

Industrial & Bioprocess Engineering (IB)

Dr. Attawut Impoolsup

(attawut.imp@mahidol.ac.th)

- ✓ Starter culture of yeasts and lactic acid bacteria
- ✓ Yeast fermentation for recombinant protein production

Asst. Prof. Jirarut Wongkongkatep

(jirarut.won@mahidol.ac.th)

- ✓ Chemical modification of bacterial cells and their uses in emulsion system
- ✓ Detection of bacterial cells using chemical fluorescent sensor

Assoc. Prof. Manop Supphantharika

(manop.sup@mahidol.ac.th)

- ✓ Application of starch and hydrocolloids in food products
- ✓ Spray drying and fluidized bed agglomeration of biomaterials

Dr. Pramvadee Wongsangchatra

(pramvadee.won@mahidol.ac.th)

- ✓ Cloning, characterization and applications of microbial proteases for silk degumming process

Asst. Prof. Somchai Chauvatcharin

(somchai.cha@mahidol.ac.th)

- ✓ Production of probiotics & starter cultures
- ✓ Nutraceuticals & biologics production
- ✓ Bioethanol

Dr. Thunyarat Pongtharangkul

(thunyarat.pon@mahidol.ac.th)

- ✓ Bacterial whole-cell biocatalysts for production of valuable bio-based chemicals (e.g. vanillin, epoxide)
- ✓ Organic solvent-tolerant bacteria and their applications in biocatalysis & bioremediation
- ✓ Fermentation technology



Contact Information:

Department of Biotechnology
Faculty of Science, Mahidol University
Rama 6 Road, Phayathai, Ratchathewi
Bangkok 10400 THAILAND
Tel: +66(0)-2201-5310
Fax: +66(0)-2354-7160
Email: headscbt@mahidol.ac.th
Website: www.sc.mahidol.ac.th/scbt/



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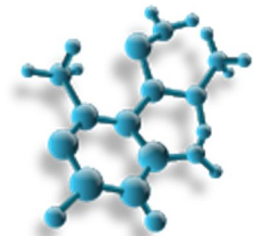
RESEARCH @ BIOTECH



Agriculture

**Molecular
& Medicine**

Food



**Industrial &
Bioprocess
Engineering**

Agricultural Biotechnology (AB)

Assoc. Prof. Jarunya Narangajavana (jarunya.nar@mahidol.ac.th)

- ✓ Functional genomics study in cassava to improve starch quality and quantity
- ✓ Biochemical and molecular genetics related to latex yield and stress response of rubber tree
- ✓ Epigenetics control for plant improvement

Dr. Kallaya Sritunyaluksana-Dangtip (Kallaya.dan@mahidol.ac.th)

- ✓ Aquaculture immunology and disease control
- ✓ Cellular response to microbial infection in shrimp and fish
- ✓ High-throughput transcriptomic analysis for the discovery of immune genes

Asst. Prof. Kanyaratt Supaibulwatana (kanyaratt.sup@mahidol.ac.th)

- ✓ Genotypic and phenotypic responses of plant under environmental stresses
- ✓ Mutation-based study on plant phenotypic and genotypic expressions
- ✓ Plant tissue culture for quantity and quality improvement of crop plants

Dr. Napassorn Punyasuk (scnapassorn@mahidol.ac.th)

- ✓ Physiology and molecular biology of plant under environmental stresses
- ✓ Plant metal homeostasis
- ✓ Hydroponic technology

Asst. Prof. Puchapat Sojikul (puchapat.soj@mahidol.ac.th)

- ✓ Plant molecular biology
- ✓ Genetic engineering for plant based protein expression

Dr. Saengchan Senapin (saengchan@biotec.or.th)

- ✓ Surveillance and genomic analysis of viral pathogens in shrimp
- ✓ Protein interaction study between shrimp and viral proteins

Dr. Siripong Thitamadee (siripong.thi@mahidol.ac.th)

- ✓ Testing for bacterial or viral pathogens as causative agents of Acute Hepatopancreatic Degeneration Syndrome (AHDS), a newly emerging shrimp disease, in Thailand
- ✓ Study of double-stranded RNA (dsRNA) translocation into circulatory system of the pacific white shrimp by oral feeding

Molecular Biotechnology (MB)

Dr. Arjaree Nilavongse (arjaree.nil@mahidol.ac.th)

- ✓ Studies on bioactive peptides with angiotensin I-converting enzyme (ACE) inhibitory activity
- ✓ Metagenomic library on functional enzyme screening (e.g. polysaccharide and lipid degrading enzyme)

Assoc. Prof. Chuenchit Boonchird (chuenchit.boo@mahidol.ac.th)

- ✓ Analysis of gene involved in stress tolerance of thermotolerant yeast
- ✓ Discovery of biologically active molecules using yeast based assay
- ✓ Development of recombinant vaccine by yeast

Asst. Prof. Idsada Mungsantisuk (idsada.mun@mahidol.ac.th)

- ✓ Animal cell culture for in vitro study of bioactive peptides from meat product

Prof. Skorn Mongkolsuk (skorn.mon@mahidol.ac.th)

- ✓ Bacterial physiology & molecular genetics of stress response

Asst. Prof. Sujinda Thanaphum (sujinda.tha@mahidol.ac.th)

- ✓ Molecular ecology of the insect pest populations and species complexity for area-wide control program
- ✓ Molecular biology of transposable elements from insect genomes toward understanding of field application on genetic transformation systems

Dr. Supareerk Borwornpinyo (supareerk.bor@mahidol.ac.th)

- ✓ Stem cells

Dr. Thipa Asvarak (thipa.asv@mahidol.ac.th)

- ✓ Screening and molecular analysis of endophytic fungi & their products against plant pathogens
- ✓ Production and molecular analysis of fungal enzymes

Prof. Watanalai Panbangred (watanalai.pan@mahidol.ac.th)

- ✓ Bacterial genetics
- ✓ Application of *Bacillus* in biological control and antagonism of insects and pathogens

Food Biotechnology (FB)

Assoc. Prof. Apinya Assavanig (apinya.ass@mahidol.ac.th)

- ✓ Improvement of Thai soy sauce production via the use of starter cultures
- ✓ Microbiology and safety of fermented food

Dr. Nuttawee Niamsiri (niamsiri@gmail.com)

- ✓ Production of polyhydroxyalkanoates (PHAs)
- ✓ Biopolymer-based antimicrobial food packaging
- ✓ Applications of PHAs in drug delivery & tissue engineering

Dr. Pairoj Luangpituksa (pairoj.lua@mahidol.ac.th)

- ✓ Food sanitation programs in the food industry
- ✓ 5S-KAIZEN & GMP system in food industry
- ✓ Health-enhancing functional substances and trends in development of value added functional food products

Assoc. Prof. Sittiwat Lertsiri (sittiwat.ler@mahidol.ac.th)

- ✓ Flavor improvement in fermented food
- ✓ Deterioration and shelf life prediction in fermented food
- ✓ Chemical safety in food