Napamanee Kornthong, Ph.D.

Position Associate professor (Anatomy), Chulabhorn International College of Medicine, Thammasat University

E-mail address napamaneenatt@gmail.com
napamaneekornthong@gmail.com
napanatt@tu.ac.th

Tel +66 2-5644440 ext.4434

Education

2002- 2005	B.Sc. (Nursing science, 2nd Honors), Ramathibodi school of nursing, Faculty of medicine Ramathibodi hospital, Mahidol University, Thailand
2007-2013	Ph.D. (Anatimy and Structural biology), Anatomy department, Faculty of science, Mahidol University, Thailand ทุนการศึกษา ระดับปริญญาเอก: ทุนพัฒนาอาจารย์ จาก สำนักงานคณะกรรมการการอุดมศึกษา (ประเทศไทย)
2011-2012	Genecology laboratory, School of Science, Technology and Engineering, University of the Sunshine Coast, Queensland, Australia

Current research

1. Product prototype of chitosan and chitosan oligosaccharides from crab shell waste for application of dietary supplements and disease prevention
2. Integration of Innovative Development for Healthy Agricultural Products for Export within the Context of the Green Economy: A Case Study of Marine and Coastal Community Networks in Thailand
3. Neuroprotective Potential of *Holothuria scabra*: Localization and Molecular Docking of Activin and Inhibin Genes to human receptors
4. Development of Product from Thai Agricultural Resources for Wellness Applications: Functional Date Palm Drink for Glycemic Control and Bioactive Skincare from Indigenous Seaweed and Wolffia
5. Neuroprotective Potential of Seaweed and *Wolffia* in an Alzheimer's Disease Model

6. Chemical Profiling of Thai and Chinese Medicinal Herbs and Development of Encapsulated Phytopharmaceutical Products

Research experiences

1. Anatomical organization of the central nervous system and gonadal structures in crustaceans.
2. Hormonal localization and distribution within the central nervous system and gonad of crustaceans.
3. Molecular cloning, characterization, and expression analysis of reproductive-related genes.
4. Transcriptomic analyses in crustaceans, echinoderms, and other disease models.
5. Applications of biotechnology in aquatic animals for research and industrial use.
6. Effects of sea cucumber extracts on osteoblast proliferation and differentiation.
7. Effects of chitosan and chitosan oligosaccharides on adipocyte differentiation and osteoblast development.
8. Neuroprotective potential of sea cucumber, seaweed, and *Wolffia* in Alzheimer's disease models.
9. Development of agricultural-based products for wellness applications, including dietary supplements and cosmeceuticals.
10. Phytochemical profiling and evaluation of antioxidant and anti-inflammatory activities of herbal and agricultural products.
11. Development of medical devices, including AI-assisted instrumentation for heart-sound analysis.

Research skills

RT-PCR, Real time PCR, Cloning, Gene expression, Histology, Immunohistochemistry, Cell culture, *In-situ* hybridization, Blast2go program and CLC workbench

International Journals

1. Nonkhwao S, Charoenrit J, Ratanamungklanon C, Sojikul L, Duangprom S, Songkoomkrong S, Saetan J, Nuemket N, Amonruttanapun P, Sobhon P, **Kornthong N**. (2025) Characterization and Expression of TGF-β Proteins and Receptor in Sea Cucumber (*Holothuria scabra*): Insights into Potential Applications via Molecular Docking Predictions. *International Journal of Molecular Sciences*. 26:6998. https://doi.org/10.3390/ijms26146998
2. Duangprom S, Nonkhwao S, Saetan J, Songkoomkrong S, Amonruttanapun P, Samhuay C, Boonobrom B, Tamtin M, Sobhon P, **Kornthong N**. (2025) Increasing reproductive capacity in female blue swimmer crabs using vitellogenesis-inhibiting hormone dsRNA, Aquaculture Reports, 42,102827, https://doi.org/10.1016/j.aqrep.2025.102827.
3. Muneerungsee N, Sukketsiri W, Tanasawet S, Duangprom S, Songkoomkrong S, Amonruttanapun P, **Kornthong N**, Saetan J. (2025) "Oxytocin/Vasopressin-Like Peptide in the Central Nervous System and

Ovaries of the Mud Crab *Scylla olivacea*," *Zoo Sci* 42, https://doi.org/10.2108/zs240079

4. Saetan U, **Kornthong N**, Duangprom S, Songkoomkrong S, Phanthong P, Sanprick A, Tipbunjong C, Tamtin M, Saetan J. (2025) The occurrence of luteinizing hormone-like molecule and its receptor in the blue swimming crab, *Portunus pelagicus*, *Comp Biochem Phys A* 299,111753,
5. Songkoomkrong S, Nonkhwao, Duangprom S, Saetan J, Manochantr S., Sobhon P, **Kornthong N**, Amonruttanapun P. (2024) Investigating the potential of an extract from the sea cucumber *Holothuria scabra* on preosteoblast MC3T3-E1 cells - a natural product with promising implications for protecting against osteoporosis. *Sci Rep* 14, 26415. https://doi.org/10.1038/s41598-024-77850-4
6. Saetan J, Duangprom S, Songkoomkrong S, Amonruttanapun P, Phanaksri T, Surinlert P, Samhuay C, Tamtin M, Suwansa-ard S.,Cummins S. F, Sobhon P, **Kornthong N**. (2023) Potent Ovarian Development as Being Stimulated by Cocktail Hormone in the Female *Scylla olivacea*. *Front. Mar. Sci*. 10:1286789. doi: 10.3389/fmars.2023.1286789
7. Nonkhwao S, Rungsa P, Buraphaka H, Klaynongsruang S, Daduang J, **Kornthong N**, Daduang S. (2023) Characterization and Localization of Sol g 2.1 Protein from *Solenopsis geminata* Fire Ant Venom in the Central Nervous System of Injected Crickets (*Acheta domestica*). *Int. J. Mol. Sci. 24*, 14814. https://doi.org/10.3390/ijms241914814
8. Kruangkum T, Duangprom S, Songkoomkrong S, Chotwiwatthanakun C, Vanichviriyakit R, Sobhon P and **Kornthong N**. (2022) Discovery of a hidden form of neuropeptide F and its presence throughout the CNS–gut axis in the mud crab, *Scylla olivacea*. *Front. Mar. Sci.* 9:951648. doi: 10.3389/fmars.2022.951648
9. Duangprom S, Saetan J, Phanaksri T, Songkoomkrong S, Surinlert P, Tamtin M, Sobhon P, **Kornthong N.** (2022) Acceleration of ovarian maturation in the female mud crab with RNA interference of the vitellogenesis-inhibiting hormone (VIH). *Front. Mar. Sci.* 9:880235. doi: 10.3389/fmars.2022.880235
10. **Kornthong N**, Phanaksri T, Saetan J, Duangprom S, Lekskul B, Vivattanasarn T, Songkoomkrong S, Jattujan P, Cummins S. F., Sobhon P, Suwansa-ard S. (2021). Identification and localization of growth factor genes in the sea cucumber*, Holothuria scabra. Heliyon* 7: e08370
11. Saetan J, Kornthong N, Duangprom S, Phanthong P., Kruangkum T, Sobhon P. The oxytocin/vasopressin-like peptide receptor mRNA in the central nervous system and ovary of the blue swimming crab, *Portunus pelagicus. Comp. Biochem. Phys. A 2021, 110983*
12. Thongbuakaew T, Sumpownon C, Engsusophon A, Kornthong N, Chotwiwatthanakun C, Meeratana P, Sobhon P. (2021) Characterization of prostanoid pathway and the control of its activity by the eyestalk optic ganglion in the female giant freshwater prawn, *Macrobrachium rosenbergii. Heliyon, e05898*
13. **Kornthong N**., Saengsuwan J., Duangprom S., Songkoomkrong S., Vivattanasarn T., Suwansa-ard S., Manochantr S., Sobhon P. (2020) The effect of sea cucumber extract (*Holothuria scabra)* on the proliferation of human placenta derived mesenchymal stromal cells. Journal of the Medical association of Thailand. 103, 3

14. Sukprasert S., Deenonpoe R., Yimsoo T., Yingmema W., Prasopdee S., Krajang A., **Kornthong N.,** Pattaraarchachai J., Daduang S. (2021) Antidote activity and protective effects of *Lysiphyllum strychnifolium* (Craib) A. Schmitz extract against organophosphate pesticide in omethoate-treated rats. Journal of Traditional and Complementary Medicine, 11: 189-196
15. Nakeima J., **Kornthong N**., Saetan J., Duangprom S., Sobhona P., Sretarugsaa P. (2020), Presence of serotonin and its receptor in the central nervous system and ovary and molecular cloning of the novel crab serotonin receptor of the blue swimming crab, *Portunus pelagicus*., Acta Histochemica., 122: 151457
16. **Kornthong N.**, Duangprom S., Suwansa-ard S., Saetan J., Phanaksri T., Songkoomkrong S., Kheowkae S., Pollawat J. and Sobhon P. (2019), Molecular characterization of a vitellogenesis-inhibiting hormone (VIH) in the mud crab (*Scylla olivacea*) and temporal changes in abundances of VIH mRNA transcripts during ovarian maturation and following neurotransmitter administration, Animal Reproduction Science 208:106122
17. Khornchatri K., Saeton J**,** Thongbuakaew T., Senarai T., Kruangkum T., **Kornthong N**., Tinikul Y., Sobhon P. (2018) Distribution of abalone egg-laying hormone-like peptide in the central nervous system and reproductive tract of male mud crab, *Scylla olivacea*. Acta Histochemica. 121: 143-150
18. Duangprom S., Ampansri W., Suwansa-ard S., Chotwiwatthanakhun C., Sobhon P., **Kornthong N.** (2018) Identification and expression of prostaglandin E syntahase (PGES) gene in the central nervous system and ovary during ovarian maturation of the female mud crab, *Scylla olivacea*. Animal Reproduction Science 198: 220-232
19. Duangprom S., **Kornthong N.**, Suwansa-ard S., Srikawnawan W., Chotwiwatthanakhun C., Sobhon P. (2017) Distribution of crustacean hyperglycemic hormones (CHH) in the mud crab (*Scylla olivacea*) and their differential expression following serotonin stimulation. Aquaculture 468: 481–488
20. Suwansa-ard S., Kankuan W., Thongbuakaew T., Saetan J., **Kornthong N**., Kruangkum T., Khornchatri K., Cummins S.F., Isidoro C. and Sobhon P. (2016) Transcriptomic analysis of the autophagy machinery in crustaceans. BMC genomics 17:587
21. Khornchatri K., **Kornthong N**., Saeton J., Tinikul Y., Chotwiwatthanakun C., Cummins S.F., Hanna P.J., Sobhon P. (2015) Distribution of serotonin and dopamine in the central nervous system of the female mud crab, *Scylla olivacea* (Herbst). Acta Histochemica 117: 196-204 (Impact factor 1.760)
22. **Kornthong N.**, Cummins S.F., Chotwiwatthanakun C., Khornchatri K., Engsusophon A., Sobhon P. (2014) Identification of genes associated with reproduction in the mud crab (*Scylla olivacea*) and their differential expression following Serotonin stimulation. Plos One, 9:e115867 (Impact factor 3.534)
23. **Kornthong N**, Tinikul Y, Khornchatri K, Saeton J, Magerd S, Suwansa_Ard S, Kruankum T, Hanna P, Sobhon P. (2014) Neuronal classification and distribution in the central nervous system of the female mud crab, *Scylla olivacea*. Microscopic Research Technique 77: 189-200.
24. **Kornthong N**, Chotwiwatthanakun C, Chansela P, Tinikul Y, Cummins SF, Hanna PJ, Sobhon P. (2013) Characterization of red pigment concentrating

hormone (RPCH) in the female mud crab (*Scylla olivacea*) and the effect of 5-HT on its expression. General and Comparative Endocrinology. 185.
25. Chansela P, Goto-Inoue N, Zaima N, Hayasaka T, Sroyraya M, **Kornthong N**, Engsusophon A, Tamtin M, Chaisri C, Sobhon P, Setou M. (2012) Composition and localization of lipids in Penaeus merguiensis ovaries during the ovarian maturation cycle as revealed by imaging mass spectrometry. PLoS One. 7:e33154.
26. Tinikul Y, Poljaroen J, **Kornthong N**, Chotwiwatthanakun C, Anuracpreeda P, Poomtong T, Hanna PJ, Sobhon P. (2011) Distribution and changes of serotonin and dopamine levels in the central nervous system and ovary of the Pacific white shrimp, *Litopenaeus vannamei*, during ovarian maturation cycle. Cell and Tissue Research. 345:103-24.
27. Tinikul Y, Poljaroen J, Nuurai P, Anuracpreeda P, Chotwiwatthanakun C, Phoungpetchara I, **Kornthong N**, Poomtong T, Hanna PJ, Sobhon P. (2011) Existence and distribution of gonadotropin-releasing hormone-like peptides in the central nervous system and ovary of the Pacific white shrimp, *Litopenaeus vannamei*. Cell and Tissue Research 343: 579-593
28. Sroyraya M, Chotwiwatthanakun C, Stewart MJ, Soonklang N, **Kornthong N**, Phoungpetchara I, Hanna PJ, Sobhon P. (2010) Bilateral eyestalk ablation of the blue swimmer crab, *Portunus pelagicus*, produces hypertrophy of the androgenic gland and an increase of cells producing insulin-like androgenic gland hormone. Tissue and Cell 42: 293-300

Award

- Outstanding young researcher award, Thammsat university, 2015
- Best oral presentation award in 2018 5th International conference on Biomedical and Bioinformatics engineering (ICBBE2018), at Okinawa Institute of Science and technology Graduate University, japan
- Outstanding young researcher award (First runner up), Chulabhorn International College of Medicine, Thammsat university, 2019
- รางวัลบุคลากรที่ได้สร้างชื่อเสียงให้แก่มหาวิทยาลัย ของ ม.ธรรมศาสตร์ ประจำปี 2562

Funding

1. The Commission on Higher Education (CHE) Scholarship 2007-2011 to Napamanee Kornthong.
2. TU Research scholar 2015 Thammasat University to Napamanee Kornthong
3. CICM research scholar 2015, Chulabhorn Interantional college of medicine, Thammasat university to Napamanee Kornthong
4. TU Research scholar 2017, Thammasat University to Napamanee Kornthong
5. The Thailand Research Fund 2018-2019 to Napamanee Kornthong
6. CICM research scholar 2018, 2019, 2021 Chulabhorn Interantional college of medicine, Thammasat university to Napamanee Kornthong and Colleagues
7. National research council of Thailand 2019 to Napamanee Kornthong and Colleagues
8. Thai Science Research and Innovation Fundamental Fund 2020-2025 to Napamanee Kornthong

9. CICM research scholar 2024, Chulabhorn Interantional college of medicine, Thammasat university to Napamanee Kornthong
10. POC (Proof of Concept) : TED Youth Startup 2024
11. POC (Proof of Concept) : TED Youth Startup 2025

Innovation awards

World Invention Creativity Olympic & Conference2025, Seoul, Korea

Gold medal

1. *Crusta Cap*: A new-generation supplement powered by short-chain chitosan, designed to block fat absorption
2. *Ovaboost-C*: Improving Reproductive Performance in Crabs through Chitosan-Supplemented Diets
3. *Siam Spark* - Craft Cola from Thailand mixed with Thai fruit (Lychee and Date)

Silver medal

1. *Greenscentia*: Serum from Sea Grape Extract for Skin Restoration from Airborne Pollution, Made with Advanced Technology
2. *Healing from the Ocean*: Bioactive Compounds from Sea Cucumber for Cellular Rejuvenation
3. *BLOOMMA*: Pre-meal functional jelly from Thai superfood (wolffia) to reduce glucose spikes and support weight control
4. *SnifFix*: A limonene-linalool balm formulated from lemon peel (*Citrus limon*) and Thai basil (*Ocimum basilicum*), designed to support individuals in quitting cigarette smoking or managing mood
5. *NEPPY*: Organic Repellents for Infants and Kids made from Catnip, DHF Protection