



DOCTOR OF PHILOSOPHY IN BIOCHEMISTRY

■ FACULTY OF MEDICAL SCIENCE

DOCTOR OF PHILOSOPHY IN BIOCHEMISTRY

The Biochemistry Department at Naresuan University is a leader in lower northern Thailand in biochemistry, molecular biology, basic and advanced knowledge for biomolecules and metabolism, applied life science technology, omic technologies (genomics, proteomics, metabolomics) with multi-disciplinary research in a wide spectrum of medical biochemistry and biochemical technology. High-quality national experts serve as our faculty, especially in molecular biology, recombinant protein technology, bioinformatics, plant biochemistry, thalassemia, natural products, molecular biology of cancer, oxidative stress, environmental toxicology, signal transduction, nutrigenomic, biochemistry of neurodegenerative diseases, and related fields. Our ongoing research activities receive financial support from the university and other governmental agencies, such as the Thailand Research Fund (TRF) and the National Research Council of Thailand (NRCT).

The Doctoral Program in Biochemistry includes comprehensive knowledge or innovation in the biochemistry field and also prepares mid-career professionals for senior-level positions in both public and private organizations.



Objectives

Our graduates are expected to have the following:

- Have thorough advanced knowledge in biochemistry.
- Be capable of systematic analysis and synthesis of data and information.
- Possess an inquiry mind, be competent in innovating on one's own, and cherish life-long learning in biochemistry.
- Be good at communications. Possess effective interactive skills with others as a team member.
- Adhere to morality and professional ethics, be acceptable as a role model in the society.

Admission

In accordance with the Graduate School Rules and Regulations. The program committee reserves the rights to require more qualifications as deemed appropriate.

Medium of Instruction

Thai and English



Research Focus

- Medical biochemistry and molecular biology
- Extraction and bioassay of Thai medicinal plants related to human diseases, including osteoarthritis, cancers, skin diseases, Alzheimer disease, and neuronal abnormalities
- Recombinant protein production for human diseases and biochemical technology
- Genetics and biochemistry of detection for avian influenza
- Biochemical toxicology and nanotechnology
- Biochemistry of thalassemia
- Biochemistry and molecular biology of cancer
- Cell signaling
- Plant biochemistry, molecular biology and signaling
- Plant proteomics
- Bioinformatics
- Neuronal stem cell
- Bioplastics

Requirement for Graduation

In accordance with the Graduate School Rules and Regulations, with a departmental addition of paper presentation once a semester for at least four semesters in seminars organized by the department.