



Claudia Del Toro Runzer

Postdoctoral Scholar, Medical Genetics

Bio

BIO

Claudia Del Toro Runzer is a postdoctoral scholar at Stanford University specializing in gene therapy and regenerative medicine. Her current research focuses on developing gene editing strategies for inherited disorders, including GNE myopathy and Gaucher disease. She works on advancing precision gene engineering approaches in human hematopoietic stem and progenitor cells and other clinically relevant cell types, with the goal of enabling safe and durable therapeutic correction.

Dr. Del Toro Runzer earned her PhD in Tissue Engineering from the MERLN Institute for Technology-Inspired Regenerative Medicine at Maastricht University. Her doctoral research focused on chemically modified mRNA therapeutics for bone regeneration, where she investigated molecular design, intracellular trafficking, and biomaterial-assisted delivery systems to enhance protein expression and osteogenic outcomes. Her work resulted in multiple first-author publications in leading journals, including *Advanced Functional Materials*, *Bone Research*, *Materials Today*, and *Molecular Therapy: Nucleic Acids*.

Prior to her PhD, she completed an M.Sc. in Regenerative Biology and Medicine at Technische Universität Dresden and a B.Sc. in Biotechnology Engineering at Instituto Tecnológico de Monterrey. Her international training spans Germany, the Netherlands, Mexico, and the United States, with research experience in organoid systems, tissue regeneration, biomaterials engineering, and microphysiological platforms.

INSTITUTE AFFILIATIONS

- Member, Maternal & Child Health Research Institute (MCHRI)

STANFORD ADVISORS

- Natalia Gomez-Ospina, Postdoctoral Faculty Sponsor

Publications

PUBLICATIONS

- **Biologics for bone regeneration: advances in cell, protein, gene, and mRNA therapies** *BONE RESEARCH*
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- **Engineering bone tissue with mRNA: from molecular design and delivery to clinical applications** *MATERIALS TODAY*
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- **Inside the cell: Approaches to evaluating mRNA internalization and trafficking.** *Methods (San Diego, Calif.)*
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- **Acoustically Responsive Nanofibrous Scaffolds with 3D Hierarchy for Tympanic Membrane Regeneration** *SMALL STRUCTURES*
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- **HBEGF-TNF induce a complex outer retinal pathology with photoreceptor cell extrusion in human organoids.** *Nature communications*
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2022; 13 (1): 6183
- **Thymidylate synthase polymorphism in Mexican patients with colon cancer treated with 5-fluorouracil.** *Journal of B.U.ON. : official journal of the Balkan Union of Oncology*
Patricia Rios-Ibarra, C., Janeth Rodriguez-Silva, C., Alonso Lopez-Chuken, Y., Ortiz-Lopez, R., Fernandez-Castillo, E., Beatriz Del Toro Runzer, C., Paul Armenta-Perez, V., Flores-Gutierrez, J. P., Quintanilla-Guzman, A., Salinas-Santander, M., Gonzalez-Guerrero, J. F., Bosques-Padilla, F., Santos, et al
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