

Zhen LIU Ph.D.



zliu2010@ion.ac.cn

Dr. Liu is the Principal Investigator at the Institute of Neuroscience, CAS, Shanghai, China. He is focused on important questions of reproduction, stem cells, and embryology in primate species, including somatic cell nuclear transfer and cell reprogramming, embryonic stem cell pluripotency, germ cell differentiation, spermatogonial stem cells, and reproductive endocrinology. Dr. Liu's studies will provide new potential transgenic technologies for non-human primates and new solutions for human reproductive barriers.

EDUCATION

- **2017** : Ph.D. from Institute of Neuroscience, CAS
- **2010** : B.S. from Shandong Normal University

OTHERS

Dr. Liu reported the first clone monkeys by somatic cell nuclear transfer (SCNT) and generated new transgenic technologies development in monkeys.

ACADEMIC APPOINTMENTS

- **2018 - present** : Principal Investigator, Institute of Neuroscience, CAS
- **2017 - 2018** : Post-doctor, Institute of Neuroscience, CAS

EXPERTISE

- Primate embryonic development and reprogramming
- Reproductive development and germ cell regeneration
- Embryonic stem cell pluripotency and embryo model
- Developing gene- modified methods for monkey model generation

SELECTED PUBLICATIONS

1. Cao, J., Li, W., Li, J., Mazid, A., Li, C., Jiang, Y., Jia, W., Liao, Z., Sun, S., Fu, J., Wang, Y., Lu, Y., Xu, Y., Nie, Y., Bian, X., Gao, C., Zhang, X., Zhang, L., Li, Y., Fu, L., Liu, H., Lai, J., Wang, Y., Yuan, Y., Lai, Y., Liu, L., Wang, X., Sun, Q., Esteban, M-A., Liu, Z. 2023. Live Birth of Chimeric Macaque Monkey with High Contribution from Homologous Embryonic Stem Cells. *Cell*. 186: 4996-5014.
2. Li, J., Zhu, Q., Cao, J., Liu, Y., Lu, Y., Sun, Y., Li, Q., Huang, Y., Shang, S., Bian, X., Li, C., Zhang, L., Wang, Y., Nie, Y., Fu, J., Li, W., Mazid, A., Jiang, Y., Jia, W., Wang, X., Sun, Y., Esteban, M-A., Sun, Q., Zhou, F., Liu, Z. 2023. Cynomolgus monkey embryo model captures gastrulation and early pregnancy. *Cell Stem Cell*. 30: 362-377.
3. Liu, Z., Cai, Y., Liao, Z., Xu, Y., Wang, Y., Wang, Z., Jiang, X., Li, Y., Lu, Y., Nie, Y., Zhang, X., Li, C., Bian, X., Poo, M., Chang, H-C., Sun, Q. 2019. Cloning of a Gene- edited Macaque Monkey by Somatic Cell Nuclear Transfer. *National Science Review*. 6(1): 101-108.
4. Liu, Z., Cai, Y., Wang, Y., Nie, Y., Zhang, C., Xu, Y., Zhang, X., Lu, Y., Wang, Z., Poo, M., Sun, Q. 2018. Cloning of Macaque Monkeys by Somatic Cell Nuclear Transfer. *Cell*. 172: 881-887.
5. Liu, Z., Li, X., Zhang, J-T., Cai, Y-J., Cheng, T-L., Wang, Y., Zhang, C-C., Nie, Y-H., Bian, W-J., Zhang, L., Xiao, J-Q., Lu, B., Zhang, Y-F., Zhang, X-D., Sang, X., Wu, J-J., Xu, X., Xiong, Z-Q., Zhang, F., Yu, X., Gong, N., Zhou, W-H., Sun, Q., Qiu, Z. 2016. Autism-like behaviours and germline transmission in transgenic monkeys overexpressing MeCP2. *Nature*. 530: 98-102.