

# Publications

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## Recent Publications

Ng, R., Hussain, N.A., Zhang, Q.Y., Chang, C.W., Li, H.Y., Han, W.P., Stunkel, W. and Xu, F.\* (2017)

miRNA-32 drives brown fat thermogenesis and trans-activates subcutaneous white fat browning in mice.

**Cell Reports.** 19, 1229–1246.

Julien, S.G., Kim, S.Y., Brunmeir, R., Sinnakannu, J.R., Ge, X.J., Ma, W., Yaligar, J., KN, B.P., Velan, S.S., Röder, P.V., Zhang, Q.Y., Sim, C.K., Wu, J.Y., Xie, W., McFarlane, C., Han, W.P. and Xu, F.\* (2017)

Narciclasine attenuates diet-induced obesity by promoting oxidative metabolism in skeletal muscle.

**PLoS Biology.** 16;15(2):e1002597. ([Research Highlights](#) by **Nature Reviews Endocrinology**)

Brunmeir, R., Wu, J.Y., Peng, X., Julien, S.G., Zhang, Q.Y., Xie, W.\* and Xu, F.\* (2016)  
Comparative Transcriptomic and Epigenomic Analyses Reveal New Regulators of Murine Brown Adipogenesis.

**PLoS Genetics.** 12(12):e1006474.

Sim, C.K. #, Kim, S.Y. #, Brunmeir, R., Zhang, Q.Y., Li, H.Y., Dharmasegaran, D., Leong, C., Lim, Y.Y., Han, W.P. and Xu, F.\* (2017) Regulation of White and Brown Adipocyte Differentiation by RhoGAP Dlc1.

**PLoS One.** 12(3):e0174761.

Li, N., Zhou, Z.S., Shen, Y., Xu, J., Miao, H.H., Xiong, Y., Xu, F., Li, B.L., Luo, J. and Song, B.L.\* (2016)

Inhibition of the SREBP pathway suppresses hepatocellular carcinoma through repressing inflammation.

**Hepatology.** 2016 Dec 27.

Kim, S.Y. #, Sim, C.K. #, Zhang, Q.Y., Tang, H., Brunmeir, R., Pan. H., Karnani, N., Han, W.P., Zhang, K.L.\* and Xu, F. \* (2016)

An Alternative Strategy for Pan-acetyl- lysine Antibody Generation.

**PLoS One.** 11(9):e0162528.

Zheng H, Huang B, Zhang B, Xiang Y, Du Z, Xu Q, Li Y, Wang Q, Ma, J., Peng, X., Xu, F. and Xie, W.\* (2016)

Resetting Epigenetic Memory by Reprogramming of Histone Modifications in Mammals.

**Molecular Cell.** 63(6):1066-79.

Zhang, B., Zheng, H., Huang, B., Li, W., Xiang, Y., Peng, X., Ming, J., Wu, X., Zhang, Y., Xu, Q., Liu, W., Kou, X., Zhao, Y., He, W., Li, C., Chen, B., Li, Y., Wang, Q., Ma, J., Yin, Q., Kee, K., Meng, A., Gao, S., Xu, F., Na, J., and Xie, W.\* (2016)

Allelic reprogramming of the histone modification H3K4me3 in early mammalian development.

**Nature.** 537(7621):553-557.

Wu. J., Huang, B., Chen. H., Yin, Q.Z., Li, W.Z., Liu. Y., Xiang, Y.L., Zhang. B.J., Zheng, H., Xia. W.K., Ming, J., Li, Y.Y., Zhang. W.H., Wang, Q.J., Zhang, J., Peng, X., Tian, G., Xu, F., Chang, Z., Yang, X.R., Na, J., and Xie, W.\* (2016)

The landscape of accessible chromatin in mammalian preimplantation embryos.

**Nature.** 534(7609): 652-7.

Sundaram, A., Hughes, T., Biondi, S., Bolduc, N., Bowman, S.K., Camilli, A., Chew, Y.C., Couture, C., Farmer, A., Jerome, J.P., Lazinski, D.W., McUsic, A., Peng, X., Shazand, K., Xu, F., Lyle, R.\* and Gilfillan, G.D.\* (2016)

A comparative study of ChIP-seq library preparation methods.

**BMC Genomics.** 17(1):816.

Kim, S.Y. #, Sim, C.K. #, Tang, H., Han, W.P., Zhang, K.L.\* and Xu, F. \* (2016) Acetylome study in mouse adipocytes identifies targets of SIRT1 deacetylation in chromatin organization and RNA processing.

**Arch Biochem Biophys.** 598:1-10.

Kim, S.Y. #, Sim, C.K. #, Tang, H., Han, W.P., Zhang, K.L.\* and Xu, F. \* (2015) Acetylome Analysis Identifies SIRT1 Targets in mRNA-processing and Chromatin-remodeling in Mouse Liver.

**PLoS One.** 10(10):e0140619.

Kim, S.Y., Zhang, Q.Y., Brunmeir, R., Han, W.P. and Xu, F. \* (2015)

[SIRT1 Interacts with and Deacetylates ATP6V1B2 in Mature Adipocytes.](#)

**PLoS One.** 10(7):e0133448.

Joseph, R., Poschmann, J., Sukarieh, R., Too, P.G., Julien, S.G., Xu, F., Teh, A.L., Holbrook, J.D, Ng, K.L., Chong, Y.S., Gluckman, P.D., Prabhakar. S. and Stünkel, W.\* (2015)

Acyl-CoA synthetase 1 in differentiated adipocytes from small for gestational age neonates: Putative association with fetal programming of cellular insulin sensitivity and lipid content. ***Mol Endocrinol.*** 29(6):909-920.

Peng, X., Wu, J.Y., Brunmeir, R., Kim, S.Y., Zhang, Q.Y., Ding, C.M., Han, W.P., Xie, W. and Xu, F. \* (2015)

TELP, a sensitive and versatile library construction method for next-generation sequencing. ***Nucleic Acids Res.*** 43(6):e35.

Nicholas, D., Tang, H., Zhang, Q.Y., Xu, F., Langridge, W. and Zhang, K.L.\* (2015) Protein profiling reveals dynamic H1 expression and histone modifications during human monocyte differentiation.

***Molecular and Cellular Proteomics.*** 14(1):15-29.

Yang, W.L., Thein, S., Lim, C.Y., Ericksen, R.E., Sugii, S., Xu, F., Robinson, R., Kim, J.B. and Han, W.P.\* (2014)

Arp2/3 complex regulates adipogenesis by controlling cortical actin remodeling. ***Biochemical Journal.*** 464(2), 179-192.

Ramlee, M.K., Zhang, Q.Z., Idris, M., Peng, X., Sim, C.K., Han, W.P. and Xu, F. \* (2014) Histone H3 K27 acetylation marks a potent enhancer for the adipogenic master regulator gene *Pparg2*.

***Cell Cycle.*** 13(21), 3414-3422.

Gao, M., Sim, C.K., Leung, C., Hu, Q.L., Feng, G.X., Xu, F.\* Tang, B.Z.\* and Liu, B.\* (2014) A fluorescent light-up probe for specific mitochondrial imaging to identify differentiating brown adipose cells.

***Chemical Communications.*** 50(61), 8312-8315.

Yang, W.L., Thein, S., Wang, X.R., Bi, X.Z., Ericksen, R.E., Xu, F., and Han, W.P.\* (2014) BSCL2 / seipin regulates adipogenesis through actin cytoskeleton remodeling.

***Human Molecular Genetics.*** 23(2), 502-513.

Yang, W.L., Thein, S., Guo, X.X., Xu, F., Venkatesh, B., Sugii, S., Radda, G.K., and Han, W.P.\* (2013)

Seipin differentially regulates lipogenesis and adipogenesis through a conserved core sequence and an evolutionarily acquired C-terminus.

**Biochemical Journal.** 452, 37-44.

Villanueva, C.J., Vergnes, L., Drew, B., Tu, Y.P., Hu, Y., Peng, X., Xu, F., Saez, E., Wroblewski, K., Hevener, A., Reue, K., Fong, L.G., Young, S.G. and Tontonoz, P.\* (2013) Adipose subtype-selective recruitment of TLE3 or Prdm16 by PPAR $\gamma$  specifies lipid storage versus thermogenic gene programs.

**Cell Metabolism.** 17, 423–435.

Yang, W.L., Guo, X.X., Thein, S., Xu, F., Sugii, S., Baas, P.B., Radda, G.K., and Han, W.P.\* (2013)

Regulation of adipogenesis by katanin-mediated cytoskeleton remodeling is facilitated by MEC-17-dependent acetylation of  $\alpha$ -tubulin.

**Biochemical Journal.** 449, 605–612.

Zhang, Q.Y., Ramlee, M.K., Brunmeir, R., Villanueva, C.J., Halperin, D. and Xu, F.\* (2012) Dynamic and distinct histone modifications modulate the expression of key adipogenesis regulatory genes.

**Cell Cycle** 11:23, 4310–4322.

Sun, W., Xie, W., Xu, F., Grunstein, M. and Li, K.C. (2009)

[Dissecting nucleosome free regions by a segmental semi-Markov model.](#)

**PLoS One.** 4(3):e4721.

Xie, W., Song, C., Young, N.L., Sperling, A.S., Xu, F., Sridharan, R., Conway, A.E., Garcia, B.A., Plath, K., Clark, A.T. and Grunstein, M. (2009)

[Histone H3 lysine 56 acetylation is linked to the core transcriptional network in human embryonic stem cells.](#)

**Molecular Cell.** 33, 417-427.

Xu, F., Zhang, Q.Y., Zhang, K.L., Xie, W. and Grunstein, M. (2007) Sir2 Deacetylates Histone H3 Lysine 56 to Regulate Telomeric Heterochromatin Structure in Yeast.

**Molecular Cell.** 27, 890-900.

Millar, C.B., Xu, F., Zhang, K.L. and Grunstein, M. (2006)

**Acetylation of H2AZ Lys 14 is associated with genome-wide gene activity in yeast.**

**Genes & Development.** 20 (6), 711-722.

Xu, F., Zhang, K.L. and Grunstein, M. (2005)

Acetylation in Histone H3 Globular Domain Regulates Gene Expression in Yeast.

**Cell.** 121,375-385.

Yu, Y., Liu, Y., Shen, N., Xu, X., Xu, F., Jia, J., Jin, Y., Arnold, E. and Ding, J. (2004) Crystal structure of human tryptophanyl-tRNA synthetase catalytic fragment: insights into substrate recognition, tRNA binding, and angiogenesis activity.

**J Biol Chem.** 279(9), 8378-8388.

Wang, Z.C., Wang, X.M., Jin, Y.X., Jiao, B.H., Xu, F., Miao, M.Y. and Zhu, K.J. Search for difference in aminoacylation of mitochondrial DNA-encoded wild-type and mutant human tRNA<sup>Leu</sup> (UUR). (2003)

**IUBMB Life.** 55(3), 139-144.

Xu, F., Jiang, G., Li, W., He, X., Jin, Y.X. and Wang, D. (2002)

Three G.C base pairs required for the efficient aminoacylation of tRNA<sup>Trp</sup> by tryptophanyl-tRNA synthetase from *Bacillus subtilis*.

**Biochemistry.** 41(25), 8087-8092.

Jia, J., Xu, F., Chen, X., Chen, L., Jin, Y.X. and Wang, D.B. (2002)

Two essential regions for tRNA recognition in *Bacillus subtilis* tryptophanyl-tRNA synthetase.

**Biochem J.** 365(Pt 3), 749-756.

Xu, F., Chen, X.L., Xin, L., Chen, L., Jin, Y.X. and Wang, D.B. (2001)

Species- Specific Differences in the Operational RNA Code for Aminoacylation of tRNA<sup>Trp</sup>.

**Nucleic Acids Res.** 29, 4125-4133.

Xu, F., Jia, J., Jin, Y.X. and Wang, D.B. (2001)

High-Level expression and single- step purification of human tryptophanyl-tRNA synthetase.

**Protein Express. Purif.** 23, 296-300.

Xu, R.H., Liu, J., Chen, X.W., Xu, F., Xie, Q., Yu, H., Guo, Q., Zhou, X.Q. and Jin, Y.X.

(2001)

Ribozyme-mediated Inhibition of Caspase-3 Activity Reduces Apoptosis Induced by 6-Hydroxydopamine in PC12 Cells.

**Brain Research.** 899, 10-19.