



Sam Scharenberg

- MD Student, expected graduation Spring 2026
- Ph.D. Student in Biophysics, admitted Autumn 2021
- MSTP Student

Publications

PUBLICATIONS

- **An SPNS1-dependent lysosomal lipid transport pathway that enables cell survival under choline limitation.** *Science advances*
Scharenberg, S. G., Dong, W., Ghoochani, A., Nyame, K., Levin-Konigsberg, R., Krishnan, A. R., Rawat, E. S., Spees, K., Bassik, M. C., Abu-Remaileh, M.
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- **Engineering monocyte/macrophage-specific glucocerebrosidase expression in human hematopoietic stem cells using genome editing** *Nature Communications*
Scharenberg, S. G., Poletto, E., Lucot, K. L., Colella, P., Sheikali, A., Montine, T. J., Porteus, M. H., Gomez-Ospina, N.
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- **Cellular and organismal function of choline metabolism.** *Nature metabolism*
Kenny, T. C., Scharenberg, S., Abu-Remaileh, M., Birsoy, K.
2025
- **Genome-edited Human Hematopoietic Stem Cells Correct Lysosomal Storage Disorders**
Poletto, E., Scharenberg, S. G., Channabasavaiah, G. B., Porteus, M., Gomez-Ospina, N.
WILEY.2020: S213–S214
- **Monocyte lineage-specific glucocerebrosidase expression in human hematopoietic stem cells: A universal genome editing strategy for Gaucher disease**
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- **CRISPR/Cas9 Genome Engineering in Engraftable Human Brain-Derived Neural Stem Cells.** *iScience*
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- **Genome Edited Human Hematopoietic Stem Cells Correct Lysosomal Storage Disorders: Proof-of-Concept and Safety Studies for Mucopolysaccharidosis Type I and Gaucher Disease**
Gomez-Ospina, N., Scharenberg, S., Mostrel, N., Raj, N., Attardi, L., Khan, S., Tomatsu, S., Lee, C., Bao, G., Porteus, M. H.
CELL PRESS.2019: 329
- **Human genome-edited hematopoietic stem cells phenotypically correct Mucopolysaccharidosis type I.** *Nature communications*
Gomez-Ospina, N. n., Scharenberg, S. G., Mostrel, N. n., Bak, R. O., Mantri, S. n., Quadros, R. M., Gurumurthy, C. B., Lee, C. n., Bao, G. n., Suarez, C. J., Khan, S. n., Sawamoto, K. n., Tomatsu, et al
2019; 10 (1): 4045
- **Engineering the Hematopoietic System for Lysosomal Storage Disorders: Correction of Mucopolysaccharidosis Type I Using Genome-Edited, Human Hematopoietic Stem and Progenitor Cells**
Gomez-Ospina, N., Scharenberg, S., Mostrel, N., Mantri, S., Nicolas, C., Porteus, M. M.
CELL PRESS.2018: 310–11

- **Engineering blood stem cells for autologous transplants for lysosomal diseases: Correction of mucopolysaccharidosis type I using genome-edited hematopoietic stem and progenitor cells**

Gomez-Ospina, N., Scharenberg, S. G., Mantri, S., Nicolas, C., Bak, R. O., Porteus, M. H.
ACADEMIC PRESS INC ELSEVIER SCIENCE.2018: S54–S55