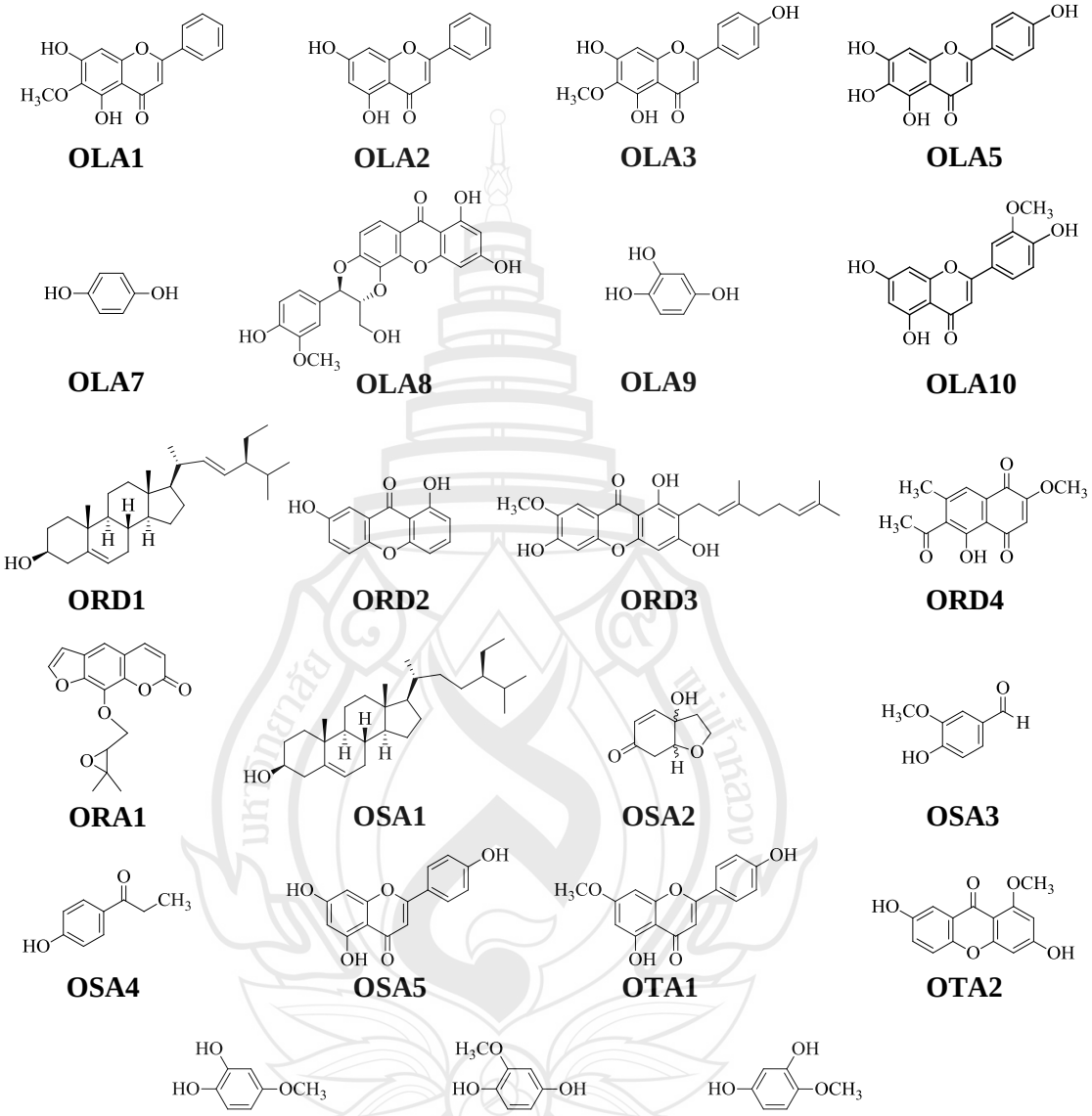
Thesis Title	Chemical Constituents of *Oroxylum indicum* (L.) Vent., Antibacterial and Antioxidation Properties
Author	Kulsiri Yossathera
Degree	Master of Science (Applied Chemistry)
Advisor	Dr. Suwanna Deachathai
Co-Advisor	Asst. Prof. Dr. Siripat Suteerapataranon
	Asst. Prof. Dr. Sarin Sriprang

ABSTRACT

The studies of chemical constituents from leaves, roots, stems, and twigs of *Oroxylum indicum* (L.) Vent. using chromatographic seperation led to twenty one compounds; **OLA1** (oroxylin A), **OLA2** (chrysin), **OLA3** (hispidulin), **OLA5** (scutellarein), **OLA7** (hydroquinone), **OLA8** (5'-demethoxycadensin G), **OLA9** (hydroxyquinol), **OLA10** (chrysoeriol), **ORD1** (stigmasterol), **ORD2** (euxanthone), **ORD3** (cowaxanthone), **ORD4** (orientalone), **ORA1** (heraclenin), **OSA1** (*β*-sitosterol), **OSA2** (rengyolone), **OSA3** (vanillin), **OSA4** (1-(4-hydroxyphenyl) propan-1-one), **OSA5** (apigenin), **OTA1** (genkwanin), **OTA2** (3,7-dihydroxy-1-methoxyxanthone), and three possible structures of **ORA2** (2-methoxy-1,4-benzenediol or 4-methoxy-1,2-benzenediol or 4-methoxy-1,3-benzenediol). Their structures were elucidated by spectroscopic analysis. The acetone extract from the leaves and roots exhibited strong radical scavenging activity with IC_{50} of 8.01 ± 0.29 and 9.81 ± 0.09 μg/mL, respectively. **OLA5** and **OLA10** exhibited strong and moderate antioxidative activity with IC_{50} values of 11.88 ± 0.06 and 33.45 ± 1.45 μM, respectively. In addition, all crude extracts exhibited weak to moderate antibacterial activities against gram-positive and gram-negative bacteria. **OLA3** was found to

possess moderate activity against MRSA SK1 with an MIC value of 32 μg/mL, whereas **OLA8** exhibited strong activity against *B. cereus* with an MIC value of 16 μg/mL.



Possible Structures of **ORA2**

Keywords: *Oroxylum indicum* (L.) Vent./antibacterial/antioxidative