



## CHEW Shit Fun

### Position

Associate Professor

### Designation

Deputy Head (Research & Postgraduate Matters), NSSE

### Department

Natural Sciences & Science Education (NSSE)

### Office Location

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### Education

PhD, PGDipTHE

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### Research Interests

biochemistry, physiology & biochemistry of fishes

## Profile

### Academic Background

BSc (Honours); PhD NUS

PGDipTHE NTU

### Professional Organisations

European Society for Comparative Physiology and Biochemistry, Member

Singapore Institute of Biology, Member

### Courses

AAB102 Cell Structure and Function

AAB206 General Physiology

AAB301 Biochemistry

AAB302 Animal Physiology

ASK301/DSS100 Topics in Primary Science for Primary Teaching

MLS828 Environmental Health & Toxicology

MLS865 Comparative Environmental Physiology

QUB512 Biochemical & Physiological Basis of Life

#### Research Interests

On the mudflats of Singapore, dwell many interesting intertidal organisms like the mudskippers, sipunculids and the intertidal pulmonates. We are intrigued by the capabilities of these organisms in surviving in such harsh environment. These intertidal organisms are exposed to low oxygen tension since they burrow into the mudflats. They are also exposed to the fluctuating salinities and the high sulfide content in the mudflats. Thus, our laboratory has been actively involved in elucidating the biochemical strategies employed by these organisms in adapting to the harsh environment in the mudflats. Recently, we have been looking extensively on the nitrogen metabolism of some interesting fish during terrestrial excursion and high ammonia exposure. These include *Misgurnus anguillicaudatus* also known as the weatherloach, *Oxyeleotris marmoratus* commonly known as Soon Hock (a delicacy serve in our local restaurants), *Channa asiatica* (also called the snakehead which is well known as a tonic used to speed recovery after a surgery), *Periophthalmodon schlosseri* (a giant mudskipper found in Pasir Ris Mangrove), *Monopterus albus* (swamp eel), *Protopterus spp* (African lungfish) and *Himantura signifer* (freshwater stingray). Our results indicated that different fishes used different strategies to prevent ammonia build-up in their tissues.