

Name: Wunrada Surat
Position: Lecturer
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Education background:

B.S. in General Science (1st Honor) at Kasetsart University, Thailand, 1995-1999
M.S. in Cell and Molecular Biology at Kasetsart University, Thailand, 1999-2003
Ph.D. in Biology at Mahidol University, Thailand, 2003-2008

Courses taught:

Laboratory in Genetics
Genetic Engineering
Human Genetics
Intensive Genetics
Plant Molecular Genetics

Research interests:

1. Ancient DNA analysis; emphasis on phylogenetic relationship, diversity and origin of mammal species.
2. Phytoremediation; emphasis on relationship between endophytes and plants for clean up heavy-metal contaminated areas
3. Dengue virus; emphasis on detection of serotype and genotype of dengue virus in field-caught mosquitoes in endemic areas of Thailand

Publications:

1. **Surach, W.**, M. Mingmuang, and A. Thongpan. 2006. Effects of Na⁺, K⁺ and Ca²⁺ accumulation on the expression of Ca²⁺-ATPase gene in Rice KDML 105. *Kasetsart Journal (Nat. Sci.)* 40: 99-106.
2. **Surat, W.**, Kruatrachue, M., Pokethitiyook, P., Tanhan, P., and Samranwanich, T. 2008. Potential of *Sonchus arvensis* for phytoremediation of lead-contaminated soil. *International Journal of Phytoremediation*. 10(4): 325-342.

International Conference:

Surat, W., Goldsbrough, P.B., and Kruatrachue, M. Analysis of lead hyperaccumulation in *Sonchus arvensis* from a lead mine in Thailand. Annual Meeting of the American Society of Plant Biologists and the Canadian Society of Plant Physiologists, Boston, Massachusetts USA, August 5-9, 2006.

Surat, W., Wannajuk M, Sangthong, P, Natapintu, S., Kubera, A. and Mingmuang, M. Molecular genetic analysis of ancient pig remains excavated from Pong Takhop archaeological site in Saraburi Province, Thailand. Society for Molecular Biology and Evolution (SMBE), Dublin, Ireland, June 23-26, 2012.

Proceedings

Wannajuk, M, Surat, W. *, Sangthong, P., Natapintu, S., Kubera, A and Mingmuang, M. MOLECULAR GENETIC ANALYSIS OF THAI ANCIENT PIG (*Sus scrofa*)

USING PARTIAL MITOCHONDRIAL DNA D-LOOP SEQUENCES. 37th Congress on Science and Technology of Thailand, Bangkok, Thailand, October 10-13, 2011.

Present research:

- 1) Study of relationship, migration and human settlement by determination and analysis of mitochondrial DNA from ancient bone in prehistoric period at Ban-Pong-Ma-Now, Lopburi province, Thailand
- 2) Endophytic bacterial diversity in hyperaccumulator plants
- 3) Prevalence of dengue virus in field-caught mosquitoes in endemic areas of Thailand
- 4) Isolation and identification of bacteria in midgut of malaria vectors in Thailand