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Selected Publication

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 doi: 10

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Research Aims and Interests

My research interests focus on understanding fundamental biology of development and aging processes using genetically modified mice and human diseases as model systems. There are two major research directions in my lab. One is on aging and human accelerated aging syndrome. The other one is on signaling regulation in development and diseases.

For aging research, our goal is to understand the similarity and differences in genomic maintenance and stem cell potency between accelerated aging and normal aging processes. We aim to identify the paralleled mechanisms underlying accelerated aging and physiological aging. Our particular interest lies in epigenetics and chromatin dynamics regulated by nuclear matrix. We would like to develop primate model of human aging syndromes, such as Hutchinson-Gilford Progeria Syndrome, in collaboration with scientists in China. In addition, we aim to understand how aging process impact metabolism and the pathogenesis of metabolic syndromes. We hope to provide important knowledge of aging biology essential for developing novel strategies in aging-associated disease prevention, management and health-span extension in human.