Zhong Chuanxin

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Education

2014 - 2018	**Bachelor of Biomedical Engineering** Department of Biomedical Engineering, Southern University of Science and Technology (SUSTech), China Supervisor: Professor Ren Fuzeng
2018 - 2023	**Doctor of Philosophy** Law Sau Fai Institute for Advancing Translational Medicine in Bone & Joint Diseases, School of Chinese Medicine Hong Kong Baptist University-SUSTech joint program Supervisor: Professor Zhang Ge

Research Interests

Translational research in bone and joint diseases

Biomaterial for tissue engineering

Aptamer-based drug development

Honors and Awards

Start-up Scholarship of SUSTech

Outstanding Student of Shuren College, SUSTech

Outstanding graduation of Shuren College, SUSTech

Publications

Journal Paper

1. **Zhong, Chuanxin**, Dingshan Liang, Tian Wan, Shan He, Lu Yang, Ju Fang, Ge Zhang, and Fuzeng Ren. "Ultrafine-grained Nb-Cu immiscible alloy implants for hard tissue repair: Fabrication, characterization, and in vitro and in vivo evaluation." *Journal of Materials Science & Technology* 127 (2022): 214-224.
2. **Chuanxin, Zhong**, Wang Shengzheng, Dang Lei, Xie Duoli, Liu Jin, Ren Fuzeng, Lu Aiping, and Zhang Ge. "Progress in 11β-HSD1 inhibitors for the treatment of metabolic diseases: a comprehensive guide to their chemical structure diversity in drug development." *European journal of medicinal chemistry* 191 (2020): 112134.
3. Liang, Dingshan*, **Chuanxin Zhong***, Feilong Jiang, Junchen Liao, Haixia Ye, and Fuzeng Ren. "Fabrication of Porous Tantalum with Low Elastic Modulus and Tunable Pore Size for Bone Repair." *ACS Biomaterials Science & Engineering* 9, no. 3 (2023): 1720-1728.
4. Liu, Jin*, Xiaohao Wu*, Jun Lu, Guangxin Huang, Lei Dang, Huarui Zhang, **Chuanxin Zhong*** et al. "Exosomal transfer of osteoclast-derived miRNAs to chondrocytes contributes to osteoarthritis progression." *Nature Aging* 1, no. 4 (2021): 368-384.
5. He, Shan, Ju Fang, **Chuanxin Zhong**, Min Wang, and Fuzeng Ren. "Spatiotemporal Delivery of pBMP2 and pVEGF by a Core–Sheath Structured Fiber-Hydrogel Gene-Activated Matrix Loaded with Peptide-Modified Nanoparticles for Critical-Sized Bone Defect Repair." *Advanced Healthcare Materials* 11, no. 21 (2022): 2201096.
6. He, Shan, Ju Fang, **Chuanxin Zhong**, Fuzeng Ren, and Min Wang. "Controlled pVEGF delivery via a gene-activated matrix comprised of a peptide-modified non-viral vector and a nanofibrous scaffold for skin wound healing." *Acta Biomaterialia* 140 (2022): 149-162.
7. Yu, Yuanyuan, Luyao Wang, Shuaijian Ni, Dijie Li, Jin Liu, Hang Yin Chu, Ning Zhang, Ren Qing, **Zhong Chuanxin** et al. "Targeting loop3 of sclerostin preserves its cardiovascular protective action and promotes bone formation." *Nature Communications* 13, no. 1 (2022): 4241.

8. Liang, Chao, Jie Li, Cheng Lu, Duoli Xie, Jin Liu, **Chuanxin Zhong**, Xiaohao Wu et al. "HIF1α inhibition facilitates Leflunomide-AHR-CRP signaling to attenuate bone erosion in CRP-aberrant rheumatoid arthritis." *Nature Communications* 10, no. 1 (2019): 4579.
9. Wang, Xiaofei, Ju Fang, Weiwei Zhu, **Chuanxin Zhong**, Dongdong Ye, Mingyu Zhu, Xiong Lu, Yusheng Zhao, and Fuzeng Ren. "Bioinspired highly anisotropic, ultrastrong and stiff, and osteoconductive mineralized wood hydrogel composites for bone repair." *Advanced Functional Materials* 31, no. 20 (2021): 2010068.
10. Zhu, Mingyu, Haixia Ye, Ju Fang, **Chuanxin Zhong**, Junyi Yao, Jaewon Park, Xiong Lu, and Fuzeng Ren. "Engineering high-resolution micropatterns directly onto titanium with optimized contact guidance to promote osteogenic differentiation and bone regeneration." *ACS applied materials & interfaces* 11, no. 47 (2019): 43888-43901.

Conference Paper

1. Zhong, Chuanxin, Shengzheng Wang, Jin Liu, Lei Dang, Dijie Li, Nanxi Li, Rongchen Dai et al. "Elevated mature osteoblastic 11 beta-HSD1 contributes to high-fat-diet induced obesity." The American Society for Bone and Mineral Research Annual meeting 2020.
2. Zhong, Chuanxin, Nanxi Li, Dijie Li, Shengzheng Wang, Huarui Zhang, Meiheng Sun, Zhuqian Wang et al. "Targeting 11 beta-HSD1 in osteoblasts reduces fat mass and prevents bone loss in mice with high-fat diet-induced obesity." "Elevated mature osteoblastic 11 beta-HSD1 contributes to high-fat-diet induced obesity." The American Society for Bone and Mineral Research Annual meeting 2021.
3. Zhong, Chuanxin, Nanxi Li, Wang Shengzheng, Li Dijie et al. “Elevated 11β-hsd1 in osteoblast impaired glucose uptake and osteogenesis to exacerbate high-fat diet-induced obesity and bone loss.” World Congress on Osteoporosis, Osteoarthritis and Musculoskeletal Diseases 2023.