Stanford



Rebeca Arroyo Hornero

Basic Life Research Scientist, Pediatrics - Hematology/Oncology

Bio

BIO

During my PhD at Oxford University, I developed a strong passion for T cell immunotherapies while researching Treg therapy for transplantation. I then recognized the crucial role of the tissue environment in cell therapy success, which led me to study myeloid cells during my postdoc at Stanford. Now, I aim to harness myeloid-T cell interactions to enhance CAR-T cell function by integrating computational and wet-lab data from patients with solid tumors.

ACADEMIC APPOINTMENTS

- Basic Life Research Scientist, Pediatrics - Hematology/Oncology

Publications

PUBLICATIONS

- **Tabula Sapiens 2.0: A comprehensive transcriptomic atlas of human cell types.** *Cell*
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- **TNF and type I interferon crosstalk controls the fate and function of plasmacytoid dendritic cells.** *Nature immunology*
  Arroyo Hornero, R., Maqueda-Alfaro, R. A., Solís-Barbosa, M. A., Leylek, R. A., Medina Chavez, O., Martinez, O. M., Gottfried-Blackmore, A., Idoyaga, J.
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- **Monocytes give rise to Langerhans cells that preferentially migrate to lymph nodes at steady state.** *Proceedings of the National Academy of Sciences of the United States of America*
  Raquer-McKay, H. M., Maqueda-Alfaro, R. A., Saravanan, S., Arroyo Hornero, R., Clausen, B. E., Gottfried-Blackmore, A., Idoyaga, J.
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- **Increased frequencies of highly activated regulatory T cells skewed to a T helper 1-like phenotype with reduced suppressive capacity in dengue patients** *MBIO*
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- **Transitional dendritic cells are distinct from conventional DC2 precursors and mediate proinflammatory antiviral responses.** *Nature immunology*
  Sulczewski, F. B., Maqueda-Alfaro, R. A., Alcantara-Hernandez, M., Perez, O. A., Saravanan, S., Yun, T. J., Seong, D., Arroyo Hornero, R., Raquer-McKay, H. M., Esteva, E., Lanzar, Z. R., Leylek, R. A., Adams, et al
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- **Rapid recruitment and IFN-I-mediated activation of monocytes dictate focal radiotherapy efficacy.** *Science immunology*
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- **Plasmacytoid dendritic cells: A dendritic cell in disguise.** *Molecular immunology*
  Arroyo Hornero, R., Idoyaga, J.
  2023; 159: 38-45

- **Sodium perturbs mitochondrial respiration and induces dysfunctional Tregs** *CELL METABOLISM*
  Corte-Real, B. F., Hamad, I., Hornero, R., Geisberger, S., Roels, J., Van Zeebroeck, L., Dyczko, A., van Gisbergen, M. W., Kurniawan, H., Wagner, A., Yoset, N., Weiss, S. N. Y., Schmetterer, et al
  2023; 35 (2): 299-+

- **Dissecting the role of CSF2RB expression in human regulatory T cells** *FRONTIERS IN IMMUNOLOGY*
  Corte-Real, B. F. F., Hornero, R., Dyczko, A., Hamad, I., Kleinewietfeld, M.
  2022; 13: 1005965

- **The Charcot-Leyden crystal protein Galectin-10 is not a major determinant of human regulatory T-cell function** *ALLERGY*
  Arroyo-Hornero, R., Aegerter, H., Hamad, I., Corte-Real, B., Staes, K., van Der Woning, B., Verstraete, K., Savvides, S. N., Lambrecht, B. N., Kleinewietfeld, M.
  2022; 77 (9): 2818-2821

- **Fast and Efficient Genome Editing of Human FOXP3(+) Regulatory T Cells** *FRONTIERS IN IMMUNOLOGY*
  Van Zeebroeck, L., Hornero, R., Corte-Real, B. F., Hamad, I., Meissner, T. B., Kleinewietfeld, M.
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- **CD70 expression determines the therapeutic efficacy of expanded human regulatory T cells** *COMMUNICATIONS BIOLOGY*
  Hornero, R., Georgiadis, C., Hua, P., Trzupek, D., He, L., Qasim, W., Todd, J. A., Ferreira, R. C., Wood, K. J., Issa, F., Hester, J.
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- **The Impact of Dietary Components on Regulatory T Cells and Disease** *FRONTIERS IN IMMUNOLOGY*
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- **GENERATION OF POTENT AND STABLE EX VIVO-EXPANDED REGULATORY T CELLS BY MODULATING CD27 SIGNALLING**
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- **Modulation of CD27/CD70 Co-Stimulatory Pathway may Allow for the Generation of a More Potent Human Regulatory T Cell Product for Cell Therapy**
  Hornero, R., Issa, F., Hester, J., Wood, K.
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- **CD45RA Distinguishes CD4(+)CD25(+)CD127(-/low) TSDR Demethylated Regulatory T Cell Subpopulations With Differential Stability and Susceptibility to Tacrolimus-Mediated Inhibition of Suppression** *TRANSPLANTATION*
  Hornero, R., Betts, G. J., Sawitzki, B., Vogt, K., Harden, P. N., Wood, K. J.
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