



Suwanna Chaorattanakawee

65 Soi Ladplakhao33 Ladplakhao Road Ladpraw Bangkok 10230

662-570-7113, 66-84-657-6465 - suwann67@yahoo.com

Education

2008 : Ph.D. (Tropical Medicine), Mahidol University, Major in Microbiology and Immunology, GPA 3.97

2000 : B.Sc. (Medical Technology), Mahidol University, GPA 3.33

Work Experiences

Lecturer

2016-present

Mahidol University

Department of Parasitology and Entomology, Faculty of Public Health

- Gave lectures to undergraduate and postgraduate students in Parasitology, Entomology, and Molecular biology.
- Taught the laboratory techniques in Parasitology and Entomology.
- Managed the lectured courses and laboratory courses.
- Developed a research proposal for funding, designed study, collected, analyzed, interpreted, and reported results, as well as prepared a manuscript for publication.

Medical Research Scientist

2011-2015

Armed Force Research Institute of Medical Sciences

Department of Immunology&Medicine

- Collect, analyze, execute, interpret, and summarize data from clinical studies and resistance surveillance of anti-malarial drugs.
- Supervise research activities and personnel for 4 staff in the malaria culture laboratory.
- Prepare 9 manuscripts for publication and present 5 posters at international conferences.
- Prepare research proposals for funding from several sources.
- Develop and maintain extensive contacts among local and international malaria research community, provide consultations as requested.

Lecturer

2009-2011

Thammasat University

Department of Medical Technology, Faculty of Allied Health Sciences

- Gave lectures to undergraduate and postgraduate students in Hematology, Cell biology, Molecular biology, Biochemistry.
- Taught the laboratory techniques in medical technology.
- Managed the lectured courses and laboratory courses.
- Developed a research proposal for funding, designed study, collected, analyzed, interpreted, and reported results, as well as prepared a manuscript for publication.

Medical technologist(part time)

2006-2008

Department of Pathology, Rajvithi Hospital

- Conducted venipunctures at Outpatient Department

Training

2016 : Wellcome Trust Advanced Course: Human and Vertebrate Genomics, Mahidol-Oxford Research Unit, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand

2015 : Wellcome Trust Advanced Course: Malaria Experimental Genetics, Mahidol-Oxford Research Unit, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand

2014 : Artemisinin Resistance Monitoring Tools Workshop, Pasture Institute, Cambodia

2011 : Wellcome Trust Advanced Course, Genomic Epidemiology of Malaria, Mahidol-Oxford Research Unit, Faculty of Tropical Medicine, Mahidol University, Bangkok, Thailand

2006: Training course in Bioinformatics at Genetic & Genomic SNPs Level, Mahidol University, Bangkok, Thailand

2003 : 2nd Regional Training Course on Bioinformatics Applied to Tropical Diseases in Southeast Asia, arranged by WHO, at Mahidol University, Bangkok, Thailand

2003 : Research assistant at Unit of Biology of Host-Parasite Interactions, Pasteur Institut, Paris, France

1998 : Laboratory assistant in The National Doping Control Centre(NDCC) during the 13th Asian Games, Thailand

Awards and Scholarship

1. American Society for Tropical Medicine (ASTMH) Travel Award 2014
2. French Government's Contribution to The Royal Golden Jubilee Projects, 2002
3. Royal Golden Jubilee Program (RGJ) from Thailand Research Fund (TRF), 2000
4. Kun Ying Tranakchi Harinnasutta Award for the Most Outstanding Student of the Doctor of Philosophy in Tropical Medicine Class 2000

Related skills

- Proficient in statistical programs including SPSS, STATA, and GraphPad.
- Proficient in bioinformatics programs including BIOEDIT, HAPLOVIEW, MEGA, ALERQUINE, SEAVIEW, and FIGTREE.
- Develop Computer Assisted Instruction (CAI) to simulate coagulation and hemostasis mechanism and demonstrate related laboratory testing.

Publication

1. **Chaorattanakawee S**, Lon C, Jongsakul K, Gawee J, Sok S, Sundrakes S, Kong N, Thamnurak C, Chann S, Chattrakarn S, Praditpol C, Buathong N, Uthaimongkol N, Smith P, Sirisopana N, Huy R, Prom S, Fukuda MM, Bethell D, Walsh DS, Lanteri C, Saunders D. Ex vivo piperazine resistance developed rapidly in *Plasmodium falciparum* isolates in northern Cambodia compared to Thailand. *Malar J.* 2016, 15: 519
2. Spring MD, Pichyangkul S, Lon C, Gosi P, Yongvanichit K, Srichairatanakul U, Limsalakpeth A, Chaisatit C, Chann S, Sriwichai S, Auayapon M, **Chaorattanakawee S**, Dutta S, Prom S, Meng Chour C, Walsh DS, Angov E, Saunders DL. Antibody profiles to plasmodium merozoite surface protein-1 in Cambodian adults during an active surveillance cohort with nested treatment study. *Malar J.* 2016, 15: 17.
3. Saunders DL, **Chaorattanakawee S**, Gosi P, Lanteri C, Somethy S, Kuntawunginn W, et al. Atovaquone-proguanil remains a potential stopgap therapy for multidrug-resistant *Plasmodium falciparum* in areas along the Thai-Cambodian border. *Antimicrob Agents Chemother.* 2016, 60:1896–1898.
4. **Chaorattanakawee S**, Charlotte AL, Sundrakes S, Yingyuen K, Gosi P, Chanarat N, et al. Attenuation of *P. falciparum* in vitro drug resistance phenotype following culture adaptation compared to fresh clinical isolates in Cambodia. *Malar J.* 2015, 14: 486
5. **Chaorattanakawee S**, David LS, Sea D, Chanarat N, Yingyuen K, Sundrakes S, et al. Ex vivo drug susceptibility and *Plasmodium falciparum* multidrug resistance gene 1 (*pfmdr1*) profiling of clinical isolates from Cambodia in 2008-2013 suggest emerging piperazine resistance. *Antimicrob Agents Chemother.* 2015, 59:4631-4643.
6. Spring MD, Lin JT, Manning JE, Vanachayangkul P, Somethy S, Bun R, Se Y, Chann S, Ittiverakul M, Sia-ngam P, Kuntawunginn W, Arsanok M, Buathong N, **Chaorattanakawee S**, Gosi P, Ta-aksorn W, Chanarat N, Sundrakes S, Kong N, Heng TK, Nou S, Teja-isavadharm P, Pichyangkul S, Phann ST, Balasubramanian S, Juliano JJ, Meshnick SR,

Chour CM, Prom S, Lanteri CA, Lon C, Saunders DL. Dihydroartemisinin-piperaquine failure in Cambodia associated with a 'triple mutant' including kelch-13 C580Y in an observational cohort study. *Lancet Infect Dis*. 2015, Jun; 15(6): 683-91.

7. Lanteri CA, **Chaorattanakawee S**, Lon C, Saunders DL, Rutvisuttinunt W, Yingyuen K, et al. Ex vivo activity of endoperoxide antimalarials, including artemisone and arterolane, against multidrug resistant *Plasmodium falciparum* isolates from Cambodia. *Antimicrob Agents Chemother*. 2014. Jul 21. pii: AAC.02462-14.
8. Lon C, Manning JE, Vanachayangkul P, So M, Sea D, Se Y, Gosi P, Lanteri C, **Chaorattanakawee S**, Sriwichai S, Chann S, Kuntawunginn W, Buathong N, Nou S, Walsh DS, Tyner SD, Juliano JJ, Lin J, Spring M, Bethell D, Kaewkungwal J, Tang D, Chuor CM, Satharath P, Saunders D. Efficacy of two versus three-day regimens of dihydroartemisinin-piperaquine for uncomplicated malaria in military personnel in northern Cambodia: an open-label randomized trial. *PLoS One*. 2014, 25; 9(3): e93138.
9. **Chaorattanakawee S**, Stuart DT, Lon C, Yingyuen K, Rutvisuttinunt W, Sundrakes S, et al. Direct comparison of the Histidine-Rich Protein-2 Enzyme-Linked Immunosorbent Assay (HRP-2 ELISA) and Malaria SYBR Green I Fluorescence (MSF) drug sensitivity tests in *Plasmodium falciparum* reference clones and fresh ex vivo field isolates from Cambodia. *Malar J*. 2012, 12: 239.
10. Rutvisuttinunt W, **Chaorattanakawee S**, Stuart DT, Teja-isavadharm P, Se Y, Yingyuen K, et al. Optimizing the HRP-2 *in vitro* malaria drug susceptibility assay using a reference clone to improve comparisons of *Plasmodium falciparum* field isolates. *Malar J*. 2012, 11: 325.
11. Tyner SD, Lon C, Se Y, Bethell D, Socheat D, Noedl H, Sea D, Satimai W, Schaecher K, Rutvisuttinunt W, Fukuda MM, **Chaorattanakawee S**, Yingyuen K, Sundrakes S, Chaichana P, Saingam P, Buathong N, Sriwichai S, Chann S, Timmermans A, Saunders DL, Walsh DS. *Ex vivo* drug sensitivity profiles of *Plasmodium falciparum* field isolates from Cambodia and Thailand, 2005 to 2010, determined by a histidine rich protein-2 assay. *Malar J*. 2012, 11:198.

Presentation:

1. Clinically significant *ex vivo* PPQ resistance in Cambodia in 2014-2015. The 64th Annual American Society for Tropical Medicine (ASTMH) conference in Philadelphia, PA. 25-29 OCT 2015

2. Emerging piperaquine resistance and rising mefloquine susceptibility linked to *Plasmodium falciparum* multidrug resistance gene 1 (*pfmdr1*) genotypes in isolates collected from Cambodia in 2008-2013. The 63rd Annual American Society for Tropical Medicine (ASTMH) conference in New Orleans, LA. 2-9 NOV 2014
3. *Ex vivo* drug susceptibility and molecular marker profiling to characterize drug resistance in *Plasmodium vivax* isolates from Cambodia. The 63rd Annual American Society for Tropical Medicine (ASTMH) conference in New Orleans, LA. 2-9 NOV 2014
4. *Pfmdr1* amplification and Y184F mutation are associated with declining drug susceptibilities in fresh *ex vivo* isolates of *Plasmodium falciparum* from Cambodia in 2009 to 2012. The 61st Annual American Society for Tropical Medicine (ASTMH) conference in Atlanta, GA. 11-15 NOV 2012
5. Comparison of SYBR Green I Fluorescence Assay with Histidine-Rich Protein 2 Enzyme-Linked Immunosorbent Assay for *in vitro* *Plasmodium falciparum* drug susceptibility testing. The 60th Annual American Society for Tropical Medicine (ASTMH) conference in Philadelphia, PA. 4 – 8 DEC 2011
6. Association of *Plasmodium falciparum* *clag9* (Cytoadherence-Linked Asexual Gene 9) with severe malaria in Thailand. Infectious Diseases: From Basic to Translational Research, Cape Town, South Africa, 2009
7. Linkage Disequilibrium (LD) structure of *clag9* gene of *P. falciparum* in Thai population. The First Scientific Meeting in Allied Health Sciences at Thammasat University, Thailand, 2008

Research interested

1. *In vitro* and molecular surveillance of malaria drugs susceptibility in multi-drug resistance areas.
2. Molecular epidemiology of malaria infection in relation to drug resistance, disease severity, vaccine development, and malaria elimination.
3. Human host and parasite genetic susceptibility to malaria and dengue infection and disease severity.