

# Xinru Qiu

Riverside, CA | [xinru.reina.qiu\[AT\]gmail.com](mailto:xinru.reina.qiu[AT]gmail.com) | <https://xqiu625.github.io/>

## Education

<b>University of California, Riverside</b> Ph.D., Genetics, Genomics, and Bioinformatics	2018-2023
<b>University of Southern California</b> Master of Science, Pharmaceutical Sciences	2013-2015
<b>Jilin University</b> Bachelor of Science, Pharmacy	2009-2013

## Positions

<b>University of California, Riverside</b> Postdoctoral Researcher	07/2023-Present
<b>University of California, Riverside</b> Ph.D. Research Assistant	09/2018-06/2023
<b>Illumina</b> Bioinformatics Intern	06/2022-09/2022
<b>Vantari Genetics</b> Clinical Genomics Scientist	11/2015-09/2018

## Teaching

- **UCR BMSC 202** - Advanced course on molecular mechanisms of diseases
- **UCR BIOL107A** - Molecular Biology
- **UCR BIOL020** - Dynamic Genome

## Service

- **Journals review:** Advanced Science, Communications Biology, Frontiers in Genetics, and others
- **Conference review:** GEM workshop at ICLR 2024, AI4Science workshop at ICML 2024
- **Grant review:** UCR Minigrants for Undergraduate Research & Creative Activities

## Technical Skills

- **Platforms:** Unix, Linux, Windows
- **Programming:** Python, R, Bash, SQL, Java, HTML, Git, Typescript
- **Machine Learning:** Pandas, NumPy, SciPy, Scikit-learn, and various ML algorithms

- **Bioinformatics Tools:** Bioconductor, BLAST, Bowtie, CellRanger, Seurat, SCANPY, AlphaFold2
- **Databases:** 1000 Genomes Browser, ClinVar, COSMIC, ENCODE, GEO, TCGA, UCSC Genome Browser

## Publications

1. **Qiu, X.**, Nair, M.G., Jaroszewski, L. and Godzik, A., 2024. Deciphering Abnormal Platelet Subpopulations in COVID-19, Sepsis and Systemic Lupus Erythematosus through Machine Learning and Single-Cell Transcriptomics. *International Journal of Molecular Sciences*, 25(11), p.5941.
2. **Qiu, X.**, Li, H., Ver Steeg, G. and Godzik, A., 2024. Advances in AI for Protein Structure Prediction: Implications for Cancer Drug Discovery and Development. *Biomolecules*, 14(3), p.339.
3. Chen Wongworawat, Y., Nepal, C., ... **Qiu, X.**, Wang, C. Spatial transcriptomics reveals distinct role of monocytes/macrophages with high FCGR3A expression in kidney transplant rejections. *Frontiers in Immunology*, 16, 1654741.
4. Takkouche, A., Ichii, K., Qiu, X., Jaroszewski, L., & Godzik, A. (2024). Divergence of the individual repeats in the leucine-rich repeat domains of human Toll-like receptors explain their diversity and functional adaptations. *bioRxiv*, 2024-09.
5. Koury, J., Singh, H., Sutley-Koury, S. N., Fok, D., **Qiu, X.**, Maung, R., ... Kaul, M. (2025). EphB2-mediated ephrin-B reverse signaling on microglia drives an anti-viral, but inflammatory and neurotoxic response associated with HIV. *Journal of Neuroinflammation*, 22(1), 1-18.
6. He, R., Sarwal, V., **Qiu, X.**, Zhuang, Y., Zhang, L., Liu, Y., Chiang, J. (2025). Generative AI models in time-varying biomedical data: scoping review. *Journal of Medical Internet Research*, 27, e59792.
7. Harahap-Carrillo, I. S., Fok, D., Wong, F., Malik, G., Maung, R., Qiu, X., ... Kaul, M. (2025). Chronic, Low-Dose Methamphetamine Reveals Sexual Dimorphism of Memory Performance, Histopathology, and Gene Expression Affected by HIV-1 Tat Protein in a Transgenic Model of NeuroHIV. *Viruses*, 17(3), 361.
8. Vizcarra, E.A., Ulu, A., Landrith, T.A., **Qiu, X.**, Godzik, A. and Wilson, E.H., 2023. Group 1 metabotropic glutamate receptor expression defines a T cell memory population during chronic Toxoplasma infection that enhances IFN-gamma and perforin production in the CNS. *Brain, Behavior, and Immunity*, 114, pp.131-143.
9. Takkouche, A., **Qiu, X.**, Sedova, M., Jaroszewski, L. and Godzik, A., 2023. Unusual structural and functional features of TpLRR/BspA-like LRR proteins. *Journal of Structural Biology*, 215(3), p.108011.
10. Bergersen, K.V., Pham, K., Li, J., Ulrich, M.T., Merrill, P., He, Y., Alaama, S., **Qiu, X.**, Harahap-Carrillo, I.S., Ichii, K. and Frost, S., 2023. Health disparities in COVID-19: Immune and vascular changes are linked to disease severity and persist in a high-risk population in Riverside County, California. *BMC Public Health*, 23(1), p.1584.

11. Li, J., Ruggiero-Ruff, R.E., He, Y., **Qiu, X.**, Lainez, N., Villa, P., Godzik, A., Coss, D. and Nair, M.G., 2023. Sexual dimorphism in obesity is governed by RELM $\alpha$  regulation of adipose macrophages and eosinophils. *Elife*, 12, p.e86001.
12. Bonenfant, J., Li, J., Nasouf, L., Miller, J., Lowe, T., Jaroszewski, L., **Qiu, X.**, Thapamagar, S., Mittal, A., Godzik, A. and Klein, W., 2022. Resistin concentration in early sepsis and all-cause mortality at a safety-net hospital in riverside county. *Journal of Inflammation Research*, pp.3925-3940.
13. Alisoltani, A., **Qiu, X.**, Jaroszewski, L., Sedova, M., Iyer, M. and Godzik, A., 2023. Gender differences in smoking-induced changes in the tumor immune microenvironment. *Archives of Biochemistry and Biophysics*, 739, p.109579.
14. **Qiu, X.**, Li, J., Bonenfant, J., Jaroszewski, L., Mittal, A., Klein, W., Godzik, A. and Nair, M.G., 2021. Dynamic changes in human single-cell transcriptional signatures during fatal sepsis. *Journal of leukocyte biology*, 110(6), pp.1253-1268.
15. Zhou, W.L., Li, L.L., **Qiu, X.R.**, An, Q. and Li, M.H., 2017. Effects of combining insulin-like growth factor 1 and platelet-derived growth factor on osteogenesis around dental implants. *Chin J Dent Res*, 20(2), pp.105-109.
16. Li, M.H., Wang, Y.S., Zhou, H.L., Li, Y.J., **Qiu, X.R.**, Wang, X.Y. and Zhao, Y.Y., 2013. Inhibitory effects of mistletoe alkali on salivary adenoid cystic carcinoma cells. *Chemical Research in Chinese Universities*, 29(2), pp.275-279.
17. Li, M.H., Zhou, H.L., Wang, W. and **Qiu, X.R.**, 2010. Inhibition of salidroside on salivary gland adenoid cystic carcinoma. *Chemical Research in Chinese Universities*, 26(6), pp.969-973.