Stanford

Chris Garcia

Younger Family Professor and Professor of Structural Biology

Molecular and Cellular Physiology

CONTACT INFORMATION

- **Alternate Contact**

  Donna Howe-Clements - Administrative Associate

  Email donnahc1@stanford.edu

Bio

ACADEMIC APPOINTMENTS

- Professor, Molecular and Cellular Physiology
- Professor, Structural Biology
- Member, Bio-X
- Member, Stanford Medicine Children's Health Center for IBD and Celiac Disease
- Member, Stanford Cancer Institute
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Investigator, Howard Hughes Medical Institute, (2005- present)

LINKS

- Garcia Lab Website: http://med.stanford.edu/garcialab.html

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

My laboratory studies the structural and functional basis of receptor/ligand interactions in systems which are relevant to human health and disease. Our investigations are aimed at understanding the molecular recognition properties governing the interactions of receptors with their ligands, and the subsequent molecular events which couple ligand recognition to receptor activation. Many of the systems we are studying in the laboratory are related to the interaction of the host with the environment. The structural studies are complemented by functional approaches using molecular biology and protein engineering to dissect the structural information, design new or altered proteins with modified specificities and activities, and ultimately contribute to the development of proteins or molecules with therapeutic potential. Molecules currently under study include receptors of the immune system involved in autoimmune disorders (T cell receptors, co-receptors, MHC, cytokines), proteins involved in host-pathogen interactions and molecular mimicry (CMV and Toxoplasma surface antigens), proteins of nervous system (peptide hormone receptors, neural guidance proteins), and membrane proteins (chemokine receptors). An emerging focus of our research is to develop. using combinatorial biology approaches, novel ligands for receptors, which may have altered activities, that may serve as therapeutic starting points.

CLINICAL TRIALS

- Adaptive Immune Responses and Repertoire in Influenza Vaccination and Infection (SLVP031), Not Recruiting

Teaching

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Cort Breuer, Johnathon Soro

Postdoctoral Faculty Sponsor

Marta Borowska, Jiacheng Hao, Honghui Liu, Liu Liu, Viola Nawrocka, Grayson Rodriguez, Qinli Sun, Pingdong Tao, Chunyu Wang, Zhen Xia, Zhiwei You

Doctoral Dissertation Advisor (AC)

Sebnem Gul, Karsten Householder, Xinyu Xiang

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Biophysics (Phd Program)
- Immunology (Phd Program)
- Microbiology and Immunology (Phd Program)
- Molecular and Cellular Physiology (Phd Program)
- Structural Biology (Phd Program)

Publications

PUBLICATIONS

- **Deep peptide recognition profiling decodes TCR specificity and enables disease-associated antigen discovery.** *Nature biotechnology*
  Wang, N., Yeh, H., Lai, B., Perera, J., Jude, K. M., Risch, I., Um, J., Chen, X., Xiang, X., Wang, C., Liu, L. D., Yang, X., Paley, et al
  2026
- **Intratumoral Treg cell ablation elicits NK cell-mediated control of CD8 T cell-resistant tumors.** *Science immunology*
  Zhang, C., Chien, C., Jurgaitytė, E., Sakiyama, K., Bockman, A., Jo, Y., Lee, S., Silveria, S., Andrews, E., Mende, A., Zhang, L., Garcia, K. C., Wagner, et al
  2026; 11 (118): eadx4411
- **Overcoming T cell tolerance to tumor self-antigens through catch-bond engineering.** *Science (New York, N.Y.)*
  Chen, X., Mao, Z., Kolawole, E. M., Persechino, M., Jude, K. M., Ogishi, M., Mo, K. C., McLaughlin, J., Cheng, D., Xiang, X., Yang, X., Gee, C., Liu, et al
  2026; 391 (6791): eadx3162
- **Predicting targeted- and immunotherapeutic response outcomes in melanoma with single-cell Raman spectroscopy and AI.** *bioRxiv : the preprint server for biology*
  Chang, K., Serasanambati, M., Ogunlade, B., Hsu, H. J., Agolia, J., Stiber, A., Gu, J., Chadokiya, J., Rodriguez, G. E., Singh, P., Sharma, S., Gonçalves, A., Verma, et al
  2026
- **Facile induction of immune tolerance by an interleukin-2-TGFβ surrogate agonist.** *Nature*
  Sun, Q., Barrett, A. K., Ogishi, M., Lyu, H., Jiang, H., Liu, H., Zhao, Y., Rodriguez, G. E., Tao, P., Obenaus, M., Householder, K. D., Tang, Q., Lanz, et al
  2026
- **Hour-scale single-molecule imaging reveals dynamic assembly of the Wnt co-receptors LRP6 and ROR2 into common signalosomes.** *Science signaling*

Philippi, M., Dohle, J., Watrinet, I., Holtmannspötter, M., Miao, Y., Li, J., Birkholz, O., Rothbauer, U., Garcia, K. C., Kurre, R., Piehler, J., You, C.
2026; 19 (927): eadr8141

- **Rewiring STAT signaling from the cell surface with Trikine immunotherapeutics.** *Science (New York, N.Y.)*
  Rodriguez, G. E., Zhao, Y., Nishiga, Y., Peprah, F., Shen, J., Abhiraman, G. C., Ogishi, M., Zhang, C., Saco, J., Waghray, D., Serasanambati, M., Torres, L., Simone, et al
  2026: eadx9954

- **Interrogating T cell receptor interactions with peptide-MHC through structure-guided mutational analysis**
  Motiani, A. H., Wang, N., Garcia, C.
  CELL PRESS.2026: 48a

- **Structural ontogeny of protein-protein interactions.** *Science (New York, N.Y.)*
  Yang, A., Jiang, H., Jude, K. M., Akpinaroglu, D., Allenspach, S., Li, A. J., Bowden, J., Perez, C. P., Liu, L., Huang, P. S., Kortemme, T., Listgarten, J., Garcia, et al
  2026; 391 (6786): eadx6931

- **Targeting immune cells in the aged brain reveals that engineered cytokine IL-10 enhances neurogenesis and improves cognition.** *Immunity*
  Navarro Negredo, P., You, J., Hauptschein, M., Schroer, A. B., Richard, D. J., Abhiraman, G. C., Tsai, A. P., Sun, E. D., Notarangelo, G., Ramirez-Matias, J., Zhou, O. Y., Buckley, M. T., Malacon, et al
  2026

- **T cell engagers control solid tumors through clonal replacement and IL2-driven effector differentiation of CD8 T cells.** *bioRxiv : the preprint server for biology*
  Obenaus, M., Poupault, C. L., McGinnis, C. S., Prange, C., Jiang, H., Su, L. L., Chen, X., Miao, Z., Muldoon, J. J., Yao, W., Waghray, D., Sun, Q., Eyquem, et al
  2026

- **Selective Immune Silencing by Targeted TGF-β Agonists.** *bioRxiv : the preprint server for biology*
  Sun, Q., Ogishi, M., Jiang, H., Barrett, A. K., Yan, H., Sola, E., Zhang, J., Xiao, P., Lyu, H., Salehi, A., Tang, Q., Lanz, T. V., Davis, et al
  2026

- **Design of solubly expressed miniaturized SMART MHCs.** *Proceedings of the National Academy of Sciences of the United States of America*
  White, W. L., Bai, H., Kim, C. J., Jude, K. M., Sun, R., Guerrero, L., Han, X., Chen, X., Chaudhuri, A., Bonzanini, J. E., Sun, Y., Onwuka, A. E., Wang, et al
  2026; 123 (1): e2505932123

- **Viral vector-free generation of orthogonal IL-2-responsive CAR T cells through gene editing of IL-2 and its receptor.** *Blood immunology & cellular therapy*
  Zhang, Q., Wu, Y., Yang, J., Zhou, K., Manoharan, E. N., Wentz, T., Su, L., Yu, A., Wang, H. Y., Bruhn, L., Steinfeld, I., Gonzalez, N., Song, et al
  2025; 1 (3)

- **IL-9 as a naturally orthogonal cytokine with optimal JAK/STAT signaling for engineered T cell therapy.** *Immunity*
  Jiang, H., Limsuwannarot, S., Kulhanek, K. R., Pal, A., Labiad, O., Rysavy, L. W., Wong, A., Su, L., Cavender, S., Soro, J., Testa, S., Ogana, H., Waghray, et al
  2025

- **Targeting peptide-MHC complexes with designed T cell receptors and antibodies.** *bioRxiv : the preprint server for biology*
  Motmaen, A., Jude, K. M., Wang, N., Minervina, A., Feldman, D., Lichtenstein, M. A., Ebenezer, A., Correnti, C., Thomas, P. G., Garcia, K. C., Baker, D., Bradley, P.
  2025

- **Redirecting immune signaling with cytokine adaptors**
  Abhiraman, G., Garcia, K.
  OXFORD UNIV PRESS.2025

- **Structure of the interleukin-5 receptor complex exemplifies the organizing principle of common beta cytokine signaling**
  Caveney, N. A., Rodriguez, G. E., Pollmann, C., Meyer, T., Piehler, J., Garcia, K.
  OXFORD UNIV PRESS.2025

- **Orientation-dependent CD45 inhibition with viral and engineered ligands**

Borowska, M. T., Liu, L. D., Caveney, N. A., Jude, K. M., Kim, W., Masubuchi, T., Hui, E., Majzner, R. G., Garcia, K.
OXFORD UNIV PRESS.2025

- **Design of a potent interleukin-21 mimic for cancer immunotherapy.** *Science immunology*
  Chun, J. H., Lim, B. S., Roy, S., Walsh, M. J., Abhiraman, G. C., Zhangxu, K., Atajanova, T., Revach, O. Y., Clark, E. C., Li, P., Palin, C. A., Khanna, A., Tower, et al
  2025; 10 (111): eadx1582

- **Design of facilitated dissociation enables timing of cytokine signalling.** *Nature*
  Broerman, A. J., Pollmann, C., Zhao, Y., Lichtenstein, M. A., Jackson, M. D., Tessmer, M. H., Ryu, W. H., Ogishi, M., Abedi, M. H., Sahtoe, D. D., Allen, A., Kang, A., De La Cruz, et al
  2025

- **Expanding the cytokine receptor alphabet reprograms T cells into diverse states.** *Nature*
  Zhao, Y., Ogishi, M., Pal, A., Su, L. L., Tao, P., Jiang, H., Rodriguez, G. E., Chen, X., Sun, Q., Rysavy, L. W., Limsuwannarot, S., Waghray, D., Kalbasi, et al
  2025

- **Spontaneous and experimental models of lymph node metastasis.** *Nature protocols*
  Breuer, C. B., Xiong, Z., Wang, A., Rodriguez, G. E., Abhiraman, G. C., Garcia, K. C., Reticker-Flynn, N. E.
  2025

- **Design of high-specificity binders for peptide-MHC-I complexes.** *Science (New York, N.Y.)*
  Liu, B., Greenwood, N. F., Bonzanini, J. E., Motmaen, A., Meyerberg, J., Dao, T., Xiang, X., Ault, R., Sharp, J., Wang, C., Visani, G. M., Vafeados, D. K., Roullier, et al
  2025; 389 (6758): 386-391

- **De novo design and structure of a peptide-centric TCR mimic binding module.** *Science (New York, N.Y.)*
  Householder, K. D., Xiang, X., Jude, K. M., Deng, A., Obenaus, M., Zhao, Y., Wilson, S. C., Chen, X., Wang, N., Garcia, K. C.
  2025; 389 (6758): 375-379

- **Two parallel lineage-committed progenitors contribute to the developing brain.** *bioRxiv : the preprint server for biology*
  Dundes, C. E., Jokhai, R. T., Ahsan, H., Kang, R. S., Salomon-Shulman, R. E., Rajan, A., Kim, Y. S., Stanton, L. J., Xu, C., Do, S., McDonald, B. D., López, J. M., Urrutia, et al
  2025

- **Solution mapping of MHC-I:TCR interactions using a minimalistic protein system.** *Proceedings of the National Academy of Sciences of the United States of America*
  Woodward, C. H., Chaudhuri, A., Chen, X. T., White, W. L., Garcia, K. C., Baker, D., Sgourakis, N. G.
  2025; 122 (24): e2506016122

- **Redirecting immune signaling with cytokine adaptors.** *Nature communications*
  Abhiraman, G. C., Householder, K. D., Rodriguez, G. E., Glassman, C. R., Saxton, R. A., Breuer, C. B., Wilson, S. C., Su, L., Yen, M., Hsu, C., Pillarisetty, V. G., Reticker-Flynn, N. E., Garcia, et al
  2025; 16 (1): 2432

- **IL-9 as a naturally orthogonal cytokine with optimal JAK/STAT signaling for engineered T cell therapy.** *bioRxiv : the preprint server for biology*
  Jiang, H., Limsuwannarot, S., Kulhanek, K. R., Pal, A., Rysavy, L. W., Su, L., Labiad, O., Testa, S., Ogana, H., Waghray, D., Tao, P., Jude, K. M., Seet, et al
  2025

- **Predicting mutational effects on protein binding from folding energy**
  Deng, A., Householder, K., Wu, F., Garcia, K., Trippe, B.
  edited by Singh, A., Fazel, M., Hsu, D., Lacoste-Julien, S., Berkenkamp, F., Maharaj, T., Wagstaff, K., Zhu, J.
  JMLR-JOURNAL MACHINE LEARNING RESEARCH.2025: 13129-13151

- **De novo design and structure of a peptide-centric TCR mimic binding module.** *bioRxiv : the preprint server for biology*
  Householder, K. D., Xiang, X., Jude, K. M., Deng, A., Obenaus, M., Wilson, S. C., Chen, X., Wang, N., Garcia, K. C.
  2024

- **A general system for targeting MHC class II-antigen complex via a single adaptable loop.** *Nature biotechnology*

Du, H., Liu, J., Jude, K. M., Yang, X., Li, Y., Bell, B., Yang, H., Kassardjian, A., Blackson, W., Mobedi, A., Parekh, U., Parra Sperberg, R. A., Julien, et al

2024

- **Design of high specificity binders for peptide-MHC-I complexes.** *bioRxiv : the preprint server for biology*

  Liu, B., Greenwood, N. F., Bonzanini, J. E., Motmaen, A., Sharp, J., Wang, C., Visani, G. M., Vafeados, D. K., Roullier, N., Nourmohammad, A., Garcia, K. C., Baker, D.

  2024

- **FZD5 controls intestinal crypt homeostasis and colonic Wnt surrogate agonist response.** *Developmental cell*

  Mu, Q., Ha, A., Santos, A. J., Lo, Y. H., van Unen, V., Miao, Y., Tomaske, M., Guzman, V. K., Alwahabi, S., Yuan, J. J., Deng, L., Li, L., Garcia, et al

  2024

- **AlphaFold2 enables accurate deorphanization of ligands to single-pass receptors.** *Cell systems*

  Banhos Danneskiold-Samsoe, N., Kavi, D., Jude, K. M., Nissen, S. B., Wat, L. W., Coassolo, L., Zhao, M., Santana-Oikawa, G. A., Broido, B. B., Garcia, K. C., Svensson, K. J.

  2024

- **Orientation-dependent CD45 inhibition with viral and engineered ligands.** *Science immunology*

  Borowska, M. T., Liu, L. D., Caveney, N. A., Jude, K. M., Kim, W. J., Masubuchi, T., Hui, E., Majzner, R. G., Garcia, K. C.

  2024; 9 (100): eadp0707

- **Single Cell TCR Sequencing Suggests Potential Limitations of TRBV9-depleting Therapies in Axial Spondyloarthritis**

  Paley, M., Yang, X., Hassman, L., Paley, G., Linskey, N., Agnew, R., de Faria, P., Feng, A., Li, S., Roberson, E., Ruzycki, P., Esaulova, E., Laurent, et al

  WILEY.2024: 3584-3585

- **De novo design of miniprotein antagonists of cytokine storm inducers.** *Nature communications*

  Huang, B., Coventry, B., Borowska, M. T., Arhontoulis, D. C., Exposit, M., Abedi, M., Jude, K. M., Halabiya, S. F., Allen, A., Cordray, C., Goreshnik, I., Ahlrichs, M., Chan, et al

  2024; 15 (1): 7064

- **Mucosal signatures of pathogenic T cells in HLA-B*27+ anterior uveitis and axial spondyloarthritis.** *JCI insight*

  Paley, M. A., Yang, X., Hassman, L. M., Penkava, F., Garner, L. I., Paley, G. L., Linskey, N., Agnew, R., Arantes de Faria, P. H., Feng, A., Li, S. Y., Simone, D., Roberson, et al

  2024

- **Preclinical proof of principle for orally delivered Th17 antagonist miniproteins.** *Cell*

  Berger, S., Seeger, F., Yu, T. Y., Aydin, M., Yang, H., Rosenblum, D., Guenin-Macé, L., Glassman, C., Arguinchona, L., Sniezek, C., Blackstone, A., Carter, L., Ravichandran, et al

  2024

- **TGF-β modulates cell fate in human ES cell-derived foregut endoderm by inhibiting Wnt and BMP signaling.** *Stem cell reports*

  Funa, N. S., Mjoseng, H. K., de Lichtenberg, K. H., Raineri, S., Esen, D., Egeskov-Madsen, A. I., Quaranta, R., Jørgensen, M. C., Hansen, M. S., van Cuyl Kuylenstierna, J., Jensen, K. B., Miao, Y., Garcia, et al

  2024

- **De novo design of buttressed loops for sculpting protein functions.** *Nature chemical biology*

  Jiang, H., Jude, K. M., Wu, K., Fallas, J., Ueda, G., Brunette, T. J., Hicks, D. R., Pyles, H., Yang, A., Carter, L., Lamb, M., Li, X., Levine, et al

  2024

- **Structural insights into human MHC-II association with invariant chain.** *Proceedings of the National Academy of Sciences of the United States of America*

  Wang, N., Waghray, D., Caveney, N. A., Jude, K. M., Garcia, K. C.

  2024; 121 (19): e2403031121

- **Engineered ortholL2-CAR T Cells Generated Using Viral Vector-Free, Three-in-One Nonviral CRISPR-Based Technology Demonstrate Enhanced Antitumor Activity in a Murine Model of Leukemia**

  Zhang, Q., Wu, Y., Yang, J., Manoharan, E., Wentz, T., Yu, A., Zhou, K., Hresko, M., Su, L., Ryan, D., Garcia, C., Milone, M.

  CELL PRESS.2024: 831-832

- **Structure of the interleukin-5 receptor complex exemplifies the organizing principle of common beta cytokine signaling.** *Molecular cell*
  Caveney, N. A., Rodriguez, G. E., Pollmann, C., Meyer, T., Borowska, M. T., Wilson, S. C., Wang, N., Xiang, X., Householder, K. D., Tao, P., Su, L. L., Saxton, R. A., Piehler, et al
  2024
- **Regulatory T cells use heparanase to access IL-2 bound to extracellular matrix in inflamed tissue.** *Nature communications*
  Martinez, H. A., Koliesnik, I., Kaber, G., Reid, J. K., Nagy, N., Barlow, G., Falk, B. A., Medina, C. O., Hargil, A., Zihsler, S., Vlodavsky, I., Li, J. P., Pérez-Cruz, et al
  2024; 15 (1): 1564
- **A general platform for targeting MHC-II antigens via a single loop.** *bioRxiv : the preprint server for biology*
  Du, H., Liu, J., Jude, K. M., Yang, X., Li, Y., Bell, B., Yang, H., Kassardjian, A., Mobedi, A., Parekh, U., Sperberg, R. A., Julien, J. P., Mellins, et al
  2024
- **Stat5 opposes the transcription factor Tox and rewires exhausted CD8+ T cells toward durable effector-like states during chronic antigen exposure.** *Immunity*
  Beltra, J. C., Abdel-Hakeem, M. S., Manne, S., Zhang, Z., Huang, H., Kurachi, M., Su, L., Picton, L., Ngiow, S. F., Muroyama, Y., Casella, V., Huang, Y. J., Giles, et al
  2023; 56 (12): 2699-2718.e11
- **TCR ligand potency differentially impacts PD-1 inhibitory effects on diverse signaling pathways.** *The Journal of experimental medicine*
  Chan, W., Cao, Y. M., Zhao, X., Schrom, E. C., Jia, D., Song, J., Sibener, L. V., Dong, S., Fernandes, R. A., Bradfield, C. J., Smelkinson, M., Kabat, J., Hor, et al
  2023; 220 (12)
- **Overcoming lung cancer immunotherapy resistance by combining non-toxic variants of IL-12 and IL-2.** *JCI insight*
  Horton, B. L., D'Souza, A. D., Zagorulya, M., McCreery, C. V., Abhiraman, G. C., Picton, L. K., Sheen, A., Agarwal, Y., Momin, N., Wittrup, K. D., White, F. M., Garcia, K. C., Spranger, et al
  2023
- **Epitope base editing CD45 in hematopoietic cells enables universal blood cancer immune therapy.** *Science translational medicine*
  Wellhausen, N., O'Connell, R. P., Lesch, S., Engel, N. W., Rennels, A. K., Gonzales, D., Herbst, F., Young, R. M., Garcia, K. C., Weiner, D., June, C. H., Gill, S. I.
  2023: eadi1145
- **Shortwave-infrared-light-emitting probes for the in vivo tracking of cancer vaccines and the elicited immune responses.** *Nature biomedical engineering*
  Ren, F., Wang, F., Baghdasaryan, A., Li, Y., Liu, H., Hsu, R., Wang, C., Li, J., Zhong, Y., Salazar, F., Xu, C., Jiang, Y., Ma, et al
  2023
- **De novo design of buttressed loops for sculpting protein functions.** *bioRxiv : the preprint server for biology*
  Jiang, H., Jude, K. M., Wu, K., Fallas, J., Ueda, G., Brunette, T. J., Hicks, D., Pyles, H., Yang, A., Carter, L., Lamb, M., Li, X., Levine, et al
  2023
- **Structure of the thrombopoietin-MPL receptor complex is a blueprint for biasing hematopoiesis.** *Cell*
  Tsutsumi, N., Masoumi, Z., James, S. C., Tucker, J. A., Winkelmann, H., Grey, W., Picton, L. K., Moss, L., Wilson, S. C., Caveney, N. A., Jude, K. M., Gati, C., Piehler, et al
  2023
- **Structural insight into guanylyl cyclase receptor hijacking of the kinase-Hsp90 regulatory mechanism.** *eLife*
  Caveney, N. A., Tsutsumi, N., Garcia, K. C.
  2023; 12
- **Deploying synthetic coevolution and machine learning to engineer protein-protein interactions.** *Science (New York, N.Y.)*
  Yang, A., Jude, K. M., Lai, B., Minot, M., Kocyla, A. M., Glassman, C. R., Nishimiya, D., Kim, Y. S., Reddy, S. T., Khan, A. A., Garcia, K. C.
  2023; 381 (6656): eadh1720
- **A structural blueprint for interleukin-21 signal modulation.** *Cell reports*
  Abhiraman, G. C., Bruun, T. U., Caveney, N. A., Su, L. L., Saxton, R. A., Yin, Q., Tang, S., Davis, M. M., Jude, K. M., Garcia, K. C.
  2023; 42 (6): 112657

- **Single Cell Sequencing Suggests Mucosal Origins of T Cells in HLA-B27-associated Inflammation**
  Paley, M. A., Hassman, L., Yang, X., Linskey, N., Esaulova, E., Paley, G. L., Ruzycki, P., Laurent, J., Feigl-Lenzen, L., Artyomov, M., Garcia, K., Yokoyama, W. M.
  AMER ASSOC IMMUNOLOGISTS.2023

- **Epitope Editing in Hematopoietic Cells Enables Universal Blood Cancer Immune Therapy**
  Wellhausen, N., Rennels, A. K., Lesch, S., Engel, N. W., Young, R. M., Garcia, K., June, C. H., Gill, S. I.
  CELL PRESS.2023: 123

- **Structural insight into guanylyl cyclase receptor hijacking of the kinase-Hsp90 regulatory mechanism.** *bioRxiv : the preprint server for biology*
  Caveney, N. A., Tsutsumi, N., Garcia, K. C.
  2023

- **Design of cell-type-specific hyperstable IL-4 mimetics via modular de novo scaffolds.** *Nature chemical biology*
  Yang, H., Ulge, U. Y., Quijano-Rubio, A., Bernstein, Z. J., Maestas, D. R., Chun, J., Wang, W., Lin, J., Jude, K. M., Singh, S., Orcutt-Jahns, B. T., Li, P., Mou, et al
  2023

- **Receptor Elimination by E3 Ubiquitin Ligase Recruitment (REULR): A Targeted Protein Degradation Toolbox.** *ACS synthetic biology*
  Siepe, D. H., Picton, L. K., Garcia, K. C.
  2023

- **Structural insights into the mechanism of leptin receptor activation.** *Nature communications*
  Saxton, R. A., Caveney, N. A., Moya-Garzon, M. D., Householder, K. D., Rodriguez, G. E., Burdsall, K. A., Long, J. Z., Garcia, K. C.
  2023; 14 (1): 1797

- **Rapid and accurate deorphanization of ligand-receptor pairs using AlphaFold.** *bioRxiv : the preprint server for biology*
  Danneskiold-Samsøe, N. B., Kavi, D., Jude, K. M., Nissen, S. B., Wat, L. W., Coassolo, L., Zhao, M., Santana-Oikawa, G. A., Broido, B. B., Garcia, K. C., Svensson, K. J.
  2023

- **Structure of the Wnt-Frizzled-LRP6 initiation complex reveals the basis for coreceptor discrimination.** *Proceedings of the National Academy of Sciences of the United States of America*
  Tsutsumi, N., Hwang, S., Waghray, D., Hansen, S., Jude, K. M., Wang, N., Miao, Y., Glassman, C. R., Caveney, N. A., Janda, C. Y., Hannoush, R. N., Garcia, K. C.
  2023; 120 (11): e2218238120

- **Structural basis of Janus kinase trans-activation.** *Cell reports*
  Caveney, N. A., Saxton, R. A., Waghray, D., Glassman, C. R., Tsutsumi, N., Hubbard, S. R., Garcia, K. C.
  2023; 42 (3): 112201

- **FOXP3+ regulatory T cells use heparanase to access IL-2 bound to ECM in inflamed tissues.** *bioRxiv : the preprint server for biology*
  Martinez, H. A., Koliesnik, I., Kaber, G., Reid, J. K., Nagy, N., Barlow, G., Falk, B. A., Medina, C. O., Hargil, A., Vlodavsky, I., Li, J. P., Pérez-Cruz, M., Tang, et al
  2023

- **Facile repurposing of peptide-MHC-restricted antibodies for cancer immunotherapy.** *Nature biotechnology*
  Yang, X., Nishimiya, D., Lochte, S., Jude, K. M., Borowska, M., Savvides, C. S., Dougan, M., Su, L., Zhao, X., Piehler, J., Garcia, K. C.
  2023

- **Prevention of acute GVHD disease using an orthogonal IL-2/IL-2Rbeta system to selectively expand regulatory T-cells in vivo.** *Blood*
  Lopes Ramos, T., Bolivar-Wagers, S., Jin, S., Thangavelu, G., Simonetta, F., Lin, P., Hirai, T., Saha, A., Koehn, B. H., L Su, L., Picton, L. K., Baker, J., Lohmeyer, et al
  2022

- **Synthetic cytokine circuits that drive T cells into immune-excluded tumors.** *Science (New York, N.Y.)*
  Allen, G. M., Frankel, N. W., Reddy, N. R., Bhargava, H. K., Yoshida, M. A., Stark, S. R., Purl, M., Lee, J., Yee, J. L., Yu, W., Li, A. W., Garcia, K. C., El-Samad, et al
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