

**Research Title :** Biological Activity of Hogweed

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### ABSTRACT

This study interests to test the important biological activities from fruit of *Physalis angulata* L. e.g. antioxidation, antimicrobials, anticancer and anti neuramidinase (from H5N1 virus) activities from the extraction of fruit with acetone using ultrasonic for 30 นาที at 40°C. It was found that this extract has a potency of DPPH scavenging, antimicrobials activity (e.g. *Klebsiella pneumonia* ATCC 700603, *Mycobacterium tuberculosis* H<sub>37</sub>Ra and *Magnaporthe grisea* Mat 1-1 THL1156). The extract can inhibit the *K. pneumonia* growth higher than the inhibition of *M. tuberculosis* H<sub>37</sub>Ra growth, the IC<sub>50</sub> ± SE against *K. pneumonia* growth was 0.65 ± 0.33 ug/mL, the IC<sub>50</sub> ± SE against *M. tuberculosis* H<sub>37</sub>Ra growth was 3.28 ± 0.85 ug/mL and the inhibition against *M. grisea* growth of extract concentration at 50 ug/mL was 43.25 ± 9.73 %

This extract also inhibited several cancer cells e.g. lung cancer (NCI-H187), oral cavity cancer (KB-16), colon cancer (Caco2) and hepatocacinoma (HepG2). The antiproliferation of NCI-H187 was higher than another cancer cell. The IC<sub>50</sub> ± SE against NCI-H187 was 15.06 ± 0.49 µg/mL. Moreover, this extract can inhibit the neuramidinase activity which the IC<sub>50</sub> ± SE was 78.00 ± 30.02 ug/mL

**Keywords :** *Physalis angulata* L., cancer cell line and neuraminidase