Stanford



Aaron J. Wilk

Fellow in Pathology

Bio

PROFESSIONAL EDUCATION

- MD, Stanford University School of Medicine (2024)
- PhD, Stanford University School of Medicine , Immunology (2022)
- BS, Westmont College , Biology, Chemistry, Music (2016)

Publications

PUBLICATIONS

- **A practical approach to risk stratification of incidental T cell clonality.** *Blood advances*
  Wilk, A. J., Khodadoust, M. S., Oak, J. S.
  2026
- **NKG2C Improves Diagnostic Specificity of NK Cell Receptor Restriction by Identifying Non-Neoplastic Adaptive NK Cell Clones.** *Modern pathology : an official journal of the United States and Canadian Academy of Pathology, Inc*
  Wilk, A. J., Gitana, G., Oak, J.
  2026: 100984
- **Comparative analysis of cell-cell communication at single-cell resolution.** *Nature biotechnology*
  Wilk, A. J., Shalek, A. K., Holmes, S., Blish, C. A.
  2023
- **Multi-omic profiling reveals widespread dysregulation of innate immunity and hematopoiesis in COVID-19.** *The Journal of experimental medicine*
  Wilk, A. J., Lee, M. J., Wei, B., Parks, B., Pi, R., Martinez-Colon, G. J., Ranganath, T., Zhao, N. Q., Taylor, S., Becker, W., Stanford COVID-19 Biobank, Jimenez-Morales, D., Blomkalns, A. L., et al
  2021; 218 (8)
- **A single-cell atlas of the peripheral immune response in patients with severe COVID-19.** *Nature medicine*
  Wilk, A. J., Rustagi, A., Zhao, N. Q., Roque, J., Martinez-Colon, G. J., McKechnie, J. L., Ivison, G. T., Ranganath, T., Vergara, R., Hollis, T., Simpson, L. J., Grant, P., Subramanian, et al
  2020
- **A practical difference from the normal approach to evaluate natural killer (NK) cells and NK cell neoplasms by flow cytometry.** *Cytometry. Part B, Clinical cytometry*
  Wilk, A. J., Shameli, A., Ames, E., Fromm, J. R., Grzywacz, B., Shi, M., Cherian, S., Oak, J.
  2026
- **Cytoplasmic staining of T cell receptor components enables efficient assessment of lineage and clonality in surface CD3-negative T cell neoplasms.** *Cytometry. Part B, Clinical cytometry*
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2026

- **Immunophenotyping challenges in the diagnosis of NK-LGLL.** *Blood advances*
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  2026
- **TP53 genetic alterations are highly recurrent in Epstein-Barr virus-negative aggressive NK-cell leukemia: insights from an institutional experience and comprehensive literature review.** *American journal of clinical pathology*
  Gonzalez Mancera, M., Wilk, A. J., Oak, J., Natkunam, Y., Silva, O.
  2026; 165 (4)
- **CellVoyager: AI CompBio agent generates new insights by autonomously analyzing biological data.** *Nature methods*
  Alber, S., Chen, B., Sun, E., Isakova, A., Wilk, A. J., Zou, J.
  2026
- **Interferon-mediated NK cell activation increases cytolytic activity against T follicular helper cells and limits antibody response to SARS-CoV-2.** *Nature immunology*
  de Los Rios Kobara, I., Jayewickreme, R., Lee, M. J., Wilk, A. J., Blomkalns, A. L., Nadeau, K. C., Yang, S., Rogers, A. J., Blish, C. A.
  2025
- **Membrane-wide screening identifies potential tissue-specific determinants of SARS-CoV-2 tropism.** *PLoS pathogens*
  Dinesh, R. K., Wang, C., Qu, Y., Rustagi, A., Cousins, H., Zengel, J., Wang, X., Barnard, T. R., Johnson, W. A., Xu, G., Zhang, T., Magazine, N., Beck, et al
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- **Prior vaccination prevents overactivation of innate immune responses during COVID-19 breakthrough infection.** *Science translational medicine*
  Chan, L., Pinedo, K., Stabile, M. A., Hamlin, R. E., Pienkos, S. M., Ratnasiri, K., Yang, S., Blomkalns, A. L., Nadeau, K. C., Pulendran, B., O'Hara, R., Rogers, A. J., Holmes, et al
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- **Interstitial macrophages are a focus of viral takeover and inflammation in COVID-19 initiation in human lung.** *The Journal of experimental medicine*
  Wu, T. T., Travaglini, K. J., Rustagi, A., Xu, D., Zhang, Y., Andronov, L., Jang, S., Gillich, A., Dehghannasiri, R., Martinez-Colon, G. J., Beck, A., Liu, D. D., Wilk, et al
  2024; 221 (6)
- **Premature skewing of T cell receptor clonality and delayed memory expansion in HIV-exposed infants.** *Nature communications*
  Dzanibe, S., Wilk, A. J., Canny, S., Ranganath, T., Alinde, B., Rubelt, F., Huang, H., Davis, M. M., Holmes, S. P., Jaspan, H. B., Blish, C. A., Gray, C. M.
  2024; 15 (1): 4080
- **NK Cell-Monocyte Cross-talk Underlies NK Cell Activation in Severe COVID-19.** *Journal of immunology (Baltimore, Md. : 1950)*
  Lee, M. J., de Los Rios Kobara, I., Barnard, T. R., Vales Torres, X., Tobin, N. H., Ferbas, K. G., Rimoin, A. W., Yang, O. O., Aldrovandi, G. M., Wilk, A. J., Fulcher, J. A., Blish, C. A.
  2024
- **Pro-inflammatory feedback loops define immune responses to pathogenic Lentivirus infection.** *Genome medicine*
  Wilk, A. J., Marceau, J. O., Kazer, S. W., Fleming, I., Miao, V. N., Galvez-Reyes, J., Kimata, J. T., Shalek, A. K., Holmes, S., Overbaugh, J., Blish, C. A.
  2024; 16 (1): 24
- **Inferring cell-cell communication at single-cell resolution** *NATURE BIOTECHNOLOGY*
  Wilk, A. J., Blish, C. A.
  2023
- **Single-cell RNA-seq methods to interrogate virus-host interactions.** *Seminars in immunopathology*
  Ratnasiri, K., Wilk, A. J., Lee, M. J., Khatri, P., Blish, C. A.
  2022
- **Integrated analysis of multimodal single-cell data.** *Cell*

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2021

- **Synthetic Siglec-9 Agonists Inhibit Neutrophil Activation Associated with COVID-19.** *ACS central science*

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- **SARS-CoV-2 RNAemia predicts clinical deterioration and extrapulmonary complications from COVID-19.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*

  Ram-Mohan, N. n., Kim, D. n., Zudock, E. J., Hashemi, M. M., Tjandra, K. C., Rogers, A. J., Blish, C. A., Nadeau, K. C., Newberry, J. A., Quinn, J. V., O'Hara, R. n., Ashley, E. n., Nguyen, et al

  2021

- **Charge-altering releasable transporters enable phenotypic manipulation of natural killer cells for cancer immunotherapy.** *Blood advances*

  Wilk, A. J., Weidenbacher, N. L., Vergara, R. n., Haabeth, O. A., Levy, R. n., Waymouth, R. M., Wender, P. A., Blish, C. A.

  2020; 4 (17): 4244–55

- **Diversification of human NK cells: Lessons from deep profiling.** *Journal of leukocyte biology*

  Wilk, A. J., Blish, C. A.

  2018

- **Bordetella PlrSR regulatory system controls BvgAS activity and virulence in the lower respiratory tract.** *Proceedings of the National Academy of Sciences of the United States of America*

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