

Genomic maintenance and premature aging

By

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Venue: SCT909
Cha Chi Ming Science Tower
Ho Sin Hang Campus
Hong Kong Baptist University

All Interested are Welcome



Prof Zhongjun Zhou received his BSc degree from Xiamen University, and PhD degree from Karolinska Institute, SWEDEN. He joined The University of Hong Kong in 2002 and became full professor in 2014. His research focuses on understanding the mechanisms of development and aging, particularly in the area of growth factor signaling, nuclear architecture and chromatin dynamics. He is the first one to develop mouse model for Hutchinson-Gilford Progeria Syndrome (a human premature aging disorder). His team in HKU has been working toward developing approaches to delay the accelerated aging, which may be applicable in normal aging or aging associated diseases.

Prof Zhou received several awards for his research excellence including the Distinguished Overseas Young Chinese Scholar Award (2006) from Natural Science Foundation of CHINA, the Outstanding Research Award of University of Hong Kong (2014) and Croucher Senior Research Fellow (2015).

Prof Zhou is the chief editor of scientific journal “Translational Medicine of Aging” and the associate editor of journal “Mutation Research”. He is the founding President of Asian Society for Aging Research and Hong Kong Society for Cell Biology.

Selected Publications

1. Ghosh S, Wong SK, Jiang ZX, Liu B, Hao Q, Gorbunova V, Liu X, **Zhou Z***. Haploinsufficiency of Trp53 dramatically extends the lifespan of Sirt6-deficient mice. *eLife*, 2018, DOI: 10.7554/eLife.32127.001
2. Li T, Wang L, Du Y, Xie S, Yang X, Lian F, **Zhou Z***, Qian C* New Mechanistic Insights into UHRF1-mediated DNMT1 activation in the Maintenance DNA Methylation. *Nuclear Acid Res*, 2018, DOI:10.1093/nar/gky104
3. H L Wong, G Jin, R Cao, S Zhang, Y Cao, **Z Zhou***. MT1-MMP sheds LYVE-1 on lymphatic endothelial cells and suppresses VEGF-C production to inhibit lymphangiogenesis. *Nature Communication* 2016
4. K Ghosh, B Liu, Y Wang, Q Hao, **Z Zhou***. SIRT6 is an endogenous activator of SIRT6 and promote SIRT6-mediated DNA repair. *Cell Reports* 2015, 13 (6), 1396–1406
5. B Liu, Z Wang, L Zhang, S Ghosh, H Zheng and **Z Zhou***. *Depleting the methyltransferase Suv39h1 improves DNA repair and extends lifespan in a progeria mouse model.* *Nature Communication* 2013; 4:1868.
6. B Liu, S Ghosh, X Yang, H Zheng, X Liu, Z Wang, B Zheng, B K Kennedy, Y Suh, M Kaeberlein, K Tryggvason, and **Z Zhou***. Resveratrol rescues Sirt1-dependent adult stem cell decline and alleviates progeroid features in laminopathy-based progeria. *Cell Metabolism* 2012, Dec 5, 16(6),738-750
7. K Chan, H Wong, G Jin, B Liu, R Cao, Y Cao, K Lehti, K Tryggvason and **Z Zhou***. MT1-MMP Inactivates ADAM9 to Regulate FGFR2 Signalling in Calvarial Osteogenesis. *Developmental Cell* 2012, 22(6); 1176-1190 recommended by Faculty 1000, F1000 Factor 8.0 must read.
8. G Jin, F Zhang, K M Chan, H L Wong, B Liu, K Cheah, X Liu, C Mauch, D Liu, **Z Zhou***. MT1-MMP cleaves Dll1 to negatively regulate Notch signaling to maintain normal B cell development. *EMBO J* 2011, 30, 2281 – 2293
9. V Krishnan, M Z Chow, Z Wang, L Zhang, B Liu, X Liu and **Z Zhou***. Histone H4 lysine 16 hypoacetylation is associated with defective DNA repair and premature senescence in Zmpste24-deficient mice. *Proc Natl Aca Sci USA* 2011,108 (30);12325-12330.
10. Liu B, Wang J, Chan KM, Tjia WM, Deng W, Guan X, Huang JD, Li KM, Chau PY, Chen DJ, Pei D, Pendas AM, Cadinanos J, Lopez-Otin C, Tse HF, Hutchison C, Chen J, Cao Y, Cheah KS, Tryggvason K, **Zhou Z*** Genomic instability in laminopathy-based premature aging. *Nature Medicine* 2005, 11 (7), 780-785