Stanford



Thomas Koehnke

Senior Research Scientist-Basic Life, Stem Cell Bio Regenerative Med Institute

Bio

ACADEMIC APPOINTMENTS

- Senior Research Scientist-Basic Life, Stem Cell Bio Regenerative Med Institute

PROFESSIONAL EDUCATION

- Fellowship, University Hospital of Munich (LMU), Munich, Germany , Medicine - Hematology/Oncology (2017)
- Dr. med., Charité - University Medicine Berlin, Berlin, Germany , Medicine (2015)
- Residency Training, University Hospital of Munich (LMU), Munich, Germany , Medicine - Hematology/Oncology (2013)
- M.D., Georg-August-Universität Göttingen, Göttingen, Germany , Medicine (2010)

Publications

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
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- **Sensitive detection of novel structural variants and 3D chromosome conformation reveals likely novel drivers including enhancer hijacking in AML**
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- **Inhibition of DOCK1 prevents the clonal expansion of high-risk TP53-mutant clonal hematopoiesis induced by genotoxic stressors**
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- **Human HSPCs CRISPR-engineered to endogenously express oncogenic NRAS generate a transplantable lethal myeloid malignancy targetable with novel RAS therapeutics**
  Liu, S., Collins, C., Chavez, J., Choi, S., Koehnke, T., Majeti, R.
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- **Intra-leukemic interferon signaling suppresses expansion and mediates chemoresistance in human AML.** *Blood cancer discovery*
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- **A CEBPB/IL-1β/TNF-α Feedback Loop Drives Drug Resistance to Venetoclax and MDM2 Inhibitors in Monocytic Leukemia.** *Blood*
  Allen, B., Bottomly, D., Köhnke, T., Wang, A., Lin, H. Y., Johnson, K., Kenna, I., Streltsova, A., Martin, E., Chen, R., Savoy, L., Long, N., Ryabinin, et al
  2025

- **A New Era of Functional Experimentation in Human Hematopoiesis and Leukemia Research.** *Experimental hematology*
  Köhnke, T., Feng, Y., Majeti, R.
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- **ENGINEERING SEQUENTIAL MUTATIONS INTO HUMAN HSPCS YIELDS AN AGGRESSIVE MYELOID MALIGNANCY ALLOWING FOR INTERROGATION OF PRELEUKEMIC TRANSFORMATION**
  Collins, C., Nakauchi, Y., Koehnke, T., Chavez, J., Choi, S., Sharma, R., Zhao, F., Majeti, R.
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- **ENGINEERING SEQUENTIAL MUTATIONS INTO HUMAN HSPCS YIELDS AN AGGRESSIVE MYELOID MALIGNANCY ALLOWING FOR INTERROGATION OF PRELEUKEMIC TRANSFORMATION**
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- **Convergent epigenetic evolution drives relapse in acute myeloid leukemia.** *eLife*
  Nuno, K., Azizi, A., Koehnke, T., Lareau, C., Ediriwickrema, A., Corces, M. R., Satpathy, A. T., Majeti, R.
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  Kohnke, T., Nuno, K. A., Alder, C. C., Gars, E. J., Phan, P., Fan, A. C., Majeti, R.
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  Landberg, N., Köhnke, T., Feng, Y., Nakauchi, Y., Fan, A. C., Linde, M. H., Karigane, D., Lim, K., Sinha, R., Malcovati, L., Thomas, D., Majeti, R.
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- **ASXL1 Truncating Mutations Drive Leukemic Resistance to T Cell Attack**
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- **Serum Amyloid A1 (SAA1) Secreted By the Stromal Microenvironment Drives Malignant Clonal Proliferation in Myelodysplastic Syndromes (MDS) and Acute Myeloid Leukemia (AML)**
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  Allen, B., Bottomly, D., Wang, A., Koehnke, T., Savoy, L., Ryabini, P., Chen, R., Johnson, K., Kurtz, S. E., Agarwal, A., Barton, M., Druker, B. J., Majeti, et al
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- **BCOR Loss Confers Increased Stemness and Partially Rescues RUNX1-Deficient Phenotypes in Human Hematopoietic Stem and Progenitor Cells**
  Jackson, K. K., Fan, A. C., Karigane, D., Zhao, F., Collins, C. T., Nakauchi, Y., Kayamori, K., Rangavajhula, A. S., Koehnke, T., Majeti, R.
  AMER SOC HEMATOLOGY.2023

- **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
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- **Intra-Leukemic IFN. Signaling Mediates Cell Cycle Suppression and Chemoresistance in AML**
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  AMER SOC HEMATOLOGY.2023
- **Engineering Sequential Mutations into Human HSPCs Yields an Aggressive Myeloid Malignancy Allowing for Interrogation of Preleukemic Transformation**
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  Fan, A. C., Nakauchi, Y., Bai, L., Azizi, A., Nuno, K. A., Zhao, F., Köhnke, T., Karigane, D., Cruz-Hernandez, D., Reinisch, A., Khatri, P., Majeti, R.
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- **Reprogramming Cancer into Antigen Presenting Cells as a Novel Immunotherapy.** *Cancer discovery*
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- **Targeting IDH1-Mutated Pre-Leukemic Hematopoietic Stem Cells in Myeloid Disease, Including CCUS and AML**
  Landberg, N., Koehnke, T., Nakauchi, Y., Fan, A., Karigane, D., Thomas, D., Majeti, R.
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- **The cell type specific 5hmC landscape and dynamics of healthy human hematopoiesis and TET2-mutant pre-leukemia.** *Blood cancer discovery*
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- **Clonal hematopoiesis: from mechanisms to clinical intervention.** *Cancer discovery*
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- **The TRACE-Seq method tracks recombination alleles and identifies clonal reconstitution dynamics of gene targeted human hematopoietic stem cells.** *Nature communications*
  Sharma, R. n., Dever, D. P., Lee, C. M., Azizi, A. n., Pan, Y. n., Camarena, J. n., Köhnke, T. n., Bao, G. n., Porteus, M. H., Majeti, R. n.
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- **Chromatin Accessibility Analysis Reveals Epigenetic Evolution Is a Common Mechanism of Relapse in Acute Myeloid Leukemia**
  Nuno, K. A., Azizi, A., Koehnke, T., Ediriwickrema, A., Corces, M., Majeti, R.
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- **Enasidenib drives human erythroid differentiation independently of isocitrate dehydrogenase 2.** *The Journal of clinical investigation*
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- **Integrated analysis of patient samples identifies biomarkers for venetoclax efficacy and combination strategies in acute myeloid leukemia.** *Nature cancer*
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- **Toll-like receptor 7/8-matured RNA-transduced dendritic cells as post-remission therapy in acute myeloid leukaemia: results of a phase I trial** *CLINICAL & TRANSLATIONAL IMMUNOLOGY*
  Lichtenegger, F. S., Schnorfeil, F. M., Rothe, M., Deiser, K., Altmann, T., Buecklein, V. L., Koehnke, T., Augsberger, C., Konstandin, N. P., Spiekermann, K., Moosmann, A., Boehm, S., Boxberg, et al
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