



## Fabian Suchy

Postdoctoral Scholar, Stem Cell Biology and Regenerative Medicine

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#### PROFESSIONAL EDUCATION

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

#### STANFORD ADVISORS

- Hiro Nakauchi, Postdoctoral Research Mentor

### Publications

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#### PUBLICATIONS

- **DNMT3A R882H Is Not Required for Disease Maintenance in Primary Human AML, but Is Associated With Increased Leukemia Stem Cell Frequency.** *Cancer discovery*  
Köhnke, T., Karigane, D., Hilgart, E., Fan, A. C., Kayamori, K., Miyauchi, M., Collins, C. T., Suchy, F. P., Rangavajhula, A., Feng, Y., Nakauchi, Y., Martinez-Montes, E., Fowler, et al  
2025
- **Intra-leukemic interferon signaling suppresses expansion and mediates chemoresistance in human AML.** *Blood cancer discovery*  
Karigane, D., Fan, A. C., Nishimura, T., Kayamori, K., Nakauchi, Y., Köhnke, T., Rangavajhula, A., Ediriwickrema, A., Benard, B. A., Thomas, R., Zhao, F., Stafford, M., Suchy, et al  
2025
- **Highly efficient in vivo hematopoietic stem cell transduction using an optimized self-complementary adeno-associated virus** *MOLECULAR THERAPY METHODS & CLINICAL DEVELOPMENT*  
Charlesworth, C. T., Homma, S., Amaya, A. K., Dib, C., Vaidyanathan, S., Tan, T., Miyauchi, M., Nakauchi, Y., Suchy, F. P., Wang, S., Igarashi, K. J., Cromer, M., Dudek, et al  
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- **Highly efficient in vivo hematopoietic stem cell transduction using an optimized self-complementary adeno-associated virus.** *Molecular therapy. Methods & clinical development*  
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2025; 33 (1): 101438
- **DNMT3AR882H Is Not Required for Disease Maintenance in Primary Human AML, but Is Associated With Increased Leukemia Stem Cell Frequency.** *bioRxiv : the preprint server for biology*  
Köhnke, T., Karigane, D., Hilgart, E., Fan, A. C., Kayamori, K., Miyauchi, M., Collins, C. T., Suchy, F. P., Rangavajhula, A., Feng, Y., Nakauchi, Y., Martinez-Montes, E., Fowler, et al  
2024
- **Secreted Particle Information Transfer (SPIT) - A Cellular Platform for In Vivo Genetic Engineering.** *Research square*  
Charlesworth, C. T., Homma, S., Suchy, F., Wang, S., Bhadury, J., Amaya, A. K., Camarena, J., Zhang, J., Tan, T. K., Igarashi, K., Nakauchi, H.

2024

- **HYPDXIC/SCF-SUPPLEMENTED CULTURE IN POLYMER-BASED MEDIUM ENABLES STABLE EX VIVO HUMAN HEMATOPOIETIC STEM CELL EXPANSION**  
Miyachi, M., Mack, P., Bhadury, J., Tan, A., Suchy, F., Zhang, J., Charlesworth, C., Homma, S., Karigane, D., Nakauchi, H.  
ELSEVIER SCIENCE INC.2024
- **Skin graft with dermis and appendages generated in vivo by cell competition.** *Nature communications*  
Nagano, H., Mizuno, N., Sato, H., Mizutani, E., Yanagida, A., Kano, M., Kasai, M., Yamamoto, H., Watanabe, M., Suchy, F., Masaki, H., Nakauchi, H.  
2024; 15 (1): 3366
- **Unwanted Concatemeric Knock-Ins Occur Frequently with Cas9/AAV-Mediated Gene-Editing: Detection and Prevention**  
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  
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- **Genome engineering with Cas9 and AAV repair templates generates frequent concatemeric insertions of viral vectors.** *Nature biotechnology*  
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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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2022
- **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*  
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- **Generating human artery and vein cells from pluripotent stem cells highlights the arterial tropism of Nipah and Hendra viruses.** *Cell*  
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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.  
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- **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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Vilarino, M., Suchy, F., Rashid, S., Lindsay, H., Reyes, J., McNabb, B., van der Meulen, T., Huising, M. O., Nakauchi, H., Ross, P.  
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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*  
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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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- **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*  
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- **Lessons from Interspecies Mammalian Chimeras** *ANNUAL REVIEW OF CELL AND DEVELOPMENTAL BIOLOGY, VOL 33*  
Suchy, F., Nakauchi, H.  
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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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- **Improved expression and purification of sigma 1 receptor fused to maltose binding protein by alteration of linker sequence** *PROTEIN EXPRESSION AND PURIFICATION*

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