

香港理工大学导师信息

● Prof. CHEN Sheng (4 quota)

1. Foodborne pathogen isolation from retail meat and seafood in Hong Kong

Objective: To understand the general process of isolation and identification of foodborne pathogens (*Escherichia coli*, *Salmonella*, *Klebsiella pneumoniae*, *Vibrio* and *Staphylococcus aureus*) from retail meat and seafood, including pork, beef, chicken and shrimp.

2. Bacterial isolation from the environment and antimicrobial resistance determination

Objective: To understand the process of bacterial isolation from the environment such as wastewater, soil and air, and study the basic technologies relating to bacterial antimicrobial resistance including antimicrobial susceptibility test, DNA extraction and bioinformatic analysis.

3. Virulence-related gene knockout in *Klebsiella pneumoniae*

Objective: To study the methods for gene knockout in bacteria, including vector design, PCR amplification of homologous sequences, recombinant plasmid construction, transformation and genotype identification.

4. Purification of the flagellar hook FlgE protein

Objective: To understand the methods for bacterial protein isolation and purification, including sample preparation, centrifugation, initial purification, chromatographic separation, elution and protein identification.

● Prof. Chiou Jiachi, Amber (1 quota)

Investigating the functional components of *Bifidobacteria* to promote skin health

● Prof. ZHU Yuyan (1 quota)

Physiology and Pathology of Adipose Tissue and Liver Metabolism.

Description: Our lab offers dynamic research opportunities spanning molecular and cellular biology, in vivo animal models, and translational clinical studies. For your 2-month summer placement, we will custom-design a specific project tailored to your current technical background and our shared research interests.

- **Prof. ZHAO Danyue, Daisy (1 quota)**

(1) Understanding hydrogen's roles in gut bacterial metabolism of polyphenols.

(2) Effects of dietary polyphenol on liver steatosis (fatty liver) in obesity mouse models.

- **Prof. GAN Renyou (1 quota)**

Cultivation and Nutrient Fortification of Duckweeds for Food Functional Ingredients Development

- **Dr. ZHONG Yuyue (1 quota)**

Bio-inspired photonic pigments in food industry

- **Prof. Zhou Xiaohui (1 quota)**

Antimicrobial activities of plant-derived molecules