Curriculum Vitae

Name Asst. Prof. Dr. Rossarin Karnpean, Ph.D

Position Assistant professor

Office address Department of Pathology, Faculty of Medicine, Srinakharinwirot University 6 2 M. 7 Rangsit-Nakhon Nayok Road Ongkharak district Nakhon Nayok 26120

Tel +66 37-395085-6 ext. 10355-10357

E-mail rossarink@g.swu.ac.th

Education

2006	B.Sc., Medical Technology (First class hour), Faculty of Associated Medical Sciences, Khon Kaen University
2009	M.Sc., Medical Sciences, Faculty of Associated Medical Sciences, Khon Kaen University
2013	Ph.D., Biomedical Sciences, Graduate School, Khon Kaen University

Position

2013-2021	Instructor, College of Medicine and Public Health, Ubon Ratchathani University
2021-present	Instructor, Department of Pathology, Faculty of Medicine, Srinakharinwirot University

Awards

2012	a Berend Houwen Travel Awards, International Society for Laboratory Hematology (Title: Fetal red blood cells parameters in thalassemia and Hb E related disorders): The XXV international Symposium on Technical Innovations in Laboratory Hematology, International Society for Laboratory Hematology, Acropolis, Nice, France, May 21-24, 2012.
2019	Student/trainee scholarship (Title: APO B VNTR in Thais and application in prenatal diagnosis of severe thalassemia/ and Title: Prevalence Hb E in Laos and Khmers ethnic groups residing in the lower northeastern Thailand): Indian Ocean Rim Laboratory Haematology Congress 2019, Fremantle, Western Australia, 16-18 October 2019

2020 Honorable Researcher Award, College of Medicine and Public Health, Ubon Ratchathani University

2023 Global Investigator Award (Title: Development of multi plex PCR method for simultaneous detection of Hb Bart's hydrops fetalis, Hb H-Constant Spring, and homozygous Hb Constant Spring); LMCE 2023 (Laboratory Medicine Congress & Exhibition) & KSLM 64th Annual Meeting Suwon, Korea, October 18-20, 2023.

Areas of Research Interest

Red blood cell disorders (especially thalassemia), molecular diagnosis, clinical laboratories

Publications (present-past)

International publications

1. **Karnpean R**, Narkwichean, Laosooksathit W, Panichchob P, Jomoui W. Direct cord blood LAMP colorimetric phenol red assay for detecting α^0-thalassemia (SEA deletion); the validation and post-natal screening in Thailand. Scand J Clin Lab Invest 2023; 83(7):495-500.
2. **Karnpean R**, Vanichakulthada N, Suwannaloet W, Thongrung R, Singsanan S, Prakobkaew N, et al. Anemia, iron deficiency, and thalassemia among the Thai population inhabiting at the Thailand-Lao PDR-Cambodia triangle. **Sci Rep** 2022; 12(1):18643.
3. **Karnpean R**, Tepakhan W, Suankul P, Thingphom S, Poonsawat A, Thanunchaikunlanun N, et al. Genetic Background Studies of Eight Common Beta Thalassemia Mutations in Thailand Using β-Globin Gene Haplotype and Phylogenetic Analysis. **Genes** 2022; 13, 1384.
4. Singsanan S, Yamsri S, Pangjit K, Saenwang P, **Karnpean R**, Fucharoen S. Five VNTR loci (D17S5, APO B, TPO intron 10, IL-1α intron 6, and CIAS1) in Thais and application in the prenatal diagnostic laboratory. **Genet Test Mol Biomarkers** 2022; 26(6): 324-330.
5. Bunthupanich R, **Karnpean R**, Pinyachat A, Jiambunsri N, Prakopkaew N, Pakdee N, Fucharoen S. Micromapping of thalassemia and hemoglobinopathies among Laos,

Khmer, Suay and Yer ethnic groups residing in the lower northeastern Thailand. **Hemoglobin** 2020; 44(3): 162-167.

6. Singha K, **Karnpean R**, Fucharoen G, Fucharoen S. Dominant β-thalassaemia with unusually high Hb A 2 and Hb F caused by β CD121(-G) (HBB:c.364delG) in exon 3 of β-globin gene. **J Clin Patho** 2020; 73(8): 511-513.
7. Jomoui W, Tepakhan W, **Karnpean R**. Strong Linkage of the Single Nucleotide Polymorphism rs77308790 with an α^0-Thalassemia (−−SEA deletion) Allele and Application for Double-Check Diagnosis of Hb Bart's Hydrops Fetalis Syndrome in Thailand. **Hemoglobin** 2019; 43(4-5): 236-240.
8. Charoenwijitkul T, Singha K, Fucharoen G, Sanchaisuriya K, Thepphitak P, Wintachai P, **Karnpean R**, Fucharoen S. Molecular characteristics of α^+-thalassemia (3.7 kb deletion) in Southeast Asia: Molecular subtypes, haplotypic heterogeneity, multiple founder effects and laboratory diagnostics. **Clin Biochem** 2019; 71: 31-37.
9. Jomoui W, Wongprachum K, **Karnpean R.** Non-invasive Prenatal Testing for Hemoglobin Bart's Hydrops Fetalis Syndrome (SEA Deletion) Using Cell-Free Fetal DNA in Maternal Plasma: Systematic Review and Meta-analysis. **Int J Hum Genet** 2018; 18: 292-300.

10. **Karnpean R.** Fetal Blood Sampling in Prenatal Diagnosis of Thalassemia at Late Pregnancy. **J Med Assoc Thai** 2014 (Suppl. 4): s49-s55.
11. Chaibunruang A, **Karnpean R**, Fucharoen G, Fuchareon S. Genetic heterogeneity of hemoglobin AEBart's disease: A large cohort data from a single referral center in northeast Thailand. **Blood Cells Mol Dis** 2014; 52: 176-180.
12. **Karnpean R**, Fucharoen G, Fuchareon S, Ratanasiri T. Fetal red blood cell parameters in thalassemia and hemoglobinopathies. **Fetal Diag Ther** 2013; 34: 166-171.
13. **Karnpean R**, Pansuwan A, Fucharoen G, Fuchareon S. A proficiency testing program of hemoglobin analysis in prevention and control of thalassemia in Thailand. **Clin Chem Lab Med** 2013; 51: 1265-1271.
14. **Karnpean R**, Pansuwan A, Fucharoen G, Fucharoen S. Evaluation of the URIT-2900 Automated Hematology Analyzer for screening of thalassemia and hemoglobinopathies in Southeast Asian populations. **Clin Biochem** 2011; 44: 889-893.

15. Singsanan S, **Karnpean R**, Fucharoen G, Sanchaisuriya K, Sae-ung N, Fucharoen S. Hemoglobin Q-Thailand related disorders: Origin, molecular, hematological and diagnostic aspects. **Blood Cells Mol Dis** 2010; 45:210-214.
16. **Karnpean R**, Fucharoen G, Fucharoen S, Sae-ung N, Sanchaisuriya K, Ratanasiri T. Accurate prenatal diagnosis of Hb Bart's hydrops fetalis in daily practice with a double check PCR system. **Acta Haematol** 2009; 121: 227-233.

National publications

1. Bunthupanich R, **Karnpean R**, Pinyachat A, Jiambunsri N, Prakopkaew N, Pakdee N. Anemia and thalassemia in Kui (Suay) elderly living in Sisaket province located at the lower Northeastern Thailand. **Arch AHS** 2020; 32 (3): 32-38.
2. Pispong C, Klamchuen S, Sawatnatee S, Pangjit K, Suwannalert W, Saenwang P, **Karnpean R.** Complement C3 level and expression of CD55 and CD59 on red blood cells of variable clinical severity Hb H disease. **J Med Tech Phy Ther** 2019; 31 (2): 93-104. (In Thai)

3. **Karnpean R**, Obchoei S, Fucharoen G, Changtrakul Y, Changtrakul D Kitchareon S, et al. Relationship of α- thalassemia genotypes with Hb Bart's and Hb H levels determined by automated hemoglobin analyzer in Hb H disease. **J Med Tech Phy Ther** 2006; 18:17-23. (In Thai)