

# QIQI XIE

Bioinformatics Scientist. Data scientist. Biologist. Master of Medicine.

I received the B.S. degree in Bachelor of Medicine from Nanchang University, City, China, in 2015 and the M.S. degree in Clinical Surgery from Lanzhou University, City, China, in 2019. I am currently undertaking doctoral training at Indiana University Bloomington, specializing in cancer stem cells, and I plan to pursue postdoctoral training in the future.

I am broadly interested in gbm, breast cancer, bone tumor, and neuropathic pain. Fluent in Bioinformatics, NGS analysis, scRNA-seq, and machine learning.



## EDUCATION

- |                   |  |   |
|-------------------|--|---|
| 2026<br> <br>2023 | <ul style="list-style-type: none"><li>● <b>Ph.D. in Oncology</b><br/>Indiana University Bloomington<ul style="list-style-type: none"><li>• Indiana University School of Medicine Bloomington</li></ul></li></ul>           | <span style="color: #333; font-size: 1.5em;">📍</span> Bloomington, IN 47405 |
| 2019<br> <br>2016 | <ul style="list-style-type: none"><li>● <b>Master of Orthopedics</b><br/>Lanzhou University<ul style="list-style-type: none"><li>• Mechanism of TRPM2-GSK3B Signaling Pathway in Diabetic Osteoporosis</li></ul></li></ul> | <span style="color: #333; font-size: 1.5em;">📍</span> Gansu, CN             |
| 2015<br> <br>2010 | <ul style="list-style-type: none"><li>● <b>Diploma of Clinical Medicine</b><br/>Nanchang University</li></ul>  | <span style="color: #333; font-size: 1.5em;">📍</span> Jiangxi, CN           |

## CERTIFICATE

- |      |  |   |
|------|--|---|
| 2018 | <ul style="list-style-type: none"><li>● <b>Outstanding Graduates</b></li></ul>   | <span style="color: #333; font-size: 1.5em;">📍</span> Lanzhou University  |
| 2016 | <ul style="list-style-type: none"><li>● <b>National Scholarships</b></li><li>● <b>The First-Prize Scholarship</b></li><li>● <b>The Third-Prize Scholarship</b></li></ul> | <span style="color: #333; font-size: 1.5em;">📍</span> Lanzhou University  |
| 2014 | <ul style="list-style-type: none"><li>● <b>The Third-Prize Scholarship</b></li></ul>   | <span style="color: #333; font-size: 1.5em;">📍</span> Lanzhou University  |
| 2012 | <ul style="list-style-type: none"><li>● <b>The Second-Prize Scholarship</b></li></ul>  | <span style="color: #333; font-size: 1.5em;">📍</span> Nanchang University |

## CONTACT

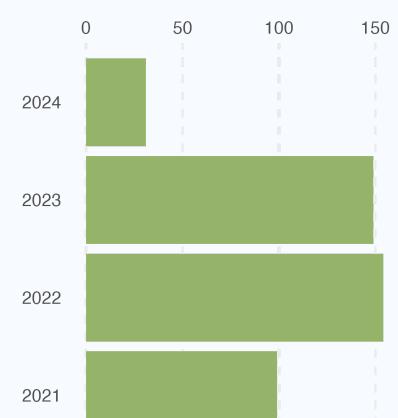
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Citation = 470

H-index = 12

l10-index = 17



2011

- National College English Competition Encouragement Award  
📍 Nanchang University

## ↳ GRANTS

2023  
|  
2022

- Qinghai Provincial Breast Center Key Specialty Construction  
Participation

2022  
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2021

- Popularization and application of early diagnosis and treatment technology for breast cancer in Qinghai Province  
Participation

2021  
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2020

- Study on the mechanism of single cell sequencing in bone metastasis of Breast Cancer  
Participation

2020  
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2019

- Pain mechanism and treatment of spinal diseases  
Participation
- The mechanism of exosome microRNAs in osteoporosis  
Participation

2019  
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2018

- Mechanism of TRPM2-GSK3B ta Signaling Pathway in Diabetic Osteoporosis  
Participation

2018  
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2017

- Endogenous cannabinoids regulate astrocyte-mediated pain: the MAPK-Glu-Gln shuttle pathway  
Participation

## ↳ PUBLICATIONS

2023

- Correlation between mismatch repair and survival of patients with gastric cancer after 5-FU-based adjuvant chemotherapy  
*J Gastroenterol*
  - Zhao F, Li E, Shen G, Dong Q, Ren D, Wang M, Zhao Y, Liu Z, Ma J, Xie Q, Liu Z, Li Z, Gao L, Zhao J
  - SCI, IF=6.772, JCR Q1

2022

- SKI knockdown suppresses apoptosis and extracellular matrix degradation of nucleus pulposus cells via inhibition of the Wnt/β-catenin pathway and ameliorates disc degeneration  
*Apoptosis*
  - Wu ZL, Chen YJ, Zhang GZ, Xie QQ, Wang KP, Yang X, Liu TC, Wang ZQ, Zhao GH, Zhang HH
  - SCI, IF=5.561, JCR Q2

2021

- **An Immune-Related Long Non-Coding RNA Signature to Predict the Prognosis of Ewing's Sarcoma Based on a Machine Learning Iterative Lasso Regression**

*Front Cell Dev Biol*

- Enhui Ren, Yajun Deng, Wenhua Yuan, Guangzhi Zhang, Zuolong Wu, *Qiqi Xie\**
- SCI, IF=6.681, JCR Q2
- Corresponding\_author

- **Development of a Machine Learning-Based Autophagy-Related lncRNA Signature to Improve Prognosis Prediction in Osteosarcoma Patients**

*Front Mol Biosci*

- Guangzhi Zhang, Zuolong Wu, Chunying Li, Enhui Ren, Wenhua Yuan, Yajun Deng, *Qiqi Xie\**
- SCI, IF=5.240, JCR Q3
- Corresponding\_author

- **Role of the Wnt pathway in the formation, development, and degeneration of intervertebral discs**

*Pathol Res Pract*

- Zuo-Long Wu, *Qiqi Xie\**, Tai-Cong Liu, Xing Yang, Guang-Zhi Zhang, Hai-Hong Zhang
- SCI, IF=3.250, JCR Q4
- Co-first\_authors

- **Screening of osteoarthritis diagnostic markers based on immune-related genes and immune infiltration**

*Scientific Reports*

- Wenhua Yuan, *Qiqi Xie\**, Keping Wang, Wei Sheng, Xiaofei Feng, Zheng Liu, Jintao Shi, Xiaobo Zhang, Kai Zhang, Yajun Deng, Haiyu Zhou
- SCI, IF=4.371, JCR Q3
- Co-first\_authors

- **A four-methylated lncRNA signature predicts survival of osteosarcoma patients based on machine learning**

*Genomics*

- Yajun Deng, Wenhua Yuan, Enhui Ren, Guangzhi Zhang, Zuolong Wu, *Qiqi Xie\**
- SCI, IF=5.732, JCR Q3
- Corresponding\_author

- **An immune-related gene signature for determining Ewing sarcoma prognosis based on machine learning**

*Journal of Cancer Research and Clinical Oncology*

- Enhui Ren, Yajun Deng, Wenhua Yuan, Zuolong Wu, Guangzhi Zhang, *Qiqi Xie\**
- SCI, IF=4.550, JCR Q3
- Corresponding\_author

2020

- **Development of a novel immune-related genes prognostic signature for osteosarcoma**  
*Scientific Reports*
  - Zuolong Wu, Guangzhi Zhang, Yajun Deng, Enhui Ren, Wenhua Yuan,  
*Qiqi Xie\**
  - SCI, IF=4.371, JCR Q3
  - Corresponding\_author
- **Protein Kinase A Is Involved in Neuropathic Pain by Activating the p38MAPK Pathway to Mediate Spinal Cord Cell Apoptosis**  
*Mediators of Inflammation*
  - Yajun Deng, Liang Yang, *Qiqi Xie*, Fengbiao Yang, Guoqiang Li, Guangzhi Zhang, Shaoping Li, Zuolong Wu, Jing Wang, Xuwen Kang\*
  - SCI, IF=4.711, JCR Q3
  - Co-first\_authors
- **MCM2 and NUSAP1 Are Potential Biomarkers for the Diagnosis and Prognosis of Pancreatic Cancer**  
*BioMed Research International*
  - Yajun Deng, Hanyun Ma, Jinyong Hao\*, *Qiqi Xie\**, Ruochen Zhao\*
  - SCI, IF=3.411, JCR Q3
  - Corresponding\_author
- **Decreased expression of NUSAP1 predicts poor overall survival in cervical cancer**  
*Journal of Cancer*
  - *Qiqi Xie*, Wen Ou-yang, Mingwei Zhang, Huimei Wang, Qiuyuan Yue\*
  - SCI, IF=4.200, JCR Q3
  - First\_authors
- **GRB10 and E2F3 as Diagnostic Markers of Osteoarthritis and Their Correlation with Immune Infiltration**  
*Diagnostics*
  - Yajun Deng, Enhui Ren, Wenhua Yuan , Guangzhi Zhang, Zuolong Wu,  
*Qiqi Xie\**
  - SCI, IF=3.701, JCR Q3
  - Corresponding\_author
- **Identification of a novel autophagy-related gene signature for predicting metastasis and survival in patients with osteosarcoma**  
*Research Square*
  - Guangzhi Zhang, Yajun Deng, Zuolong Wu, Enhui Ren, Wenhua Yuan,  
*Qiqi Xie\**
  - SCI
  - Corresponding\_author

2019

- Identification of diagnostic markers for major depressive disorder by cross-validation of data from whole blood samples

*PeerJ*

- Huimei Wang, Mingwei Zhang, **Qiqi Xie**, Jin Yu, Yan Qi, Qiu Yuan Yue\*
- SCI, IF=2.984, JCR Q3

- Anterior versus posterior decompression for the treatment of thoracolumbar fractures with spinal cord injury:a Meta-analysis

*China journal of orthopaedics and traumatology*

- Enhui Ren, Yajun Deng, **Qiqi Xie**, Liang Yang, Guangzhi Zhang, Shaoping Li, Zuolong Wu, Jing Wang, Xuewen Kang\*
- SCI

- Identification of potential diagnostic and therapeutic target genes for lung squamous cell carcinoma

*Oncology Letters*

- Nana Zhang, Hong Wang, **Qiqi Xie**, Hua Cao, Fanqi Wu, Dan Bei Di Wu, Yixin Wan\*
- SCI, IF=2.860, JCR Q4
- Co-first\_authors

- Integrative analyses of genes associated with idiopathic pulmonary fibrosis

*Journal of Cellular Biochemistry*

- Huimei Wang, **Qiqi Xie**, Wen Ou\_Yang, Mingwei Zhang\*
- SCI, IF=4.423, JCR Q3

- Slow skeletal muscle troponin T, titin and myosin light chain 3 are candidate prognostic biomarkers for Ewing's sarcoma

*Oncology Letters*

- Yajun Deng, **Qiqi Xie**, Guangzhi Zhang, Shaoping Li, Zuolong Wu, Zhanjun Ma, Xuegang He, Yicheng Gao, Yonggang Wang, Xuewen Kang, Jing Wang\*
- SCI, IF=2.860, JCR Q4
- Co-first\_authors

- 2-arachidonyl glycerol modulates astrocytic glutamine synthetase via p38 and ERK1/2 pathways

*Journal of Neuroinflammation*

- Shenghong Wang, Hua Zhang, Bin Geng, **Qiqi Xie**, Wenzhou Li, Yajun Deng, Weidong Shi, Yunyan Pan, Xuewen Kang, Jing Wang\*
- SCI, IF=8.324, JCR Q2

2018

- **High-affinity glutamate transporters and chronic pain**  
*Journal of Central South University (Medical Sciences)*
  - Zhang H, Wang S, *Qiqi Xie*, Li W, Shi W, Ma J, Wang J\*
  - CSCD
  - Article in chinese
- **Bioinformatics analysis of gene chip data related to early pathological pain induced by SNI rat model**  
*Life Science Research*
  - Xie Q, Li W, Shi W, Deng Y, Ren E, Ma J, Kang X, Wang J\*
  - CSCD, First\_authors
  - Article in chinese
- **Advances in application of gemstone energy spectrum CT in skeletal system**  
*Life science Research*
  - Xie Q, Li W, Shi W, Deng Y, Ren E, Ma J, Kang X, Wang J\*
  - CSCD, First\_authors
  - Article in chinese
- **Bioinformatics analysis of osteoarthritis expression profile microarray integration**  
*Hua Zhong Ke Ji Da Xue Xue Bao Yi Xue Ban*
  - Xie Q, Li W, Shi W, Deng Y, Ren E, Ma J, Kang X, Wang J\*
  - CSCD, First\_authors
  - Article in chinese
- **Effects of diabetes on bone biomechanics in ovariectomized rats**  
*Chinese Journal of Medical Physics*
  - Xie Q, Li W, Shi W, Deng Y, Ren E, Ma J, Pan Y, Kang X, Wang J\*
  - CSCD, First\_authors
  - Article in chinese
- **Selection of sites for detecting bone mineral density in diabetic osteoporosis rats by DXA**  
*Chinese Journal of Medical Physics*
  - Li W, Xie Q, Ren E, Deng Y, Pan Y, Ma J, Kang X, Wang J\*
  - CSCD, Co-first\_authors
  - Article in chinese
- **Visual analysis of related literature on quantitative computed tomography in diagnosis of osteoporosis**  
*Chinese Journal of Medical Physics*
  - Deng Y, Xie Q, Li W, Shi W, Ma J, Pan Y, Kang X, Wang J\*
  - CSCD, Co-first\_authors
  - Article in chinese

- The expression and clinical significance of formyl peptide receptor 1 in glioma were analyzed based on bioinformatics  
*Cancer, aberration, mutation*
  - Dong Q, Xie Q, Hu J, Wang M, Yuan G, Pan Y\*
  - CSCD, Co-first\_authors
  - Article in chinese
- The correlation between quantitative parameters of EDCT and bone biomechanics  
*Chinese Journal of Medical Physics*
  - Dong Q, Xie Q, Zhao R, Huang X, Li W, Zhang Y, Pan Y\*
  - CSCD, Co-first\_authors
  - Article in chinese
- Preliminary study on the evaluation of biomechanics by EDCT  
*Chinese Journal of Medical Physics*
  - Huang X, Xie Q, Deng Y, Zhao R, Dong Q, Zhou J\*
  - CSCD, Co-first\_authors
  - Article in chinese
- Progress in the study of skeletal endocrine function  
*Life science Research*
  - Li W, Xie Q, Shi W, Deng Y, Ma Y, Xie J, Kang X, Wang J\*
  - CSCD, Co-first\_authors
  - Article in chinese

## CONFERENCE PROCEEDINGS

2020  
|  
2018

- The 3<sup>th</sup> Academic Conference of Chinese Medical Association on Osteoporosis and Bone Mineral Salt
  - Shanxi, CN
- The 9<sup>th</sup> International Symposium on Osteoporosis and Bone Mineral Salt Diseases
  - Suzhou, CN
- The 13<sup>th</sup> Annual Congress of Chinese Orthopaedic Association
  - Xiamen, CN

## PROFESSIONAL SKILLS

### Wet-lab Experimental

- I am good at Immunohistochemistry, Immunofluorescence, Western Blot, RT-PCR, RNAi, Exosome identification, Open-field Test, Water Maze Test, Forced Swimming Test, Von Frey Hair Test, Cold Hot Plate Test, and Tereotactic Injection.

### Experimental instruments

- I can operate the following experimental instruments: micro-drop PCR system, automatic protein expression quantitative system, high-content live cell imaging quantitative analysis system and cell metabolic analyzers.

#### **Software**

- I have advanced experience in using Microsoft Office, Illustrator, Photoshop, GraphPad Prism, SPSS, ImageJ, Image-Pro Plus, Cytoscape, Funrich.

#### **Statistics**

- I have moderate experience in using R and Python for statistical modeling and data visualization.

#### **Machine learning**

- I know how to do machine learning (including deep learning) and have applied some technologies to my projects.

#### **Data analysis**

- I have advanced experience in using R and Shell for data preprocessing, data cleaning and data interpretation. RNA-seq, ChIP-seq, ATAC-seq, scRNA-seq, scATAC-seq Analysis. Spatial Transcriptomics.