

Mr. Yixiao Zhou
School of Biomedical Sciences



Biography

Name: Yixiao Zhou
University: The University of Western Australia
Degree: PhD, Full Time
Principal Supervisor: Nathan Pavlos
Co-supervisor: Benjamin Mullin
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1. ABOUT MY RESEARCH

Research Abstract

My study focus on the cellular biological mechanisms involved in osteoclast, a bone-digesting cell which maintain skeletal bone mass and bone remodelling. Imbalances in osteoclast activity is associated with bone-wasting diseases like osteoporosis (low bone mass) and sclerosing (high bone mass) dysplasia such as osteopetrosis. My study figure out the key regulative proteins and validate their functions in osteoclasts.

And I have research experience of Bio 3D-printing of dental materials in my master study.

My knowledge of cellular biology and working experience of Bio-3D-printing will be helpful to identify new biocompatible materials and establish new bone-compatible implants, which are necessary for Orthopedic and dental clinical applications. Besides, my professional biochemistry skills can optimize the existing design and production of these biomaterials.

Qualifications Summary

January 2011 – Current	PhD Title: Doctor of Philosophy The University of Western Australia Expected submission date: INSERT DATE
2018 – 2019	Master of molecular biology (research extensive), the University of Queensland
2012 – 2016	Bachelor of Science, Tongji University, China

2. Career History and Work Experience

Career Summary

January 2011 – Current	Tutor (part time) The University of Western Australia
2020 – 2021	Tutor (part time) Yangzhou University
2012 – 2016	Wild Bird Survey (casual) Tongji University

Key Skills

Biochemistry tests, including qPCR, western blot, ELISA, etc.

Cellular Biology skills, including cell culture, harvest cells from animal, tranfection of cells, etc.

Microscopy skills, including histological staining, confocal microscopy, etc.

Microbiology skills, including selective culture of bacteria.

Biomaterial research skills, including 3D-printing, electrospinning, laser cutting.

Qualifications

Molecular Biology, Master, Master of Molecular Biology (research extensive), University of Queensland
15 Feb 2018 → 1 Nov 2019
Award Date: 1 Nov 2019

Biotechnology, Bachelor, Bachelor of science, Tongji University
1 Sept 2012 → 15 Jul 2016
Award Date: 15 Jul 2016

Research outputs

Coaxial extrusion bioprinting of 3D microfibrinous constructs with cell-favorable gelatin methacryloyl microenvironments
Liu, W., Zhong, Z., Ning, H., Zhou, Y., Maggio, L., Miri, A. K., Fragasso, A., Jin, X., Khademhosseini, A. & Zhang, Y. S.,
12 Jan 2018, In: *Biofabrication*. 10, 2, 024102.

Extrusion Bioprinting of Shear-Thinning Gelatin Methacryloyl Bioinks
Liu, W., Heinrich, M. A., Zhou, Y., Akpek, A., Ning, H., Liu, X., Guan, X., Zhong, Z., Jin, X., Khademhosseini, A. & Zhang,
Y. S., 21 Jun 2017, In: *Advanced Healthcare Materials*. 6, 12, 1601451.