

# Stanford

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## Fabian Suchy

Postdoctoral Scholar, Stem Cell Biology and Regenerative Medicine

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#### PROFESSIONAL EDUCATION

- Doctor of Philosophy, Stanford University , STMRRM-PHD (2021)
- BS, University of Wisconsin, Madison , Molecular Biology (2012)

#### STANFORD ADVISORS

- Hiro Nakauchi, Postdoctoral Research Mentor

### Publications

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#### PUBLICATIONS

- **Genome engineering with Cas9 and AAV repair templates generates frequent concatemeric insertions of viral vectors.** *Nature biotechnology*  
Suchy, F. P., Karigane, D., Nakauchi, Y., Higuchi, M., Zhang, J., Pekrun, K., Hsu, I., Fan, A. C., Nishimura, T., Charlesworth, C. T., Bhadury, J., Nishimura, T., Wilkinson, et al  
2024
- **Secreted Particle Information Transfer (SPIT) - A Cellular Platform for In Vivo Genetic Engineering.** *bioRxiv : the preprint server for biology*  
Charlesworth, C. T., Homma, S., Suchy, F., Wang, S., Bhadury, J., Amaya, A. K., Camarena, J., Zhang, J., Tan, T. K., Igarishi, K., Nakauchi, H.  
2024
- **Gene Correction of DNMT3A:R882H in Primary Human AML Demonstrates That This Mutation Is Not Required for Disease Maintenance, but Is Associated with Increased Leukemia Stem Cell Frequency**  
Koehnke, T., Karigane, D., Hilgart, E., Kayamori, K., Fan, A. C., Collins, C. T., Suchy, F. P., Rangavajhula, A. S., Feng, Y., Nakauchi, Y., Martinez-Montes, E., Koldobskiy, M., Feinberg, et al  
AMER SOC HEMATOLOGY.2023
- **Removal of sperm tail using trypsin and pre-activation of oocyte facilitates intracytoplasmic sperm injection in mice and rats** *JOURNAL OF REPRODUCTION AND DEVELOPMENT*  
Torikai, K., Shimizu, K., Nagatomo, H., Kasai, M., Kato-ito, M., Kamada, Y., Shibasaki, I., Jeon, H., Kikuchi, R., Wakayama, S., Suchy, F., Nakauchi, H., Wakayama, et al  
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- **Removal of sperm tail using trypsin and pre-activation of oocyte facilitates intracytoplasmic sperm injection in mice and rats.** *The Journal of reproduction and development*  
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- **Chimpanzee and pig-tailed macaque iPSCs: Improved culture and generation of primate cross-species embryos.** *Cell reports*  
Roodgar, M., Suchy, F. P., Nguyen, L. H., Bajpai, V. K., Sinha, R., Vilches-Moure, J. G., Van Bortle, K., Bhadury, J., Metwally, A., Jiang, L., Jian, R., Chiang, R., Oikonomopoulos, et al

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● **Streamlined and quantitative detection of chimerism using digital PCR.** *Scientific reports*

Suchy, F. P., Nishimura, T., Seki, S., Wilkinson, A. C., Higuchi, M., Hsu, I., Zhang, J., Bhadury, J., Nakauchi, H.  
2022; 12 (1): 10223

● **Generating human artery and vein cells from pluripotent stem cells highlights the arterial tropism of Nipah and Hendra viruses.** *Cell*

Ang, L. T., Nguyen, A. T., Liu, K. J., Chen, A., Xiong, X., Curtis, M., Martin, R. M., Raftry, B. C., Ng, C. Y., Vogel, U., Lander, A., Lesch, B. J., Fowler, et al  
2022

● **Generation of Functional Organs Using a Cell-Competitive Niche in Intra- and Inter-species Rodent Chimeras.** *Cell stem cell*

Nishimura, T., Suchy, F. P., Bhadury, J., Igarashi, K. J., Charlesworth, C. T., Nakauchi, H.  
2020

● **Sufficiency for inducible Caspase-9 safety switch in human pluripotent stem cells and disease cells.** *Gene therapy*

Nishimura, T., Xu, H., Iwasaki, M., Karigane, D., Saavedra, B., Takahashi, Y., Suchy, F. P., Monobe, S., Martin, R. M., Ohtaka, M., Nakanishi, M., Burrows, S. R., Cleary, et al  
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● **Mosaicism diminishes the value of pre-implantation embryo biopsies for detecting CRISPR/Cas9 induced mutations in sheep** *TRANSGENIC RESEARCH*

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● **Intra-embryo Gene Cassette Knockin by CRISPR/Cas9-Mediated Genome Editing with Adeno-Associated Viral Vector** *ISCIENCE*

Mizuno, N., Mizutani, E., Sato, H., Kasai, M., Ogawa, A., Suchy, F., Yamaguchi, T., Nakauchi, H.  
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● **Intra-embryo Gene Cassette Knockin by CRISPR/Cas9-Mediated Genome Editing with Adeno-Associated Viral Vector.** *iScience*

Mizuno, N., Mizutani, E., Sato, H., Kasai, M., Ogawa, A., Suchy, F., Yamaguchi, T., Nakauchi, H.  
2018; 9: 286-97

● **An interspecies barrier to tetraploid complementation and chimera formation** *SCIENTIFIC REPORTS*

Yamaguchi, T., Sato, H., Kobayashi, T., Kato-ito, M., Goto, T., Hara, H., Mizuno, N., Yanagida, A., Umino, A., Hamanaka, S., Suchy, F., Masaki, H., Ota, et al  
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● **Generation of Vascular Endothelial Cells and Hematopoietic Cells by Blastocyst Complementation** *STEM CELL REPORTS*

Hamanaka, S., Umino, A., Sato, H., Hayama, T., Yanagida, A., Mizuno, N., Kobayashi, T., Kasai, M., Suchy, F., Yamazaki, S., Masaki, H., Yamaguchi, T., Nakauchi, et al  
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● **Mosaicism diminishes the value of pre-implantation embryo biopsies for detecting CRISPR/Cas9 induced mutations in sheep.** *Transgenic research*

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● **Interspecies chimeras.** *Current opinion in genetics & development*

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● **iPSC-Derived Organs In Vivo: Challenges and Promise** *CELL STEM CELL*

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2018; 22 (1): 21-24

● **CRISPR/Cas9 microinjection in oocytes disables pancreas development in sheep** *SCIENTIFIC REPORTS*

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● **Rapid Chromatin Switch in the Direct Reprogramming of Fibroblasts to Neurons** *CELL REPORTS*

Wapinski, O. L., Lee, Q., Chen, A. C., Li, R., Corces, M., Ang, C., Treutlein, B., Xiang, C., Baubet, V., Suchy, F., Sankar, V., Sim, S., Quake, et al  
2017; 20 (13): 3236-47

● **Lessons from Interspecies Mammalian Chimeras** *ANNUAL REVIEW OF CELL AND DEVELOPMENTAL BIOLOGY, VOL 33*

Suchy, F., Nakauchi, H., Schekman, R.

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● **The Oligomeric States of the Purified Sigma-1 Receptor Are Stabilized by Ligands** *JOURNAL OF BIOLOGICAL CHEMISTRY*

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● **Solution Structure of the 2A Protease from a Common Cold Agent, Human Rhinovirus C2, Strain W12** *PLOS ONE*

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● **Improved expression and purification of sigma 1 receptor fused to maltose binding protein by alteration of linker sequence** *PROTEIN EXPRESSION AND PURIFICATION*

Gromek, K. A., Meddaugh, H. R., Wrobel, R. L., Suchy, F. P., Bingman, C. A., Primm, J. G., Fox, B. G.

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