



Holden Maecker

Professor (Research) of Microbiology and Immunology

Bio

BIO

Dr. Maecker received a BS in Microbiology from Purdue University and a PhD in Cancer Biology from Stanford University. He did postdoctoral work with Ronald and Shoshana Levy at Stanford, and was an Assistant Professor of Biology at Loyola University Chicago, as well as a Senior Scientist at BD Biosciences, San Jose, CA. He is currently a Professor of Microbiology and Immunology, and Director of the Human Immune Monitoring Center, at Stanford University.

ACADEMIC APPOINTMENTS

- Professor (Research), Microbiology and Immunology
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Wu Tsai Human Performance Alliance
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Director, Human Immune Monitoring Center, (2009- present)
- Member, Institute for Immunity, Transplantation, and Infection, (2009- present)
- Member, Immunology Interdisciplinary Degree Program, (2012- present)
- Director, Service Centers and Enabling Technologies, Stanford University School of Medicine, (2014- present)
- Member, Stanford Diabetes Research Center, (2017- present)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Member, Scientific Advisory Board, Cytex (2017 - present)
- Member, SITC Biomarker Task Force (2014 - present)
- Member, Stanford Cancer Institute Scientific Review Committee (2011 - present)
- Co-chair, FOCIS Human Immunophenotyping Consortium (HIPC) (2009 - present)

PROFESSIONAL EDUCATION

- PhD, Stanford University , Cancer Biology (1988)

- BS, Purdue University , Microbiology (1984)

COMMUNITY AND INTERNATIONAL WORK

- Human Immunophenotyping Consortium

PATENTS

- Vernon Maino, Holden Maecker, Douglas Petry. "United States Patent 2007/109161 Detection of HIV-infected cell subsets", Becton, Dickinson, and Company, Jan 1, 2007
- Shoshana Levy, Rosemarie Dekruyff, Dale Umetsu, Holden Maecker. "United States Patent 2001/0044418 Treatment of allergies", Stanford University, Jan 1, 2001

LINKS

- HIMC website: <http://himc.stanford.edu>
- Maeckerlab weblog: <http://maeckerlab.typepad.com>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

A major theme in our group is to define metrics of immune competence in various settings, including cancer immunotherapy, organ transplantation, allergy, and chronic viral infection. We use CyTOF mass cytometry, often in combination with other technologies, to broadly survey immune features at the cellular level, then examine links between features or groups of features and clinical outcome. A long-term goal is to create an assay of global immune competence that could predict risk for various immune-related outcomes in both healthy individuals and in disease.

Teaching

COURSES

2025-26

- Advanced Techniques in Biomarker Analysis and Imaging: TRAM 212A (Aut)
- Introduction to Applied Computational Tools in Immunology: IMMUNOL 206 (Win)

2024-25

- Translational Assay Technologies: MED 212A (Aut)

2023-24

- Introduction to Applied Computational Tools in Immunology: IMMUNOL 206 (Win)
- MTRAM A: Translational Research Methods and Technologies: Cell Based Methods: MED 212A (Aut)

2022-23

- Introduction to Applied Computational Tools in Immunology: IMMUNOL 206 (Win)
- MTRAM A: Translational Research Methods and Technologies: Cell Based Methods: MED 212A (Aut)

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Nana Akua Duah, KWAT MEDETGUL-ERNAR, David Seong

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Immunology (Phd Program)
- Microbiology and Immunology (Phd Program)

Publications

PUBLICATIONS

- **Human vaccine responses regulated by parallel cytokine pathways.** *Nature immunology*
Chen, G., Guo, J., Heath, J., Prestwood, T. R., Kwon, W. J., Smith, A. R., Nguyen, T. T., Kathuria, K. R., Sola, E., Sangare, A., Mallajosyula, V., Furuichi Fong, R., Mohsin, et al
2026
- **Early immune events during SARS-CoV-2 infection impact memory T and B cell responses.** *Communications biology*
Woloszczuk, K., Joyner, D., Connors, J., Bernui, M., Canziani, G., Chaiken, I., Burger, J., van Gils, M. J., van Rijswijk, J., Olijhoek, W., Venkateswaran, K. V., Venkateswaran, N., Bosinger, et al
2026
- **Plasma proteomic signatures of preclinical Alzheimer's disease in clinically unimpaired older adults.** *Molecular neurodegeneration*
Trelle, A. N., Cody, K. A., Nguyen, T. T., Winer, J. R., Weiss, S., Sai, I., Ward, T., Cheng, G., Channappa, D., Mendiola, J., Al-Rajhi, A., Raghuraman, K., Sha, et al
2026
- **DNA methylation profiles at hospital admission are associated with subsequent severe COVID-19 outcomes.** *Clinical epigenetics*
Hsu, F. M., Pickering, H., Bosinger, S. E., Eckalbar, W., Maecker, H. T., Kim-Schulze, S., Ozonoff, A., Diray-Arce, J., Schaenman, J. M., Reed, E. F., Pellegrini, M.
2026
- **Pilot proteomics study for identifying a pollution exposure signature in firefighters.** *Journal of exposure science & environmental epidemiology*
Ding, V. Y., Lu, D., Ji, Y., Johnson, M. M., Haddad, F., Kim, J. B., Horne, B. D., Park, J. A., Nadeau, K. C., Desai, M., Maecker, H. T.
2026
- **Stability of Luminex cytokine assays with freeze-thaw in different plasma/serum matrices.** *Journal of immunological methods*
Verma, A., Sridharan, K., Herschmann, I., Nguyen, T., Maecker, H. T.
2026; 548: 114053
- **Empiric azithromycin alters the upper respiratory microbiome and resistome without anti-inflammatory benefit in COVID-19.** *Nature microbiology*
Glascock, A., Maguire, C., Phan, H. V., Lydon, E. C., Schaenman, J., Calfee, C. S., Melamed, E., Greenland, J., Corry, D. B., Kheradmand, F., Baden, L. R., Sekaly, R., McComsey, et al
2026
- **Machine learning models predict long COVID outcomes based on baseline clinical and immunologic factors.** *Communications medicine*
Doni Jayavelu, N., Samaha, H., Wimalasena, S. T., Hoch, A., Gygi, J. P., Gabernet, G., Ozonoff, A., Liu, S., Milliren, C. E., Levy, O., Baden, L. R., Melamed, E., Ehrlich, et al
2026; 6 (1): 1
- **Longitudinal Kinetics of T Cells and NK Cells After Pediatric Liver Transplant.** *Pediatric transplantation*
Rosenthal, A., Kowli, S., Vu, D. M., Nadimpalli, S., Chen, S. F., Maecker, H., Gans, H. A.
2026; 30 (1): e70257
- **Adjunctive ruxolitinib attenuates inflammation and enhances immunity in volunteers experimentally infected with Plasmodium falciparum.** *Science translational medicine*
Webster, R., Oyong, D. A., Llewellyn, S., Abd-Rahman, A. N., Potter, A. J., Mukhiya, R., Sahai, N., Leelasena, I., Ujvary, E., Mathison, S., Andrew, D. W., Bukali, L., de Labastida Rivera, et al
2025; 17 (826): eaea2531
- **Shrunken Median Location Effect Estimates: An Application to Immuno-Oncology.** *Journal of probability and statistics*
Holmes, T. H., Eller, D. W., Barnett, J., Maecker, H. T.
2025; 2025 (1)
- **Comprehensive analysis of multi-omics vaccine response data using MOFA and Stabl algorithms.** *Frontiers in bioinformatics*
Gupta, A., Abe, K., Maecker, H. T.

2025; 5: 1636240

- **Minimalistic transcriptomic signatures permit accurate early prediction of COVID-19 mortality.** *JCI insight*
Narendra, R., Lydon, E. C., Phan, H. V., Spottiswoode, N., Neyton, L. P., Diray-Arce, J., IMPACC Network, COMET Consortium, EARLI Consortium, Becker, P. M., Kim-Schulze, S., Hoch, A., Pickering, H., van Zalm, P., et al
2025; 10 (21)
- **Peanut allergy oral immunotherapy drives single-cell multi-omic changes in peanut-reactive T cells associated with sustained unresponsiveness.** *Nature immunology*
Han, X., Skatova, V., Mikelov, A., Ji, X., Hoh, R. A., Lee, J. Y., Cao, S., Seastedt, H., Schuetz, J., Fernandes, A., Singhal, A., Grubert, F., DeKruyff, et al
2025
- **Type 2 immune responses are associated with less severe COVID-19 in a hospitalized cohort.** *The journal of allergy and clinical immunology. Global*
Jayavelu, N. D., Qi, J., Milliren, C. E., Ozonoff, A., Liu, S., Levy, O., Baden, L. R., Melamed, E., McComsey, G. A., Cairns, C. B., Schaenman, J., Shaw, A. C., Hafler, et al
2025; 4 (4): 100515
- **Evaluating COVID-19 severity prediction and immune dynamics with NULISaseq: Insights from the IMPACC study.** *Journal of immunology (Baltimore, Md. : 1950)*
Abe, K., Holmes, T. H., Nguyen, T. T., Kim-Schulze, S., Levy, O., Baden, L. R., Melamed, E., Ehrlich, L. I., McComsey, G. A., Sekaly, R. P., Cairns, C. B., Haddad, E. K., Shaw, et al
2025
- **Trends in allergen-reactive CRTH2+ T cells and TARC associated with successful outcomes in a phase 2 cashew oral immunotherapy study.** *Frontiers in immunology*
Sindher, S. B., Fernandes, A., Manohar, M., Cao, S., Gupta, S., Parsons, E., Bogetic, D., Kumar, D., Rogers, J., Thompson, J., Dunham, D., Do, E., Maysel-Auslender, et al
2025; 16: 1655975
- **Circulating endothelial signatures correlate with worse outcomes in COVID-19, respiratory failure and ARDS.** *Critical care (London, England)*
Costa Monteiro, A. C., Pickering, H., Sarma, A., Taylor, C. S., Jenkins, M. M., Hsu, F. M., Nadel, B., Levy, O., Baden, L. R., Melamed, E., Ehrlich, L. I., McComsey, G. A., Sekaly, et al
2025; 29 (1): 432
- **A multi-omics recovery factor predicts long COVID in the IMPACC study.** *The Journal of clinical investigation*
Gabernet, G., Maciuch, J., Gygi, J. P., Moore, J. F., Hoch, A., Syphurs, C., Chu, T., Doni Jayavelu, N., Corry, D. B., Kheradmand, F., Baden, L. R., Sekaly, R. P., McComsey, et al
2025
- **A human milk oligosaccharide alters the microbiome, circulating hormones, and metabolites in a randomized controlled trial of older adults.** *Cell reports. Medicine*
Carter, M. M., Demis, D., Perelman, D., St Onge, M., Petlura, C., Cunanan, K., Mathi, K., Maecker, H. T., Chow, J. M., Robinson, J. L., Sabag-Daigle, A., Sonnenburg, E. D., Buck, et al
2025: 102256
- **Baseline predictors for 28-day COVID-19 severity and mortality among hospitalized patients: results from the IMPACC study.** *Frontiers in medicine*
Hou, J., Haslund-Gourley, B., Diray-Arce, J., Hoch, A., Roupheal, N., Becker, P. M., Augustine, A. D., Ozonoff, A., Guan, L., Kleinstein, S. H., Peters, B., Reed, E., Altman, et al
2025; 12: 1604388
- **MICBG406A polymorphism reduces risk of mechanical ventilation and death during viral acute lung injury.** *JCI insight*
Pickering, H., Alipanah-Lechner, N., Chen, E., Duchon, D., Maecker, H. T., Kim-Schulze, S., Montgomery, R. R., Cotsapas, C., Steen, H., Krammer, F., Langelier, C. R., Levy, O., Baden, et al
2025
- **Phase II basket trial of Dual Anti-CTLA-4 and anti-PD-1 blockade in Rare Tumors (DART) SWOG S1609: pancreatic neuroendocrine neoplasm (PNEN) cohort.** *Journal for immunotherapy of cancer*
Patel, S. P., Fisher, J., Chae, Y. K., Soto, L. S., Kasi, A., Konda, B., Walshauser, M., Parra, E., Zhang, J., Duault, C., Gonzalez-Kozlova, E., Manyam, G., Zhang, et al

2025; 13 (6)

- **High affinity CD16 polymorphism associated with reduced risk of severe COVID-19.** *JCI insight*
Qualls, A. E., Tsao, T., Lui, I., Lim, S. A., Su, Y., Chen, E., Duchon, D., Maecker, H. T., Kim-Schulze, S., Montgomery, R. R., Krammer, F., Langelier, C. R., Levy, et al
2025
- **Impact of age and prior COVID-19 on the response to influenza a components in the 2020-2021 Fluzone vaccine.** *Vaccine*
Ashraf, U., Lee, A., Gao, Q., Gonzalez, J. C., Scallan, C., Chinthrajah, R. S., Maecker, H. T., Davis, M. M., Nadeau, K. C., Chakraborty, S., Wang, T. T.
2025; 56: 127171
- **Altered baseline immunological state and impaired immune response to SARS-CoV-2 mRNA vaccination in lung transplant recipients.** *Cell reports. Medicine*
Hu, M., Oliveira, A. P., Fang, Z., Feng, Y., Miranda, M., Kowli, S., Arunachalam, P. S., Vasudevan, G., Hui, H. S., Grifoni, A., Sette, A., Litvack, M., Roupheal, et al
2025: 102050
- **Age-dependent cytokine surge in blood precedes cancer diagnosis.** *Proceedings of the National Academy of Sciences of the United States of America*
Chen, G., Mohsin, A., Zheng, H., Rosenberg-Hasson, Y., Padilla, C., Sarin, K. Y., Dekker, C. L., Grant, P., Maecker, H. T., Lu, Y., Furman, D., Shen-Orr, S., Khatri, et al
2025; 122 (12): e2420502122
- **A multi-institutional phase 1 clinical trial exploring upfront multimodal standard of care and combined immunotherapies for newly diagnosed glioblastoma.** *Neuro-oncology*
Wen, P. Y., Manzanera, A., Duault, C., Gonzalez-Kozlova, E., Lopez, L., Grossman, S. A., Ye, X., Fisher, J., Lee, I., Walbert, T., Snyder, J., Brem, S., Desai, et al
2025
- **Cellular immune changes during severe antisense oligonucleotide-associated thrombocytopenia in a nonhuman primate model.** *Journal of immunology (Baltimore, Md. : 1950)*
Gupta, S., Shen, L., Henry, S. P., Aghaeepour, N., Narayanan, P., Maecker, H. T.
2025
- **Society for Immunotherapy of Cancer (SITC) consensus statement on essential biomarkers for immunotherapy clinical protocols.** *Journal for immunotherapy of cancer*
Cottrell, T. R., Lotze, M. T., Ali, A., Bifulco, C. B., Capitini, C. M., Chow, L. Q., Cillo, A. R., Collyar, D., Cope, L., Deutsch, J. S., Dubrovsky, G., Gnjjatic, S., Goh, et al
2025; 13 (3)
- **Decreased levels and function of dendritic cells in blood and airways predict COVID-19 severity.** *Clinical & translational immunology*
Österberg, B., Falck-Jones, S., Vangeti, S., Åhlberg, E., Yu, M., Granja, D., Snik, M. E., Falck-Jones, R., Barros, G. W., Charles, A., Lepzien, R., Johansson, N., Holmes, et al
2025; 14 (3): e70026
- **Characterization of immune phenotypes in peripheral blood of adult renal transplant recipients using mass cytometry (CyTOF).** *ImmunoHorizons*
Kowli, S., Minocherhomji, S., Martinez, O. M., Busque, S., Lebrec, H., Maecker, H. T.
2025; 9 (4)
- **Comprehensive immune profiling of dengue and chikungunya viral responses using a novel miniaturized automated whole blood cellular analysis system and mass cytometry in a pediatric cohort in Msambweni, Kenya.** *ImmunoHorizons*
Kowli, S., Krystosik, A., Hale, M., Mutuku, F., Amugongo, J. S., Malumbo, S. L., Chebii, P. K., Maina, P. W., Mathi, K., Grossi-Soyster, E. N., Rieck, M., LaBeaud, A. D., Maecker, et al
2025; 9 (4)
- **Serum Cytokines During Acute Respiratory Infection and Relationship to Age.** *Journal of cellular immunology*
Gupta, A., Maecker, H. T.
2025; 7 (4): 139-145

- **Host-microbe multiomic profiling identifies distinct COVID-19 immune dysregulation in solid organ transplant recipients.** *Nature communications*
Pickering, H., Schaenman, J., Phan, H. V., Maguire, C., Tsitsiklis, A., Rouphael, N., Higuaita, N. I., Atkinson, M. A., Brakenridge, S., Fung, M., Messer, W., Salehi-Rad, R., Altman, et al
2025; 16 (1): 586
- **Batch Correction and Comparison of Intracellular Signaling Among Multiple Rheumatic and Inflammatory Diseases** *JOURNAL OF PROBABILITY AND STATISTICS*
Holmes, T. H., Couse, M., Rosenberg-Hasson, Y., Fernandez, R., Fernandez, A., Mathi, K., Guthridge, J. M., James, J. A., Yabu, J. M., Haddad, F., Utz, P. J., Hardan, A., Fathman, et al
2025; 2025 (1)
- **Shrunken Median Location Effect Estimates: An Application to Immuno-Oncology** *Journal of Probability and Statistics*
Holmes, T. H., Eller, D. W., Barnett, J., Maecker, H. T.
2025; 2025 (1): 6
- **Impact of air pollution exposure on cytokines and histone modification profiles at single-cell levels during pregnancy.** *Science advances*
Jung, Y. S., Aguilera, J., Kaushik, A., Ha, J. W., Cansdale, S., Yang, E., Ahmed, R., Lurmann, F., Lutzker, L., Hammond, S. K., Balmes, J., Noth, E., Burt, et al
2024; 10 (48): eadp5227
- **Phase II study of novel CXCR2 agonist and Plerixafor for rapid stem cell mobilization in patients with multiple myeloma.** *Blood cancer journal*
Sidana, S., Bankova, A. K., Hosoya, H., Kumar, S. K., Holmes, T. H., Tamaresis, J., Le, A., Muffly, L. S., Maysel-Auslender, S., Johnston, L., Arai, S., Lowsky, R., Meyer, et al
2024; 14 (1): 173
- **Community assessment of methods to deconvolve cellular composition from bulk gene expression.** *Nature communications*
White, B. S., de Reyniès, A., Newman, A. M., Waterfall, J. J., Lamb, A., Petitprez, F., Lin, Y., Yu, R., Guerrero-Gimenez, M. E., Domanskyi, S., Monaco, G., Chung, V., Banerjee, et al
2024; 15 (1): 7362
- **Single-cell peripheral immunoprofiling of lewy body and Parkinson's disease in a multi-site cohort.** *Molecular neurodegeneration*
Phongpreecha, T., Mathi, K., Cholerton, B., Fox, E. J., Sigal, N., Espinosa, C., Reincke, M., Chung, P., Hwang, L. J., Gajera, C. R., Berson, E., Perna, A., Xie, et al
2024; 19 (1): 59
- **Specific CD4+ T cell phenotypes associate with bacterial control in people who 'resist' infection with Mycobacterium tuberculosis.** *Nature immunology*
Sun, M., Phan, J. M., Kieswetter, N. S., Huang, H., Yu, K. K., Smith, M. T., Liu, Y. E., Wang, C., Gupta, S., Obermoser, G., Maecker, H. T., Krishnan, A., Suresh, et al
2024
- **Bendamustine is a safe and effective lymphodepletion agent for axicabtagene ciloleucel in patients with refractory or relapsed large B-cell lymphoma.** *Journal for immunotherapy of cancer*
Bharadwaj, S., Lau, E., Hamilton, M. P., Goyal, A., Srinagesh, H., Jensen, A., Lee, D., Mallampet, J., Elkordy, S., Syal, S., Patil, S., Latchford, T., Sahaf, et al
2024; 12 (7)
- **Clonal associations between lymphocyte subsets and functional states in rheumatoid arthritis synovium** *NATURE COMMUNICATIONS*
Dunlap, G., Wagner, A., Meednu, N., Wang, R., Zhang, F., Ekabe, J., Jonsson, A., Wei, K., Sakaue, S., Nathan, A., Bykerk, V. P., Donlin, L. T., Goodman, et al
2024; 15 (1): 4991
- **Integrated longitudinal multiomics study identifies immune programs associated with acute COVID-19 severity and mortality.** *The Journal of clinical investigation*
Gygi, J. P., Maguire, C., Patel, R. K., Shinde, P., Konstorium, A., Shannon, C. P., Xu, L., Hoch, A., Jayavelu, N. D., Haddad, E. K., Reed, E. F., Kraft, M., McComsey, et al
2024; 134 (9)
- **Host-microbe multiomic profiling reveals age-dependent immune dysregulation associated with COVID-19 immunopathology.** *Science translational medicine*

- Phan, H. V., Tsitsiklis, A., Maguire, C. P., Haddad, E. K., Becker, P. M., Kim-Schulze, S., Lee, B., Chen, J., Hoch, A., Pickering, H., van Zalm, P., Altman, M. C., Augustine, et al
2024; 16 (743): eadj5154
- **Longitudinal cytokine and multi-modal health data of an extremely severe ME/CFS patient with HSD reveals insights into immunopathology, and disease severity.** *Frontiers in immunology*
Jahanbani, F., Sing, J. C., Maynard, R. D., Jahanbani, S., Dafoe, J., Dafoe, W., Jones, N., Wallace, K. J., Rastan, A., Maecker, H. T., Röst, H. L., Snyder, M. P., Davis, et al
2024; 15: 1369295
 - **AS03 adjuvant enhances the magnitude, persistence, and clonal breadth of memory B cell responses to a plant-based COVID-19 vaccine in humans.** *Science immunology*
Grigoryan, L., Feng, Y., Bellusci, L., Lai, L., Wali, B., Ellis, M., Yuan, M., Arunachalam, P. S., Hu, M., Kowli, S., Gupta, S., Maysel-Auslender, S., Maecker, et al
2024; 9 (94): eadi8039
 - **Comprehensive landscape of neutralizing antibody and cell-mediated response elicited by the 1/5 fractional dose of 17DD-YF primary vaccination in adults.** *Scientific reports*
Reis, L. R., Costa-Rocha, I. A., Abdala-Torres, T., Campi-Azevedo, A. C., Peruhype-Magalhaes, V., Araujo, M. S., Speziali, E., do Valle Antonelli, L. R., da Silva-Pereira, R. A., Almeida, G. G., Fernandes, E. G., Fantinato, F. F., Domingues, et al
2024; 14 (1): 7709
 - **CyTOF Intracellular Cytokine Assays for Antigen-Specific T Cells.** *Methods in molecular biology (Clifton, N.J.)*
Lin, D., Maecker, H. T.
2024; 2779: 395-405
 - **SITC Clinical Immuno-Oncology Network (SCION) commentary on measurement and interpretation of essential biomarkers in early clinical trials.** *Journal for immunotherapy of cancer*
Sitc, S., Lotze, M. T., Cottrell, T., Bifulco, C., Chow, L., Cope, L., Gnjjatic, S., Maecker, H. T., Yeong Poh Shen, J.
2024; 12 (3)
 - **Impaired innate and adaptive immune responses to BNT162b2 SARS-CoV-2 vaccination in systemic lupus erythematosus.** *JCI insight*
Sarin, K. Y., Zheng, H., Chaichian, Y., Arunachalam, P. S., Swaminathan, G., Eschholz, A., Gao, F., Wirz, O. F., Lam, B., Yang, E., Lee, L. W., Feng, A., Lewis, et al
2024; 9 (5)
 - **SITC clinical Immuno-Oncology network (SCION) commentary on measurement and interpretation of essential biomarkers in early clinical trials** *JOURNAL FOR IMMUNOTHERAPY OF CANCER*
Lotze, M. T., Cottrell, T., Bifulco, C., Chow, L., Cope, L., Gnjjatic, S., Maecker, H. T., Shen, J.
2024; 12 (3)
 - **Cross-Platform Comparison of Highly Sensitive Immunoassays for Inflammatory Markers in a COVID-19 Cohort.** *Journal of immunology (Baltimore, Md. : 1950)*
Abe, K., Beer, J. C., Nguyen, T., Ariyapala, I. S., Holmes, T. H., Feng, W., Zhang, B., Kuo, D., Luo, Y., Ma, X. J., Maecker, H. T.
2024
 - **Immune Assessment Today: Optimizing and Standardizing Efforts to Monitor Immune Responses in Cancer and Beyond.** *Cancers*
Pandey, S., Cholak, M. E., Yadali, R., Sosman, J. A., Tetreault, M., Fang, D., Pollack, S. M., Gnjjatic, S., Obeng, R. C., Lysterly, H. K., Sonabend, A. M., Guevara-Patino, J. A., Butterfield, et al
2024; 16 (3)
 - **IgM N-glycosylation correlates with COVID-19 severity and rate of complement deposition.** *Nature communications*
Haslund-Gourley, B. S., Woloszczuk, K., Hou, J., Connors, J., Cusimano, G., Bell, M., Taramangalam, B., Fourati, S., Mege, N., Bernui, M., Altman, M. C., Krammer, F., van Bakel, et al
2024; 15 (1): 404
 - **Features of acute COVID-19 associated with post-acute sequelae of SARS-CoV-2 phenotypes: results from the IMPACC study.** *Nature communications*
Ozonoff, A., Jayavelu, N. D., Liu, S., Melamed, E., Milliren, C. E., Qi, J., Geng, L. N., McComsey, G. A., Cairns, C. B., Baden, L. R., Schaanman, J., Shaw, A. C., Samaha, et al
2024; 15 (1): 216

- **GIMAP5 deficiency reveals a mammalian ceramide-driven longevity assurance pathway.** *Nature immunology*
Park, A. Y., Loney-Greene, M., Lynberg, M., Gabrielski, J. Q., Xu, X., Schwarz, B., Zheng, L., Balasubramaniam, A., Ham, H., Chao, B., Zhang, Y., Matthews, H. F., Cui, et al
2024
- **Multiparameter Flow Cytometry Monitoring of T Cell Responses.** *Methods in molecular biology (Clifton, N.J.)*
Maecker, H. T.
2024; 2807: 325-342
- **Single cell multi-omic analysis identifies key genes differentially expressed in innate lymphoid cells from COVID-19 patients.** *Frontiers in immunology*
Kaushik, A., Chang, I., Han, X., He, Z., Komlosi, Z. I., Ji, X., Cao, S., Akdis, C. A., Boyd, S., Pulendran, B., Maecker, H. T., Davis, M. M., Chinthrajah, et al
2024; 15: 1374828
- **Immune determinants of CAR-T cell expansion in solid tumor patients receiving GD2 CAR-T cell therapy.** *Cancer cell*
Kaczanowska, S., Murty, T., Alimadadi, A., Contreras, C. F., Duault, C., Subrahmanyam, P. B., Reynolds, W., Gutierrez, N. A., Baskar, R., Wu, C. J., Michor, F., Altreuter, J., Liu, et al
2023
- **Relationship of Heterologous Virus Responses and Outcomes in Hospitalized COVID-19 Patients.** *Journal of immunology (Baltimore, Md. : 1950)*
Rosenberg-Hasson, Y., Holmes, T. H., Diray-Arce, J., Chen, J., Kellogg, R., Snyder, M., Becker, P. M., Ozonoff, A., Roupheal, N., Reed, E. F., Maecker, H. T.
2023; 211 (8): 1224-1231
- **Air pollution and pregnancy.** *Seminars in perinatology*
Aguilera, J., Konvinse, K., Lee, A., Maecker, H., Prunicki, M., Mahalingaiah, S., Sampath, V., Utz, P. J., Yang, E., Nadeau, K. C.
2023: 151838
- **Multi-omics analysis of mucosal and systemic immunity to SARS-CoV-2 after birth.** *Cell*
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