Stanford

Dr. Qiwen Deng

Postdoctoral Scholar, Pathology

Bio

BIO

How fibroblasts participate in the organ fibrosis and whether targeting fibroblasts is a good strategy to reverse fibrosis is still a mystery. We have identified two important immune checkpoints, CD47 and PD-L1, are highly expressed in fibroblasts and blocking CD47 and PD-L1 reversed lung fibrosis. This is a prove of concept that targeting immune regulatory pathways could be an effective therapeutic approach to treat fibrotic diseases. In addition to identifying novel targets for the treatment of fibrosis, I am also interested in the crosstalk between fibroblasts and innate immune cells in the development of fibrosis. Combined with cutting-edge NGS approaches including single cell sequencing, spatial transcriptomics and high-dimensional CyTOF technique, we have identified several potential targets and characterized immune cells landscape in lung fibrosis. In the long run, I will focus on the validation of these targets. Specifically, I will apply gain- and loss-function approaches to investigate their role in fibrosis in vitro and in vivo.

HONORS AND AWARDS

- Stanford Bio-X Travel Award, Stanford Bio-X (2023)
- Molecular Cartography Award, Resolve Biosciences and Stanford PAN (2021)
- Postgraduate Scholarship Award, Peking University (2018)
- Outstanding Graduates of South China Agricultural University, South China Agricultural University (2013)
- Undergraduate Government Scholarship Award, South China Agricultural University (2010)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Guest Editor, Biology Editorial Office (2023 - present)
- Volunteer Reviewer, MDPI (2023 - present)
- Member, International Society for Stem Cell Research (ISSCR) (2022 - present)
- Member, American Society of Nephrology (ASN) (2022 - present)

PROFESSIONAL EDUCATION

- Doctor of Philosophy, Peking University (2019)
- Ph.D., Peking University , Molecular cell biology (2019)
- B.S., South China Agricultural University , Molecular Biology (2013)

STANFORD ADVISORS

- Gerlinde Wernig, Postdoctoral Faculty Sponsor

PATENTS

- Gerlinde Wernig, Tristan Lerbs, Li Cui, Qiwen Deng, Cristabelle De Souza. "United States Patent US2021064691 Antifibrotic And Antitumor Activity of CD63 Blockade", THE BOARD OF TRUSTEES OF THE LELAND STANFORD JUNIOR UNIVERSITY, Dec 21, 2021

LINKS

- My LinkedIn: https://www.linkedin.com/in/qiwen-deng-ph-d-776025215/

Publications

PUBLICATIONS

- **The calcium signaling enzyme CD38 - a paradigm for membrane topology defining distinct protein functions.** *Cell calcium*
  Lee, H. C., Deng, Q. W., Zhao, Y. J.
  2022; 101: 102514

- **GALA peptide improves the potency of nanobody-drug conjugates by lipid-induced helix formation.** *Chemical communications (Cambridge, England)*
  Chen, Y. J., Deng, Q. W., Wang, L., Guo, X. C., Yang, J. Y., Li, T., Xu, Z., Lee, H. C., Zhao, Y. J.
  2021; 57 (12): 1434-1437

- **The transferrin receptor CD71 regulates type II CD38, revealing tight topological compartmentalization of intracellular cyclic ADP-ribose production** *JOURNAL OF BIOLOGICAL CHEMISTRY*
  Deng, Q., Zhang, J., Li, T., He, W., Fang, L., Lee, H., Zhao, Y.
  2019; 294 (42): 15293–303

- **CD38 produces nicotinic acid adenosine dinucleotide phosphate in the lysosome** *JOURNAL OF BIOLOGICAL CHEMISTRY*
  Fang, C., Li, T., Li, Y., Xu, G., Deng, Q., Chen, Y., Hou, Y., Lee, H., Zhao, Y.
  2018; 293 (21): 8151-8160

- **Development of Stabilized Peptide-Based PROTACs against Estrogen Receptor #.** *ACS chemical biology*
  Jiang, Y., Deng, Q., Zhao, H., Xie, M., Chen, L., Yin, F., Qin, X., Zheng, W., Zhao, Y., Li, Z.
  2018; 13 (3): 628-635

- **Immuno-targeting the multifunctional CD38 using nanobody** *SCIENTIFIC REPORTS*
  Li, T., Qi, S., Unger, M., Hou, Y., Deng, Q., Liu, J., Lam, C. C., Wang, X., Xin, D., Zhang, P., Koch-Nolte, F., Hao, Q., Zhang, et al
  2016; 6: 27055