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| **Stem Cell and Translational Medicine** |
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| **Research background:**China has made remarkable achievements in the field of stem cell and regenerative medicine in recent years. Zhejiang Universityhasmore than 100principalinvestigators (PI)working onstem cell biology, developmental biology, tissue engineeringand regenerative medicine. Obviously, the promise of stem cells cannotbe fulfilled by one lab, andcollaborationis the trend of modern research.Research Alliance on Stem Cell and Translational Medicinewas formally establishedin April 18, 2016. |
| **Main research topics and progress:**Stem Cell InstituteatZhejiang Universitybelongs to the"16 + X" research allianceproject. The institute hasestablished key technical platforms in the areas of stem cell differentiation and transplantation, high-throughput single cell omics technology, stem cell gene editing, small molecule compound screening and primate model.The institute is supported by Zhejiang Provincial Key Laboratory of Cardiovascular Disease Diagnosis and Treatment, Zhejiang ProvincialKey Laboratory of Tissue Engineering and Regeneration MedicineTechnology and Key Laboratory of Reproductive Genetics and Genomics of Zhejiang University. Zhejiang University Stem Cell Institutehas accomplished effective resource integration in the area of stem cell research. |
| **Member and college:**Stem Cell InstituteatZhejiang University has now brought together over 90 professors from different institutes including School of Basic Medicine, Institute of Translational Medicine, Life Science Institute, School of Life Sciences, School of Animal Sciences and the affiliated hospitals of Zhejiang University.The institute includes4Distinguished Young Scholars, 5 Experts of “1000 Talent Plan”, 6ExcellentYoungScholarsand 15members of “1000 Youth Talent Plan”. |
| **Representative achievements:**Han X**\***, Wang R, Zhou Y, Fei L, Sun H, Lai S, Saadatpour A, Zhou Z, Chen H, Ye F, Huang D, Xu Y, Huang W, Jiang M, Jiang X, Mao J, Chen Y, Lu C, Xie J, Fang Q, Wang Y, Yue R, Li T, Huang H, Orkin SH, Yuan GC, Chen M, **Guo G\*.** Mapping the Mouse Cell Atlas by Microwell-seq. **Cell.** 2018 Feb 22;172(5):1091-1107.e17.Han X**\***, Yu H, Huang D, Xu Y, Saadatpour A, Li X, Wang L, Yu J, Pinello L, Lai S, Jiang M, Tian X, Zhang F, Cen Y, Fujiwara Y, Zhu W, Zhou B, Zhou T, Ouyang H, Wang J, Yuan GC, Duan S, Orkin SH**\***, **Guo G\*.** A molecular roadmap for induced multi-lineage trans-differentiation of fibroblasts by chemical combinations. **Cell Research.** 2017 Mar;27(3):386-401.Zhang C, Yi W, Li F, Du X, Wang H, Wu P, Peng C, Luo M, Hua W, Wong C, Lee J, Li W, Chen Z, Ying S\*, Ju Z\* and Shen H\*. Eosinophil-derived CCL-6 Impairs Hematopoietic Stem Cell Homeostasis.**Cell Research**. 2018 Mar;28(3):323-335.Zhu K, Wu Q, Ni C, Zhang P, Zhong Z, Wu Y, Wang Y, Xu Y, Kong M, Cheng H, Tao Z, Yang Q, Liang H, Jiang Y, Li Q, Zhao J, Huang J, Zhang F, Chen Q, Li Y, Chen J, Zhu W, Yu H, Zhang J, Yang HT, Hu X, **Wang J\*.** Lack of Remuscularization Following Transplantation of Human Embryonic Stem Cell-Derived Cardiovascular Progenitor Cells in Infarcted Nonhuman Primates. **Circulation research.**2018 Jan 17. pii: CIRCRESAHA.117.311578.**Meng ZX**, Gong J, Chen Z, Sun J, Xiao Y, Wang L, Li Y, Liu J, Xu X.Z.S, Lin J (2017) Glucose sensing by skeletal myocytes couples nutrient signaling to systemic homeostasis. Molecular Cell. May 4;66(3):332-344.**Zhang, J.**\*,  Zhao, J., Dahan, P., Lu, V., Zhang, C., Hu, L., and  Teitell M.A.\* Metabolism in Pluripotent Stem Cells and Early Mammalian Development. **Cell Metabolism,** 2018 Feb 6;27(2):332-338.**Zhang, J.**\*, Nioi, P., Hu, L., Tounsen, A., Wu, C. J. Human Stem Cell Models Facilitate Translating Human Genetics to Drug Development. **Cell Stem Cell,** 2017 Aug. 3; 21,2, p161-165 |