Dr.Abdulrahman Ahmed Mahmood

Biopharmacist

Personal Data

Nationality: Iraqi
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Education

09/2014 – 07/2019 Ph.D. Biopharmaceutics. Huazhong University of Science and Technology (HUST), Wuhan, China
Supervisor: Prof. Qibing Zhou
Ph.D. Thesis: Superparamagnetic iron oxide nanoclusters assembled with C-or N-pHLIP as a tumor-selective MRI contrast agent with a high safety profile in cirrhosis

Research Interests

- Development of nanomaterial for biomedical application and clinical translation
- Interaction between nanomaterials and biological systems
- Development of contrast agents for molecular imaging
- Tumor-specific delivery of nanomedicine
- Systems toxicology assessment of nanomedicine

Research Experience

- Development of a new method for preparing hydroxyethyl starch (HES) coated water-soluble superparamagnetic iron oxide nanoparticles (SPIONs) in large scale
- Clinical translation study of SPIONs, including SPIO nanoclusters assembly, orthotopic liver tumor MRI, biodistribution and bioclearance and tumor-specific targeted delivery of SPIO nanoclusters
- Systems toxicity assessment of SPIONs on cirrhosis liver mouse via molecular toxicology RT^2 PCR array and biochemistry profiles
- Investigate common aerobic bacteria that can be isolated from different inanimate objects
- Study on how to reduce the incidence of nosocomial infections
- Study on composition and preparation of blood agar

Research Techniques and Skills

- Animal models and study: Subcutaneous tumor and orthotopic liver tumor model, cirrhosis liver model, nonalcoholic steatohepatitis (NASH) model; tissue biodistribution analysis, blood biochemistry analysis, molecular toxicology assessment of liver;
- Cell culture study including viability and uptake study;
- Instrumental: MR imaging analysis (Magnetom Trio Tim MRI spectrometer, 3.0 T, Siemens; Bruker BioSpin MRI GmbH, 9.4T); Dynamic Light Scatter operation and analysis; Fluorescence Microscope analysis; in vivo animal fluorescence imaging IVIS spectrum (IVIS Lumina XR, Caliper) operation and analysis; RT^2 PCR array analysis (7900 HT, Applied Biosystems)

Work Experience

Aug. 2020 – Dec 2024	Department of nuclear medicine, Shar Hospital, Sulaymaniyah, Iraq.
Mar. 2022 – Mar. 2023	Technical College of Health, Sulaimani Polytechnic University Sulaymaniyah, Iraq.
Sept. 2020 – Sept. 2021	College of Health Sciences, University of Human Development (UHD), Sulaymaniyah, Iraq.
Sept. 2008- June 2009	American University of Iraq Sulaimani, Sulaymaniyah, Iraq.

Honor & Awards

- China Scholarship Council, College of Life Science and Technology, HUST, China (2014)
- Chinese Government Scholarship-Chinese University Program, College of Life Science and Technology, HUST, China (2016)

Publications

1. Abdulrahman Ahmed Mahmood, Jianqi Zhang, Rufang Liao, Xiwei Pan, Dan Xu , Haibo Xu, and Qibing Zhou. Evaluation of non-targeting, C- or N-pH (low) insertion peptide modified superparamagnetic iron oxide nanoclusters for selective MRI of liver tumor and their potential toxicity in cirrhosis. RSC Advances, RA-ART-03-2019-002430.

2. Yushuang Wei, Rufang Liao, Abdulrahman Ahmed Mahmood, Haibo Xu, and Qibing Zhou. pH-responsive pHLIP (pH low insertion peptide) nanoclusters of superparamagnetic iron oxide nanoparticles as a tumor-selective MRI contrast agent. Acta Biomaterialia, 2017, 55: 194-203.

3. AA Mahmood, JM Hadi, IQ Maolood. Use of Nutritional Supplements Among Gym Clubs Participants in Sulaymaniyah City, Kurdistan Region of Iraq. International Journal of Occupational Safety and Health, 2021, 11: 121 – 128.

4. Maolood, I. Y., & Mhmood, A. A. Survey of Public Knowledge and Implementation Regarding COVID-19 in Sulaymaniyah City. Polytechnic Journal, 2021,11(2), 37-41.

Meeting Presentation

1. Abdulrahman Ahmed Mahmood, Zhang Jianqi, Qibing Zhou. Investigation of pHLIP SPIONs as promising magnetic resonance imaging contrast agents for tumors. Chinananomedicine 2018, Shanghai, China.

2. Yushuang Wei, Abdulrahman Ahmed Mahmood, Yang Mao, Haibo Xu, and Qibing Zhou. Development of Biocompatible SPIONs as an Effective MRI Contrast Agent for Early Tumor Diagnosis. JACR 2017, Yokohama, Japan.