

## **Apinunt Udomkit**

Professor

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### **RESEARCH INTEREST**

Molecular mechanism of shrimp reproduction, Application of RNAi technology for viral control in shrimp

### **EDUCATION**

1996	Ph.D. (Molecular Biology)	University of Edinburgh, UK
1991	M.Sc. (Biochemistry)	Mahidol University, Thailand
1986	B.Sc. (Biochemistry)	Chulalongkorn University, Thailand

### **APPOINTMENT**

Acting Head of Molecular Medical Biosciences Cluster, Institute of Molecular Biosciences, Mahidol University (2021 – 15 June 2022)

Deputy Director for Academic Affairs, Institute of Molecular Biosciences, Mahidol University (2020 - present)

Deputy Director for Academic Affairs and Program Development, Institute of Molecular Biosciences, Mahidol University (2016 - 2020)

### **AWARDS**

2020 Thailand Invention Award, National Research Council of Thailand  
2015 Outstanding Research Award, National Research Council of Thailand  
2014 Mahidol University Award (Research)

### **PUBLICATIONS (last 5 years)**

Wirasit I, Udomkit A, Sathapondecha P. 2024. Long noncoding RNA profiling in hepatopancreas of Pacific white shrimp and its role in response to white spot syndrome virus infection. *Fish & Shellfish Immunol.* 145; 109317. (<https://doi.org/10.1016/j.fsi.2023.109317>)  
Kluebsoongnoen J, Saensuwanna A, Jozghorban M, Ho T, Szolajska E, Sarnowski T, Udomkit A. 2023. A possible role of the ecdysone receptor in modulating the gonad-inhibiting

- hormone gene expression in the black tiger prawn, *Penaeus monodon*. *Aquaculture*. 569: 739393. (<https://doi.org/10.1016/j.aquaculture.2023.739393>)
- Rugsanit P, Attasart P, Udomkit A, Tirasophon W. 2021. Characterization of X- box binding protein 1(XBP1) and BiP functions and investigation their roles in YHV replication in *P. monodon*. *CMU J Nat Sci* 20(4): e2021090.
- Kluebsongnoen J, Panyim S, Sarnowski TJ, Udomkit A. Retinoid X receptor modulates vitellogenin gene expression in black tiger shrimp, *Penaeus monodon*. *Comp Biochem Physiol Part A Mol Integr Physiol*. 2021;254:110877.
- Ho T, Panyim S, Udomkit A. Assessment of the function of gonad-specific PmAgo4 in viral replication and spermatogenesis in *Penaeus monodon*. *Dev Comp Immunol*. 2021;114:103824.
- Sukthaworn S, Panyim S, Udomkit A. Homologues of Piwi control transposable elements and development of male germline in *Penaeus monodon*. *Comp Biochem Physiol Part A Mol Integr Physiol*. 2020;250:110807.
- Sanitt P, Panyim S, Udomkit A. An ATP synthase beta subunit is required for internalization of dsRNA into shrimp cells. *Fish Shellfish Immunol*. 2020;106:948-58.
- Swiatek M, Jancewicz I, Kluebsongnoen J, Zub R, Maassen A, Kubala S, Udomkit A, Siedlecki JA, Sarnowski TJ, Sarnowska E. Various forms of HIF-1 $\alpha$  protein characterize the clear cell renal cell carcinoma cell lines. *IUBMB Life*. 2020;72 (6):1220-32.
- Kluebsongnoen J, Panyim S, Udomkit A. Regulation of vitellogenin gene expression under the negative modulator, gonad-inhibiting hormone in *Penaeus monodon*. *Comp Biochem Physiol Part A Mol Integr Physiol*. 2020;243:110682.
- Sukthaworn S, Panyim S, Udomkit A. Functional characterization of a cDNA encoding Piwi protein in *Penaeus monodon* and its potential roles in controlling transposon expression and spermatogenesis. *Comp Biochem Physiol-A*. 2019;229:60-8.
- Ho T, Panyim S, Udomkit A. Suppression of Argonautes compromises viral infection in *Penaeus monodon*. *Dev Comp Immunol*. 2019;90:130–7.

#### **INTELLECTUAL PROPERTY**

**Petty patent** “Composition for stimulating spawning in shrimp” (Granted March 12, 2024)

**Patent** “Biomolecules for spawning induction in the black tiger shrimp” (Granted June 28, 2021)