

Xinru Qiu

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EDUCATION

UNIVERSITY OF CALIFORNIA, RIVERSIDE Riverside, CA Ph.D., Genetics, Genomics, and Bioinformatics	2018-2023
UNIVERSITY OF SOUTHERN CALIFORNIA Los Angeles, CA Master of Science, Pharmaceutical Sciences	2013-2015
JILIN UNIVERSITY Changchun, China Bachelor of Science, Pharmacy	2009-2013

POSITIONS

UNIVERSITY OF CALIFORNIA, RIVERSIDE Riverside, CA Postdoctoral Researcher Ph.D. Research Assistant	07/2023-Present 09/2018-06/2023
ILLUMINA San Diego, CA Bioinformatics Intern	06/2022-09/2022
VANTARI GENETICS Irvine, CA Clinical Genomics Scientist	11/2015-09/2018

TEACHING

- **UCR BMSC 202** - An advanced course exploring the fundamental molecular mechanisms underlying various diseases. The curriculum emphasizes recent breakthroughs in the field and the diverse application of cutting-edge techniques and methodologies in disease research and treatment.
- **UCR BIOL107A**- Molecular Biology, an undergraduate course covering the following topics: investigating the structure and function of genetic material, recombinant DNA technology, applications of molecular cloning procedures, and virus classification, replication, evolution.
- **UCR BIOL020**- Dynamic Genome, an undergraduate course covering the following topics: investigating the genomes of plants and animals, tools of bioinformatics and genomics, and bioinformatics databases.

SERVICE

- **Journals review:** Advanced Science (Wiley), Big Data and Cognitive Computing (MDPI), BioMedInformatics (MDPI), Biomolecules (MDPI), Communications Biology (Nature), Data (MDPI), Frontiers in Genetics, Genes (MDPI), Genomics (Elsevier), Inflammation (Springer), Heliyon (Cell Press), Journal of Clinical Medicine (MDPI), Journal of Molecular Biology (Elsevier), Mathematics (MDPI), Molecular Immunology (Elsevier).
- **Conference review:** Generative and Experimental Perspectives for Biomolecular Design (GEM) workshop at International Conference on Learning Representations (ICLR) 2024, AI4Science workshop at International Conference on Machine Learning (ICML) 2024.
- **Grant review:** UCR Minigrants for Undergraduate Research & Creative Activities.

TECHNICAL

- **Platforms:** Unix, Linux, Windows
- **Programming:** Python, R, Bash, SQL, Java, HTML, Git, Typescript.
- **Machine Learning:** Pandas, NumPy, SciPy, Matplotlib, Seaborn, Scikit-learn, logistic regression, random forest, Xgboost, SVM, K-means, Hidden Markov Models, PCA, LDA, ROC, AUC, Lift.
- **Bioinformatics Tools:** Bioconductor, Biopython, BLAST, Bowtie, Top Hat, Cufflinks, ANNOVAR, IGV, Salmon, Kallisto, DESeq, edgeR, limma, CellRanger, Seurat, SCANPY, Monocle, SingleR, AlphaFold2, Tableau, Galaxy, Ingenuity Pathways, DRAGEN Bio-IT, BWA, Picard, bcftools,
- **Databases:** 1000 Genomes Browser, BLAST, ClinVar, COSMIC, dbSNP, ENCODE, Ensembl, GenBank, GEO, gnomAD, HGMD, KEGG, MeSH Database, PharmGKB, PharmVar, Primer-BLAST, REACTOME, Reference Sequence (RefSeq), TCGA, UCSC Genome Browser, UniProt.

PUBLICATIONS

- **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.
- **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.
- 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.
- 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.
- 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.
- 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 α regulation of adipose macrophages and eosinophils. *Elife*, 12, p.e86001.
- 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.
- 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.
- **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.
- 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. 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.
- 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.
- 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.