Research Specialty

Associate Professor

Nuntaree Chaichanawongsaroj Ph.D

Transfusion Medicine and Clinical Microbiology

Presonal info :

Email :
nuntaree@gmail.com

Tel : 02-218-1549

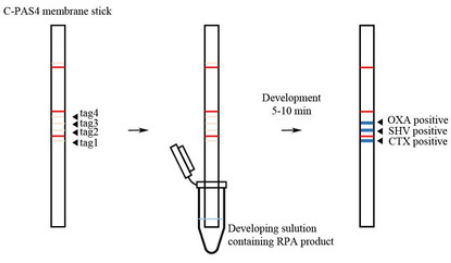
Research areas :

- Helicobacter pylori
- Extracellular vesicles
- Medicinal plants
- Antimicrobial resistance
- Lateral flow assay

Research highlight

Helicobacter pylori is of considerable concern as a gastric pathogen, being one of the factors associated with peptic ulcers and various types of gastric cancer. However, the treatment failure arise from an increasing of antibiotic resistance leading to the alternative approaches such as medicinal plants, synthetic drugs, nano-medicine and vaccine development. Several Thai medicinal plants and fruits have been studied by our group for their anti-H. pylori, anti inflammatory and anti-cancer activities. Plant-derived extracellular vesicles (EVs) are a promising candidate for nanomedicine delivery. We have characterized Kaempferia parviflora extracellular vesicles (KPEVs) and used as a drug vehicle for H. pylori treatments.

The other research interest is aimed to develop a rapid innovative diagnostic tools for antimicrobial resistance (AMR) detection. Due to the rising level of antimicrobial resistance (AMR) worldwide has a significant impact on humans, animals, and the environment. Extended spectrum β-lactamase (ESBL)-producing Enterobacteriaceae especially Escherichia coli have been categorized by the World Health Organization (WHO) as being the most critical AMR pathogen to human health and a major public health concern. The isothermal amplification techniques including recombinase polymerase amplification (RPA) or Loop-mediated isothermal amplification (LAMP) combined with lateral flow assay are our expertise which facilitate simple, rapid and equipment-free of AMR detection and could be applied in point of care and field testing. Our research area will be benefit in AMR diagnosis, treatment, and epidemiological control.



Research partnerships :

大阪大学
OSAKA UNIVERSITY

NIID
NATIONAL INSTITUTE OF INFECTIOUS DISEASES

Selected publications :

Characterizing Kaempferia parviflora extracellular vesicles, a nanomedicine candidate. PLoS One. 2022 Jan25;17(1):e0262884.

Rapid characterization of feline leukemia virus infective stages by a novel nested recombinase polymerase amplification (RPA) and reverse transcriptase-RPA. Sci Rep. 2021 Nov 11;11(1):22023.

Rapid detection of extended spectrum β-lactamase producing Escherichia coli isolated from fresh pork meat and pig cecum samples using multiplex recombinase polymerase amplification and lateral flow strip analysis. PLoS One. 2021 Mar 15;16(3):e0248536.

Ethyl acetate extract of Kaempferia parviflora inhibits Helicobacter pylori-associated mammalian cell inflammation by regulating proinflammatory cytokine expression and leukocyte chemotaxis. BMC Complement Med Ther. 2020 Apr 22;20(1):124.