HONGYU (Dennis) FENG

500 W University Pkwy, Apt 8H, Baltimore, MD, 21210
hfeng24@jh.edu (410) 294-6919

INTEREST: Lipid Nanoparticles drug delivery, mRNA delivery, Blood-brain barrier delivery

EDUCATION

JOHNS HOPKINS UNIVERSITY, Baltimore, MD
Master of Science Degree in Chemical & Biomolecular Engineering: Expected graduation May, 2024 **GPA:** 3.93/4.0

- **Departmental Fellowship Fall 2023-2024**

CHINESE UNIVERSITY OF HONG KONG, SHENZHEN, Shenzhen, China
Bachelor of Biomedical Engineering Degree: July, 2022 **GPA:** 3.400/4.0 (ranking 3/13)

- **Dean's List:** School of Medicine 2021-2022; **Master List Award of Muse College** 2019-2020**; Bowen Scholarship**
- **Coursework**: Systems Bioengineering: Neural Systems; Anatomy/Physiology; Genetic Engineering; Linear Algebra and Computational Programming; Advanced Thermodynamics in Practice; Advanced Transport Phenomena in Practice; Supramolecular Materials and Nanomedicine; Interfacial Science with Applications to Nanoscale Systems

Student Assistant July 2020 - May 2022

- Planned daily activities, managed inventory and materials, and provided student consultation.

Undergraduate Student Teaching Fellow September - December 2021

- Led a tutorial session in the course "*Biomedical Modeling and Design I*" and assisted in solving homework problems.
- Introduced various research areas in the field for students and organized review material for exams.

SPECIALIZED SKILLS

- Python (including basic machine learning); MS-Excel; MS-PowerPoint; Training in MATLAB & COMSOL
- Protein Expression; Western Blot; HPLC; LNP Formulation; Microfluidics; Gel Electrophoresis; PCR; Cell Culture; RiboGreen Assay; Luciferase Assay; BCA Assay; Zetasizer Operation; Plasmid Construction;
- Cantonese (native), Mandarin (native), English (fluent), German(elementary).

PROFESSIONAL EXPERIENCE

JOHNS HOPKINS MEDICINE, CENTER FOR NANO-MEDICINE, Baltimore, MD
Lipid Nanoparticle Student Research Assistant December 2022 – Present

- Constructed lipid nanoparticles (LNPs) and characterized LNPs including size, zeta-potential, and encapsulation efficiency.
- Performed luciferase assaying for homogenized animal samples and evaluated LNPs in vivo performance.
- Analyzed LNPs penetration capability in vaginal mucus samples via multiple-particle-tracking-analysis.

JOHNS HOPKINS UNIVERSITY, CENTER FOR LANGUAGE AND SPEECH PROCESSING, Baltimore, MD
NIST Project Student Research Assistant June 2023 – August 2023

- Invent topics for the performance evaluation of the Chinese-English cross-language information retrieval project.
- Evaluate the performance of the project on technical terminology and provide constructive feedback.

CHINESE UNIVERSITY OF HONG KONG, SHENZHEN, Shenzhen, Guangdong, CHINA
Protein Expression Student Research Assistant September 2021 - May 2022

- Led expression and purification research of Cas12a in nucleic acid testing, utilizing Cas12a.
- Prepared experimental consumables and design Cas12a expression vectors and primers.
- Executed plasmid vector construction, protein expression, purification, and concentration; optimized Cas12a expression and purification.

SHENZHEN CORE MEDICAL TECHNOLOGY INC., Shenzhen, Guangdong
R&D Engineer Intern June 2021 - August 2021

Conducted battery charging/discharging system test of left ventricular assist device (LVAD) and screened samples that failed to meet standards; detected causes of errors.

- Designed test sequence and scenario, performed usability test of LVAD system, simulated operation from the customer perspective, and observed/recorded working conditions of the system.
- Simulated LVAD implantation surgery and executed usability tests of LVAD surgical instruments.

Publication

Lian, K., **Feng, H.**, Liu, S., Wang, K., Liu, Q., Deng, L., Wang, G., Chen, Y., & Liu, G. (2022). Insulin quantification towards early diagnosis of prediabetes/diabetes. Biosensors & Bioelectronics, 203, 114029.