

# The 6<sup>th</sup> Joint Conference Ramathibodi - Osaka University

~ Cutting Edge Innovation on COVID-19 and Beyond ~

29<sup>th</sup> - 30<sup>th</sup> November 2021

## Abstract Sheet

<b>Lecture Title</b>	Detection of COVID-19 by using 8-sensors Electronic Nose
<b>First Name/Last Name</b>	Dr. Boonsam Roongpuvapaht, M.D.

### Abstract [English]

**Background:** The current gold standard for diagnosis SAR-CoV2 is polymerase chain reaction (PCR) technologies. However, the limitation of this test is timing, as it requires a professional laboratory and trained personnel to collect the specimen. Moreover, the procedure to collect specimens from nasopharyngeal or oropharyngeal swabs can cause discomfort and pain to patients. The volatile organic compounds (VOCs) in the lab-made electronic nose (E-NOSE) have recently been developed and studied in many countries to detect SAR-CoV2 but have not been yet studied in Thailand.

**Objectives:** This study aims to evaluate the sensitivity and specificity of E-NOSE compared to the RT-PCR test to determine the applicability of lab-made E-NOSE as a screening tool for COVID-19 infection and, to study VOCs breath pattern in COVID-19 subjects and non-COVID-19 subjects by using an E-NOSE.