Rowe GC, Jiang A, Koulisis N, Farrel C, Amos CI, Wei Q, Lee JE, **Zhang J**, Kupper TS, Qureshi AA, Cui R, Han J, Fisher DE, Arany Z. (2013) PGC-1 coactivators regulate MITF and the tanning response. *Mol Cell*. 2013 Jan 10;49(1):145-57.
27. **Zhang J***, Jackson Af*, Naito T*, Liu F, Dosei M, Seavitt J, Liu F, Dose M, Kashiwagi M, Yoshida T, Gounari F, Petrie H, Georgopoulos K. (2012) Harnessing of the Nucleosome Remodeling Deacetylase complex controls lymphocyte development and prevents leukemogenesis. *Nature Immunology* 13, 86-94 - Highlighted in Nature Immunology 13, 16–18 (*co-first author).

28. Gregg C*, **Zhang J***, Weissbourd B, Luo S, Schroth G, Haig D, and Dulac C. (2010) High-resolution analysis of parent-of-origin allelic expression in the mouse brain. **Science** 6;329(5992):643-48 (***co-first author**) –
29. Gregg C, **Zhang J**, Luo S, Schroth G, Haig D, and Dulac C. (2010) Sex-Specific Genomic Imprinting in the Mouse Brain. **Science** 6;329(5992):682-85
30. Zhao M, **Zhang J**, Phatnani H, Scheu S, Maniatis T. (2012) Stochastic Expression of the Interferon- β Gene. **PLoS Biol.** 10(1).
31. El-Haibi CP, Bell GW, **Zhang J**, Collmann AY, Wood D, Scherber CM, Csizmadia E, Mariani O, Zhu C, Campagne A, Toner M, Bhatia SN, Irimia D, Vincent-Salomon A, Karnoub AE. (2012) Critical role for lysyl oxidase in mesenchymal-stem-cell-driven breast cancer malignancy. **Proc Natl Acad Sci U S A.** 109(43):17460-5
32. Song F, Qureshi AA, **Zhang J**, Amos CI, Lee JE, Wei Q, Han J. (2012) Exonuclease 1 (EXO1) gene variation and melanoma risk. **DNA Repair** 11(3):304-9.
33. Bonneaud C, Balenger S, **Zhang J**, Edwards SV, Hill GE. (2012) Innate immunity and the evolution of resistance to an emerging infectious disease in a wild bird. **Molecular Ecology** 21, 2628–2639.
34. Han J, Qureshi AA, Nan H, **Zhang J**, Song Y, Guo Q, Hunter DJ. (2011) A Germline Variant in the Interferon Regulatory Factor 4 Gene as a Novel Skin Cancer Risk Locus. **Cancer Res.** 71(5):1533-9.
35. Bonneaud C, Balenger S, Russell AF, **Zhang J**, Hill GE, Edwards SV. (2011) Rapid evolution of disease resistance is accompanied by functional changes in gene expression in a wild bird. **Proc Natl Acad Sci U S A.** 108(19):7866-71.
36. Germar K, Dose M, Konstantinou T, **Zhang J**, Wang H, Lobry C, Arnett K, Blacklow S, Aifantis I, Aster J, Gounari F. (2011) Tcf-1 is a gatekeeper for T-cell specification in response to Notch signaling. **Proc Natl Acad Sci U S A.** 108(50):20060-5.
37. Nan H, Xu M, **Zhang J**, Zhang M, Kraft P, Qureshi A, Chen C, Guo Q, Hu FB, Rimm EB, Curhan G, Song Y, Amos CI, Wang L, Lee JE, Wei Q, Hunter DJ, Han J. (2011) Genome-wide association study identifies nidogen 1 (NID1) as a susceptibility locus to cutaneous nevi and melanoma risk. **Hum Mol Genet.** 20(13):2673-9.
38. Finley L, Carracedo A, Souza A, Haas W, Egia A, **Zhang J**, Teruya-Feldstein J, Clish CB, Procaccio V, Pandolfi PP, Haigis MC. (2011) SIRT3 opposes reprogramming of cancer cell metabolism through HIF1 α destabilization. **Cancer Cell** 19(3):416-28
39. Poliseno L, Salmena L, **Zhang J**, Carver B, Haveman WJ, and Pandolfi PP (2010). A coding-independent function of gene and pseudogene mRNAs regulates tumour biology. **Nature** 24;465(7301):1033-8.
40. Alimonti A, Carracedo A, Clohessy JG, Trotman LC, Nardella C, Egia A, Salmena L, Sampieri K, Haveman WJ, Brogi E, Richardson AL, **Zhang J**, and Pandolfi PP (2010). Subtle variations in Pten dose determine cancer susceptibility. **Nat Genet.** 42(5):454-8
41. Gómez-del Arco P, Kashiwagi M, Jackson AF, Naito T, **Zhang J**, Liu F, Kee B, Vooijs M, Radtke F, Redondo JM, Georgopoulos K (2010). Alternative promoter usage at the Notch1 locus supports ligand-independent signaling in T cell development and leukemogenesis. **Immunity** 33(5):685-98.
42. Ng SY*, Yoshida T*, **Zhang J***, Georgopoulos K. (2009) Genome-wide Lineage-Specific Transcriptional Networks Underscore Ikaros-Dependent Lymphoid Priming in Hematopoietic Stem Cells Immunity. **Immunity** 30(4):493-507 (***co-first author**)
43. Yoshida T, **Zhang J**, Hazan I, Naito T, Ng SY, Snippert HJ, Heller EJ, Lawton L, Williams CJ, and Georgopoulos K. (2008). The role of the chromatin remodeler Mi-2 β in hematopoietic stem cell self-renewal and multilineage differentiation. **Genes Dev.** 22, 1174-1189.
44. Makeyev EV, **Zhang J**, Carrasco MA, and Maniatis, T. (2007). The MicroRNA miR-124 promotes neuronal differentiation by triggering brainspecific alternative pre-mRNA splicing. **Mol. Cell** 27, 435-448.
45. Lesic B, Lépine F, Déziel E, **Zhang J**, Zhang Q, Padfield K, Castonguay MH, Milot S, Stachel S, Tzika AA, Tompkins RG, Rahme LG. (2007) Inhibitors of pathogen intercellular signals as selective anti-infective compounds. **PLoS Pathog.** 3(9):1229-39.
46. Tzika AA, Mintzopoulos D, Mindrinis M, **Zhang J**, Rahme LG, and Tompkins RG. (2009). Microarray analysis suggests that burn injury results in mitochondrial dysfunction in human skeletal muscle. **Int J Mol Med.** 24(3):387-92.
47. Tzika AA, Mintzopoulos D, Padfield K, Wilhelmy J, Mindrinis MN, Yu H, Cao H, Zhang Q, Astrakas LG, **Zhang J**, Yu YM, Rahme LG, Tompkins RG. (2008) Reduced rate of adenosine triphosphate synthesis

- by in vivo ³¹P nuclear magnetic resonance spectroscopy and downregulation of PGC-1beta in distal skeletal muscle following burn. *Int J Mol Med*. 2008 Feb;21(2):201-8.
48. Tzika AA, Astrakas L, Cao H, Mintzopoulos D, Andronesi OC, Mindrinos M, **Zhang J**, Rahme LG, Blekas KD, Likas AC, Galatsanos NP, Carroll RS, Black PM. (2007) Combination of high-resolution magic angle spinning proton magnetic resonance spectroscopy and microscale genomics to type brain tumor biopsies. *Int J Mol Med*. 20(2):199-208.
49. Santos D, Ho AW, Tournilhac O, Hatjiharissi E, Leleu X, Xu L, Tassone P, Neri P, Hunter ZR, Chemaly MA, Branagan AR, Manning RJ, Patterson CJ, Moreau AS, Ciccarelli B, Adamia S, Kriangkum J, Kutok JL, Tai YT, **Zhang J**, Pilarski LM, Anderson KC, Munshi N, Treon SP. (2007) Establishment of BCWM.1 cell line for Waldenström's macroglobulinemia with productive in vivo engraftment in SCID-hu mice. *Exp Hematol*. 35(9):1366-75.
50. **Zhang J**, Tang QQ, Vinson C, and Lane MD. (2004) Dominant negative C/EBP blocks mitotic clonal expansion of adipocytes. *Proc Natl Acad Sci USA* 101(1):43-7.
51. **Zhang J**, Klemm D, Vinson C, and Lane MD. (2004) Transcriptional regulation of CCAAT/enhancer binding protein beta gene during adipogenesis: role of CREB. *Journal of Biological Chemistry*. 279(6):4471-8.
52. Tang QQ, **Zhang J**, and Lane MD. (2004) Sequential gene promoter interactions of C/EBPbeta, C/EBPalpha, and PPARgamma during adipogenesis. *Biochemical and Biophysical Research Communications* 319(1):235-9
53. Shen X, Wong SB, Buck CB, **Zhang J**, Siliciano RF. (2002) Direct priming and cross-priming contribute differentially to the induction of CD8+ CTL following exposure to vaccinia virus via different routes. *J Immunol*. 169(8):4222-9