

Stanford



Yiyun Chen

Postdoctoral Scholar, Stanford Cancer Institute

Bio

BIO

Yiyun Chen, Ph.D. is a Postdoctoral Fellow at Professor Crystal Mackall's group at Stanford Cancer Institute.

Dr. Chen studied biochemistry and structural biology in her undergraduate and master trainings at The Hong Kong University of Science and Technology, where she eventually obtained her Ph.D. degree in computational biology under the supervision of Professor Jiguang Wang. During her Ph.D. training, she has developed her skill sets in analyzing and integrating various types of patient-derived sequencing data, published three first-author and four co-author papers, and received two awards for top postgraduate students. Through interdisciplinary collaborations with cancer biologist and clinicians in US and Asia, her work has uncovered tumor-specific immune cell subtypes and novel noncoding RNAs and generated new insights into precision medicine in glioma, lymphoma and gastric cancer.

Applying her expertise in computational cancer biology and immunology, her current research is focused on identifying molecular mechanisms that contribute to the clinical outcomes of patients undergoing CAR-T immunotherapy. At Mackall Lab, she will contribute to tailoring computational pipelines for profiling the spatiotemporal dynamics of the tumor and immune microenvironment and translate new discoveries into cancer therapeutics.

STANFORD ADVISORS

- Crystal Mackall, Postdoctoral Faculty Sponsor

Research & Scholarship

LAB AFFILIATIONS

- Crystal Mackall (6/15/2022)

Publications

PUBLICATIONS

- **Longitudinal single-cell atlas of GD2-CAR T cell therapy in H3K27M-mutant diffuse midline glioma identifies humoral and cellular anti-CAR immunity**
Chen, Y., Song, K., Desai, M. H., Huang, Y., Iswari, N., Ehlinger, Z. J., Daghagh, H., Koch, M. R., Reynolds, K., Mo, K. C., Tsui, K. C., Rietberg, S., Hamilton, et al
AMER ASSOC CANCER RESEARCH.2026
- **Tumor-Associated Microglia Secrete Extracellular ATP to Support Glioblastoma Progression.** *Cancer research*
Wu, C. Y., Chen, Y., Lin, Y. J., Wei, K. C., Chang, K. Y., Feng, L. Y., Chen, K. T., Li, G., Ren, A. L., Nitta, R. T., Wu, J. Y., Cho, K. B., Pant, et al
2024; 84 (23): 4017-4030

- **Tumor-associated monocytes promote mesenchymal transformation through EGFR signaling in glioma.** *Cell reports. Medicine*
Chen, Y., Huo, R., Kang, W., Liu, Y., Zhao, Z., Fu, W., Ma, R., Zhang, X., Tang, J., Zhu, Z., Lyu, Q., Huang, Y., Yan, et al
2023; 101177
- **Deciphering Brain Complexity Using Single-cell Sequencing** *GENOMICS PROTEOMICS & BIOINFORMATICS*
Mu, Q., Chen, Y., Wang, J.
2019; 17 (4): 344-366
- **Mutational Landscape of Secondary Glioblastoma Guides MET-Targeted Trial in Brain Tumor** *CELL*
Hu, H., Mu, Q., Bao, Z., Chen, Y., Liu, Y., Chen, J., Wang, K., Wang, Z., Nam, Y., Jiang, B., Sa, J. K., Cho, H., Her, et al
2018; 175 (6): 1665-+
- **Surface localized nuclear envelope proteins define a therapeutic vulnerability in MYC-driven Group 3 medulloblastoma**
Singh, S., Suk, Y., Rossotti, M. A., Ibanez-Vega, J., Shaikh, M., Chen, Y., Patel, H., Escudero, L., Delaidelli, A., Khanna, A., Slassi, S., Bazan, C.,
Apel, et al
AMER ASSOC CANCER RESEARCH.2026
- **Decoding the medulloblastoma surfaceome prioritizes the oncofetal antigen GPC2 for potent CAR-T cell therapy**
Usta, D., Gwynne, W., Suk, Y., Chen, Y., Radosevich, M. T., Chernova, D., Feng, Y., Nasajpour, E., Trissal, M., Poetschke, R., Delaidelli, A., Dunham,
C., Labanieh, et al
AMER ASSOC CANCER RESEARCH.2026
- **Efficacy of nuclear envelope protein targeting CAR T cell therapy for MYC driven group 3 medulloblastoma**
Suk, Y., Ibanez-Vega, J., Rossotti, M., Shaikh, V., Chen, Y., Patel, H., Escudero, L., Delaidelli, A., Slassi, S., Bazan, C. B., Khanna, A., Sokeechand,
S., Apel, et al
AMER ASSOC CANCER RESEARCH.2026: A032
- **c-JUN enhances CRISPR knockin anti-B7-H3 CAR T cell function in small cell lung cancer and thoracic SMARCA4-deficient undifferentiated tumors.** *Cell reports. Medicine*
Balke-Want, H., Keerthi, V., Del Carmen Arenas, M., Chen, Y., Malipatlolla, M., Klysz, D. D., Xu, P., Ho, K., Asano, K., Stahl, D., Huang, J.,
Retherford, A., Patel, et al
2026; 7 (1): 102549
- **CD22-CAR T cell multiomic features linked to patient outcomes in CD19-CAR resistant large B cell lymphoma**
Kramer, A., Murty, T., Chen, Y., Rodrigues, K., Hamilton, M., Desai, M., Kuo, A., Ehlinger, Z., Reynolds, W., Srinagesh, H., Tsui, K., Rietberg, S., Mo,
et al
ELSEVIER.2025: 566-567
- **Attention-based multiple instance learning predicts CAR T cell therapy outcomes from infusion product single-cell RNA-seq data and identifies engineering targets in large B cell lymphoma**
Rodrigues, K., Tsui, K., Zhan, X., Chen, Y., Mo, K., Mackall, C., Miklos, D., Gevaert, O., Good, Z.
ELSEVIER.2025: 5897-5898
- **Quantitative surfaceome profiling of high-risk medulloblastoma prioritizes the oncofetal antigen GPC2 for potent CAR-T cell therapy**
Usta, D., Gwynne, W., Suk, Y., Chen, Y., Radosevich, M. T., Chernova, D., Delaidelli, A., Feng, Y., Nasajpour, E., Trissal, M. C., Poetschke, R. D.,
Dunham, C., Labanie, et al
OXFORD UNIV PRESS INC.2025: v373
- **Modification of the Sphingomyelin-Ceramide balance on the Cell Membrane of Tumor-Associated Myeloid Cells Affects Membrane Permeability**
Wu, C., Chen, Y., Wei, K., Pant, A., Choi, J., Kim, L., Cho, K., Chen, K., Lin, Y., Huang, C., Chen, P., Lim, M.
OXFORD UNIV PRESS INC.2025: v447
- **HUMANIZED ANTI-CAR ANTIBODIES AFFECT DURABLE RESPONSE TO GD2-CAR T-CELLS IN DIFFUSE MIDLINE GLIOMA**
Chen, Y., Song, K., Huang, Y., Iswari, N., Desai, M., Ehlinger, Z., Daghagh, H., Reynolds, K., Mahdi, J., Majzner, R., Richards, B., Kamens, J.,
Barsan, et al
OXFORD UNIV PRESS INC.2025: v114
- **SINGLE-CELL LANDSCAPE OF B7H3-CAR T THERAPY IN GLIOMA: MECHANISMS OF RESISTANCE AND SIGNATURES OF LONG-TERM RESPONSE**

Chen, Y., Song, K., Desai, M., Ehlinger, Z., Daghigh, H., Rietberg, S., Feeney, A., Tanner, K., Dyson, K., Stockdale, B., Dhapola, G., Lohman, C., Patil, et al

OXFORD UNIV PRESS INC.2025: v13

● **MYELOID POPULATIONS MODULATE GD2 CAR T CELL ACTIVITY IN DIFFUSE MIDLINE GLIOMA**

Ramakrishna, S., Geraghty, A., Good, Z., Desai, M., Mancusi, R., Mahdi, J., Song, K., Ehlinger, Z., Chen, Y., Hamilton, M., Rietberg, S., Majzner, R., Schultz, et al

OXFORD UNIV PRESS INC.2024

● **SPATIAL TRANSCRIPTOMICS ANALYSIS OF GLIOBLASTOMA REVEALS THREE DISTINCT REGIONAL PROGRAMS OF T-CELL INFILTRATION**

Wang, W. L., Chen, Y., Mo, C., Good, Z., Sotillo, E., Mackall, C. L.

OXFORD UNIV PRESS INC.2024

● **CD22-Directed CAR T Cell Single Cell Multiomic Features Associated with Immune Effector Cell-Associated Hemophagocytic Lymphohistiocytosis-like Syndrome (IEC-HS)**

Kramer, A., Murty, T., Chen, Y., Srinagesh, H., Hamilton, M. P., Mo, K. C., Prabhu, S., Desai, M., Kuo, A., Ehlinger, Z., Reynolds, W. D., Baird, J. H., Su, et al

ELSEVIER.2024: 911-912

● **GLUT1 overexpression in CAR-T cells induces metabolic reprogramming and enhances potency. *Nature communications***

Guerrero, J. A., Klysz, D. D., Chen, Y., Malipatlolla, M., Lone, J., Fowler, C., Stuani, L., May, A., Bashti, M., Xu, P., Huang, J., Michael, B., Contrepolis, et al

2024; 15 (1): 8658

● **The CCR6-CCL20 axis promotes regulatory T cell glycolysis and immunosuppression in tumors. *Cancer immunology research***

Pant, A., Jain, A., Chen, Y., Patel, K., Saleh, L., Tzeng, S., Nitta, R. T., Zhao, L., Wu, C. Y., Bederson, M., Wang, W. L., Bergsneider, B. H., Choi, et al

2024

● **Engineered CD47 protects T cells for enhanced antitumour immunity. *Nature***

Yamada-Hunter, S. A., Theruvath, J., McIntosh, B. J., Freitas, K. A., Lin, F., Radosevich, M. T., Leruste, A., Dhingra, S., Martinez-Velez, N., Xu, P., Huang, J., Delaidelli, A., Desai, et al

2024

● **Inosine induces stemness features in CAR-T cells and enhances potency. *Cancer cell***

Klysz, D. D., Fowler, C., Malipatlolla, M., Stuani, L., Freitas, K. A., Chen, Y., Meier, S., Daniel, B., Sandor, K., Xu, P., Huang, J., Labanieh, L., Keerthi, et al

2024

● **CCL8/CCL13-producing tumor-associated macrophages linked to poor outcomes after CAR T cell therapy for LBCL *American Society of Hematology***

Mo, K. C., Yeh, C. Y., Hamilton, M. P., Spiegel, J., Desai, M., Ehlinger, Z., Reynolds, W. D., Yang, E., Ozawa, M. G., Chen, Y., Prabhu, S., Frank, M. J., Muffly, et al

2024

● **Noncoding mutations cause super-enhancer retargeting resulting in protein synthesis dysregulation during B cell lymphoma progression. *Nature genetics***

Leeman-Neill, R. J., Song, D., Bizarro, J., Wacheul, L., Rothschild, G., Singh, S., Yang, Y., Sarode, A. Y., Gollapalli, K., Wu, L., Zhang, W., Chen, Y., Lauring, et al

2023

● **MITOCHONDRIAL ATP BIOGENESIS REGULATED BY VDAC1 IN TMEM119+TUMOR-ASSOCIATED MICROGLIA AND MACROPHAGES MEDIATES HIGH-GRADE GLIOMA GROWTH**

Wu, C., Chen, Y., Lin, Y., Wei, K., Chang, K., Feng, L., Wu, A., Chen, K., Ren, A., Nitta, R., Wu, J., Pant, A., Cho, et al

OXFORD UNIV PRESS INC.2023

● **Somatic MAP3K3 mutation defines a subclass of cerebral cavernous malformation *AMERICAN JOURNAL OF HUMAN GENETICS***

Weng, J., Yang, Y., Song, D., Huo, R., Li, H., Chen, Y., Nam, Y., Zhou, Q., Jiao, Y., Fu, W., Yan, Z., Wang, J., Xu, et al

2021; 108 (5): 942-950

● **Classifying gastric cancer using FLORA reveals clinically relevant molecular subtypes and highlights LINC01614 as a biomarker for patient prognosis *ONCOGENE***

Chen, Y., Cheng, W., Shi, H., Huang, S., Chen, H., Liu, D., Xu, W., Yu, J., Wang, J.
2021; 40 (16): 2898-2909

- **Noncoding RNA processing by DIS3 regulates chromosomal architecture and somatic hypermutation in B cells** *NATURE GENETICS*
Laffleur, B., Lim, J., Zhang, W., Chen, Y., Pefanis, E., Bizarro, J., Batista, C. R., Wu, L., Economides, A. N., Wang, J., Basu, U.
2021; 53 (2): 230-+
- **Structural Basis for the High-Affinity Interaction between CASK and Mint1** *STRUCTURE*
Wu, X., Cai, Q., Chen, Y., Zhu, S., Mi, J., Wang, J., Zhang, M.
2020; 28 (6): 664-+
- **Noncoding RNA transcription alters chromosomal topology to promote isotype-specific class switch recombination** *SCIENCE IMMUNOLOGY*
Rothschild, G., Zhang, W., Lim, J., Giri, P., Laffleur, B., Chen, Y., Fang, M., Chen, Y., Nair, L., Liu, Z., Deng, H., Hammarstrom, L., Wang, et al
2020; 5 (44)
- **Ca (2+)-Induced Rigidity Change of the Myosin VIIa IQ Motif-Single alpha Helix Lever Arm Extension** *STRUCTURE*
Li, J., Chen, Y., Deng, Y., Unarta, I., Lu, Q., Huang, X., Zhang, M.
2017; 25 (4): 579-+
- **Inhibition of SOCE disrupts cytokinesis in zebrafish embryos via inhibition of cleavage furrow deepening** *INTERNATIONAL JOURNAL OF DEVELOPMENTAL BIOLOGY*
Chan, C. M., Chen, Y., Hung, T. S., Miller, A. L., Shipley, A. M., Webb, S. E.
2015; 59 (7-9): 289-301