Lisi Ai
Date of birth: 05-03-2000| Female|
Email address: ailisi2022@163.com| Phone number: +86 18071329417
Dongshan Road, Yichang City, Hubei Province, 443000,P.R.China.

EDUCATION BACKGROUND

Hubei Normal University, China 09/2018—06/2022
- Program: Bachelor of Science in Biological Science (GPA 81.6/100)

The University of Manchester, United Kingdom 09/2022—12/2023
- Program: Master of Tissue Engineering for Regenerative Medicine

PUBLICATION

Wang W, **Ai L**, Zhan Y. Expression and Biological Function of Alpha-1-Acid Glycoprotein1 in Lung Cancer, Life Science Research, July 2021. DOI: 10.16605/j.cnki.1007-7847.2021.03.0127.

- **Abstract:** The objective of this study is to utilize bioinformatics technology to analyze the expression of AGP1 in lung cancer and its correlation with the survival rate of lung cancer patients. Additionally, we aim to validate the expression of AGP1 in early-stage lung cancer through tissue and serum samples, as well as investigate the impact of AGP1 gene overexpression on lung cancer cell proliferation using molecular cell biology techniques. The ultimate goal is to establish a scientific foundation for evaluating the survival prognosis or developing targeted treatments for lung cancer involving AGP1.

Wang W, Wang Q, **Ai L**. Advances in the Pathogenesis of Acute Myeloid Leukemia, Chinese Journal of Cell Biology, 2021.

- **Abstract:** This review mainly discusses the related gene mutations or abnormal expression such as FLT3, IDH1/IDH2 and BCL-2, abnormal signaling pathways such as ROS signaling pathway, receptor tyrosine kinase pathway, non-receptor ty rosine kinase pathway, Ser/Thr kinase activity and cell surface receptors, as well as the imbalance in related immune cells such as NK cells, T cells and macrophages or abnormal immune molecules such as CD33, PD-1, CD47, CD70. In this review, the research progress of pathogenesis in AML is summarized at the molecular and cellular level, which will provide a reference for the development of targeted therapeutic drugs for AML.

Zhang Y, **Ai L**, Gong Y, Jin Y. Preparation and usage of nanomaterials in biomedicine. Biotechnology and Bioengineering. Published online June 27, 2023. DOI: 10.1002/bit.28472.

- **Abstract:** In this review, we focused on the preparation methods, including chemical, physical, and biological methods due to the properties of nanomaterials. We mainly clarified the characteristics, advantages, and disadvantages of different preparation methods. Then, we focused on the applications of nanomaterials in biomedicine, including biological detection, tumor diagnosis, and disease treatment, which provide a development trend and promising prospects for nanomaterials.

PROFESSIONAL RESEARCH

Overexpressed AACT preparations for the treatment of NSCLC.
Project Member 12/2020-06/2021

- In this study, we found that overexpression of AACT gene could significantly inhibit the proliferation of lung cancer cells A549 and H157.
- In this project, I carried out CCK8 experiment, cell migration experiment and other experiments together with my team, and analyzed the data.
- **Skills**: CCK8, cell migration experiment.

Preparation of selenium nanoparticles embed lectin complexes and investigation of biological activity.

Project Leader 12/2021-06/2022

- The sugar binding activity of AANL6-SeNPs complex was investigated to provide a reference for the development of sugar recognition tools
- In this project, I expressed the lectin AANL6 from E.coli and purified it by affinity chromatography. Selenium nanoparticles were coated with lectin AANL6 prepared by REDOX method, and then nanocharacterized. Finally, the effect of proteins coated with selenium nanoparticles on erythrocyte agglutination was investigated.
- **Skills**: Lectins AANL6 purification and expression, Preparation of AANL6 -selenium nanoparticles complex, Characterization of nanomaterials (particle size, zeta potential, UV spectrum), CCK8, Cell scratch assay.

Biological impact of intranasal carbon nanomaterial based drug delivery systems on the brain.

Project Leader 12/2022-06/2023

- To explore the biological effects of carbon nanomaterials (graphene oxide) on the brain through the intranasal drug delivery system through Nissl staining and immunofluorescence staining of mouse brain sections.
- In this project, I received training in immunofluorescence staining experiments and performed experiments on mouse brain slices using GFAP and IBA-1, respectively.
- **Skills**: Immunofluorescence staining, Nissl staining, data analysis (imageJ prism).

HONOR & AWARD

- Outstanding Graduates of Hubei Normal University; 06/2022
- Second-class Scholarship in 2020-2021 Academic Year, Hubei Normal University; 06/2021
- Advanced Individual in Summer Social Practice, Hubei Normal University; 05/2021
- Third Prize (university level) in the 13th Challenge Cup Extracurricular Academic Technology Works Competition for College Students in Hubei Province; 05/2021
- Merit Student in 2019-2020 Academic Year, Hubei Normal University; 11/2020
- Second-class Scholarship in 2019-2020 Academic Year, Hubei Normal University; 11/2020
- Third-class Scholarship in 2019-2020 Academic Year, Hubei Normal University; 11/2020
- Provincial Silver Award in the 6th China International “Internet+” Innovation and Entrepreneurship Competition for College Students; 10/2020
- National First Prize in National Life Science Competition for College Students; 08/2020

INTERNSHIP EXPERIENCE

CSCP Pharma Marketing Department Assistant 01/2022-08/2022

- Assisted the marketing manager to conduct market research, user research, monthly report and other work, skilled in using pivot tables and making powerpoint.
- Independently completed the case collection project, reviewed the cases, and summarized the project, and collected more than 2000 cases in total.
- Assisted the Marketing Department to carry out academic activities, followed up customer invitation, poster production and other work, and carried out more than 20 academic activities in total.

OTHER INFORMATION

- **Qualifications：** English（CET4/CET6), IELTS(6.0), Chinese（native）
- **Hobbies：** Dessert, swimming, hiking, mountain climbing.