

Joint Event

World Congress on

# BIOAVAILABILITY & BIOEQUIVALENCE: BA/BE STUDIES SUMMIT

International Conference on  
**FOOD & BEVERAGES**

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August 06-07, 2018 | Tokyo, Japan

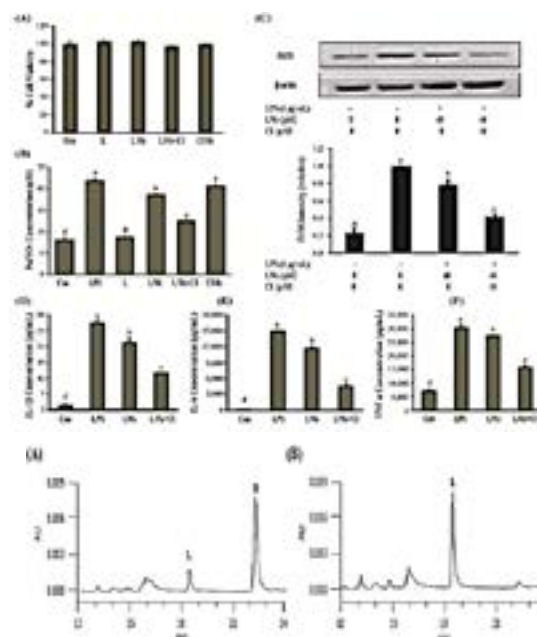


## Inwook Choi

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### Effect of catechol O-methyl transferase inhibitor on anti-inflammatory activity of luteolin metabolites

Although luteolin is known to have potent anti-inflammatory activities, much less information has been provided on such activities of its hepatic metabolites. Luteolin was subjected to hepatic metabolism in HepG2 cells either without or with catechol O-methyl transferase (COMT) inhibitor. To identify hepatic metabolites of luteolin without (LMs) or with COMT inhibitor (LMs+CI), metabolites were treated by  $\beta$ -glucuronidase and sulfatase, and found that they were composed of glucuronide and sulfate conjugates of diosmetin in LMs or these conjugates of luteolin in LMs+CI. LMs and LMs+CI were examined for their anti-inflammatory activities on LPS stimulated Raw 264.7 cells. Expression of iNOS and production of nitric oxide and pro-inflammatory cytokines such as TNF- $\alpha$ , IL-1 $\beta$  and IL-6 were suppressed more effectively by the treatment with LMs+CI than LMs. Our data provide a new insight on possible improvement in functional properties of luteolin on target cells by modifying their metabolic pathway in hepatocytes.



### Biography

Inwook Choi has worked with great enthusiasm and endeavor for developing functional foods or pharmaceutical ingredients from animal and plant resources and commercializing them. Currently, He is interested in developing the system inferring functional properties of natural extracts (Bio-FINE). The system is based on bio-information that can be extracted by comparing differently expressing genes between normal and natural extracts fed animals. Through the system, various functional properties of single as well as combinatorial natural extracts can be ranked and further utilized for commercialization.

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