

## Sofia Elena Luna

- MD Student, expected graduation Spring 2027
- Ph.D. Student in Stem Cell Biology and Regenerative Medicine, admitted Autumn 2023
- MSTP Student

### Publications

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#### PUBLICATIONS

- **Multilayered HIV-1 resistance in HSPCs through CCR5 Knockout and B cell secretion of HIV-inhibiting antibodies.** *Nature communications*  
Feist, W. N., Luna, S. E., Ben-Efraim, K., Filsinger Interrante, M. V., Amorin, A., Johnston, N. M., Bruun, T. U., Utz, A., Ghanim, H. Y., Lesch, B. J., McLaughlin, T. M., Dudek, A. M., Porteus, et al  
2025; 16 (1): 3103
- **CT pan-scanning versus targeted imaging among older adults after ground level falls.** *Trauma surgery & acute care open*  
Touponse, G., Choi, J., Calderon, C., Luna, S. E., Tennakoon, L., Ko, A.  
2025; 10 (1): e001534
- **Engineering synthetic signaling receptors to enable erythropoietin-free erythropoiesis.** *Nature communications*  
Shah, A. P., Majeti, K. R., Ekman, F. K., Selvaraj, S., Sharma, D., Sinha, R., Soupene, E., Chati, P., Luna, S. E., Charlesworth, C. T., McCreary, T., Lesch, B. J., Tran, et al  
2025; 16 (1): 1140
- **Enhancement of erythropoietic output by Cas9-mediated insertion of a natural variant in haematopoietic stem and progenitor cells.** *Nature biomedical engineering*  
Luna, S. E., Camarena, J., Hampton, J. P., Majeti, K. R., Charlesworth, C. T., Soupene, E., Selvaraj, S., Jia, K., Sheehan, V. A., Cromer, M. K., Porteus, M. H.  
2024
- **A simultaneous knockout knockin genome editing strategy in HSPCs potently inhibits CCR5- and CXCR4-tropic HIV-1 infection.** *Cell stem cell*  
Dudek, A. M., Feist, W. N., Sasu, E. J., Luna, S. E., Ben-Efraim, K., Bak, R. O., Cepika, A. M., Porteus, M. H.  
2024; 31 (4): 499-518.e6
- **Factors Influencing Parental Willingness to Consent to a Survey Study for Patients in the Pediatric Emergency Department.** *Pediatric emergency care*  
Fischer, K., Smith, G. B., Luna, S. E., Jamro-Comer, E., Leupold, O., Ahmed, H., Govindji, S., Ahmad, F.  
2024
- **Using Human Genetics to Develop Strategies to Increase Erythropoietic Output from Genome-Edited Hematopoietic Stem and Progenitor Cells**  
Luna, S. E., Camarena, J., Hampton, J. P., Majeti, K. R., Charlesworth, C. T., Soupene, E., Sheehan, V. A., Cromer, K., Porteus, M.  
AMER SOC HEMATOLOGY.2023
- **Using Inducible Signaling Receptors to Increase Erythropoietic Output from Genome-Edited Hematopoietic Stem Cells**  
Majeti, K. R., Shah, A. P., Luna, S. E., Soupene, E., Chu, S. N., Sharma, D., Porteus, M., Cromer, K.  
AMER SOC HEMATOLOGY.2023
- **High-efficiency transgene integration by homology-directed repair in human primary cells using DNA-PKcs inhibition.** *Nature biotechnology*  
Selvaraj, S., Feist, W. N., Viel, S., Vaidyanathan, S., Dudek, A. M., Gastou, M., Rockwood, S. J., Ekman, F. K., Oseghale, A. R., Xu, L., Pavel-Dinu, M., Luna, S. E., Cromer, et al  
2023

- **Engineering Human Hematopoietic Stem and Progenitor Cells for Lineage-Specific Expression of Galactocerebrosidase Using Genome Editing**  
Amorin, N. A., Golden, L., Poletto, E., Johnston, N., Feist, W., Menezes, T., Kikuta, K., Luna, S., Charlton, C., Kashuv, T., Gomez-Ospina, N.  
CELL PRESS.2023: 782
- **Establishing Multilayered Genetic Resistance to HIV-1 by Engineering Hematopoietic Stem and Progenitor Cells for B Cell Specific Secretion of Therapeutic Antibodies**  
Feist, W., Luna, S., Ben-Efraim, K., Interrante, M., Amorin, N. A., Johnston, N., Dudek, A., Porteus, M. H.  
CELL PRESS.2023: 115-116
- **Aberrant activation of TCL1A promotes stem cell expansion in clonal haematopoiesis.** *Nature*  
Weinstock, J. S., Gopakumar, J., Burugula, B. B., Uddin, M. M., Jahn, N., Belk, J. A., Bouzid, H., Daniel, B., Miao, Z., Ly, N., Mack, T. M., Luna, S. E., Prothro, et al  
2023