Stanford

Alexander Isaac Salter

- Affiliate, Department Funds
- Fellow in Medicine - Med/Hematology

Bio

BIO

I am a clinical fellow in medical oncology at Stanford University whose long-term goal is to become a translational physician-scientist who develops curative cellular immunotherapies for solid tumors. As a graduate student, I conducted the first comprehensive signaling analyses of therapeutically engineered T cells, demonstrating that signal strength, rather than quality, is a key determinant of T cell function and fate. These findings helped inform the design of next-generation cellular immunotherapies, some of which are now in clinical trials. I also co-led a collaboration with Dr. David Baker's laboratory at the University of Washington to engineer synthetic protein "logic gates" enabling combinatorial antigen recognition with high precision, offering a potential path to more safely target solid tumors. My doctoral research resulted in 16 publications, including four prominent first-, co-first-, or second-author papers in high-impact journals, several reviews and textbook chapters, and recognition on the Forbes 30 Under 30 List.

At Stanford, I focus on translating cellular therapies for thoracic and genitourinary malignancies. Under the mentorship of Drs. Crystal Mackall and Allison Betof Warner, I am developing CAR T cells for lung cancer in non- and never-smokers and serve as a sub-investigator on an upcoming first-in-human phase 1 trial of drug-regulatable CAR T cells for adults with advanced solid tumors.

CLINICAL FOCUS

- Fellow
- Lung Cancer
- Prostate Cancer

Publications

PUBLICATIONS

- **Molecular Markers in the Era of Precision Care in Lung Cancer.** *Seminars in respiratory and critical care medicine*
  Paranjpe, I., Salter, A., Chen, K., Das, M.
  2025
- **Novel immunotherapy combinations in neoadjuvant non-small cell lung cancer (NSCLC): a better chance at cure?** *Translational lung cancer research*
  Salter, A. I., Das, M.
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- **Synthetic receptors for logic gated T cell recognition and function** *CURRENT OPINION IN IMMUNOLOGY*
  Simon, S., Bugos, G., Salter, A., Riddell, S. R.
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- **Comparative analysis of TCR and CAR signaling informs CAR designs with superior antigen sensitivity and in vivo function** *SCIENCE SIGNALING*
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  Lajoie, M. J., Boyken, S. E., Salter, A., Bruffey, J., Rajan, A., Langan, R. A., Olshefsky, A., Muhunthan, V., Bick, M. J., Gewe, M., Quijano-Rubio, A., Johnson, J., Lenz, et al
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- **Visualization of human T lymphocyte-mediated eradication of cancer cells in vivo** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  He, X., Yin, X., Wu, J., Wickstrom, S. L., Duo, Y., Du, Q., Qin, S., Yao, S., Jing, X., Hosaka, K., Wu, J., Jensen, L. D., Lundqvist, et al
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- **Multispecific Targeting with Synthetic Ankyrin Repeat Motif Chimeric Antigen Receptors** *CLINICAL CANCER RESEARCH*
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- **γ-Secretase inhibition increases efficacy of BCMA-specific chimeric antigen receptor T cells in multiple myeloma** *BLOOD*
  Pont, M. J., Hill, T., Cole, G. O., Abbott, J. J., Kelliher, J., Salter, A. I., Hudecek, M., Comstock, M. L., Rajan, A., Patel, B. K. R., Voutsinas, J. M., Wu, Q., Liu, et al
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- **Tinkering in the garage - tuning CARs for safety** *NATURE REVIEWS CLINICAL ONCOLOGY*
  Salter, A. I., Riddell, S. R.
  2019; 16 (9): 530-532

- **Logic-Gated ROR1 Chimeric Antigen Receptor Expression Rescues T Cell-Mediated Toxicity to Normal Tissues and Enables Selective Tumor Targeting** *CANCER CELL*
  Srivastava, S., Salter, A., Liggitt, D., Yechan-Gunja, S., Sarvothama, M., Cooper, K., Smythe, K. S., Dudakov, J. A., Pierce, R. H., Rader, C., Ridde, S. R.
  2019; 35 (3): 489-+

- **Phosphoproteomic analysis of chimeric antigen receptor signaling reveals kinetic and quantitative differences that affect cell function** *SCIENCE SIGNALING*
  Salter, A. I., Ivey, R. G., Kennedy, J. J., Voillet, V., Rajan, A., Alderman, E. J., Voytovich, U. J., Lin, C., Sommermeyer, D., Liu, L., Whiteaker, J. R., Gottardo, R., Paulovich, et al
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- **Chimeric antigen receptor-modified T cells: CD19 and the road beyond** *BLOOD*
  Salter, A. I., Pont, M. J., Riddell, S. R.
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- **Ptpn11 Deletion in cD4⁺ cells Does not affect T cell Development and Functions but causes cartilage Tumors in a T cell-independent Manner** *FRONTIERS IN IMMUNOLOGY*
  Miah, S., Jayasuriya, C. T., Salter, A. I., Reilly, E. C., Fugere, C., Yang, W., Chen, Q., Brossay, L.
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- **A BiTE from cancer's intracellular menu** *NATURE BIOTECHNOLOGY*
  Salter, A. I., Riddell, S. R.
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- **Role of SHIP1 in Invariant NKT Cell Development and Functions** *JOURNAL OF IMMUNOLOGY*
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  2015; 195 (5): 2149-2156

- **Genome Sequencing of Idiopathic Pulmonary Fibrosis in Conjunction with a Medical School Human Anatomy Course** *PLOS ONE*
  Kumar, A., Dougherty, M., Findlay, G. M., Geisheker, M., Klein, J., Lazar, J., Machkovech, H., Resnick, J., Resnick, R., Salter, A. I., Talebi-Liasi, F., Arakawa, C., Baudin, et al
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- **Adoptive Therapy With Chimeric Antigen Receptor-Modified T Cells of Defined Subset Composition** *CANCER JOURNAL*
  Riddell, S. R., Sommermeyer, D., Berger, C., Liu, L., Balakrishnan, A., Salter, A., Hudecek, M., Maloney, D. G., Turtle, C. J.
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- **Merck Ad5/HIV induces broad innate immune activation that predicts CD8⁺ T-cell responses but is attenuated by preexisting Ad5 immunity** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
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- **Impact of Pretransplantation Minimal Residual Disease, As Detected by Multiparametric Flow Cytometry, on Outcome of Myeloablative Hematopoietic Cell Transplantation for Acute Myeloid Leukemia** *JOURNAL OF CLINICAL ONCOLOGY*
  Walter, R. B., Gooley, T. A., Wood, B. L., Milano, F., Fang, M., Sorror, M. L., Estey, E. H., Salter, A. I., Lansverk, E., Chien, J. W., Gopal, A. K., Appelbaum, F. R., Pagel, et al
  2011; 29 (9): 1190-1197

- **Comparison of matched unrelated and matched related donor myeloablative hematopoietic cell transplantation for adults with acute myeloid leukemia in first remission** *LEUKEMIA*
  Walter, R. B., Pagel, J. M., Gooley, T. A., Petersdorf, E. W., Sorror, M. L., Woolfrey, A. E., Hansen, J. A., Salter, A. I., Lansverk, E., Stewart, F. M., O'Donnell, P. V., Appelbaum, F. R.
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