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ANTI-VIRAL EFFECTS OF ETHYL ACETATE FRACTION FROM *DISTYLIUM RACEMOSUM* AGAINST NEWCASTLE DISEASE VIRUS

Hye-Ran Kim[1], Bo-Kyoung Jung[1], Weon-Jong Yoon[2], Kyung-Soo Chang[1]

[1]Oryundae-ro, South Korea
[2]Jungang-ro, South Korea

Newcastle disease virus (NDV) is a member of the *Paramyxoviridae* family, a negative-sense RNA virus. NDV causes not only serious infectious disease in birds but also zoonosis. In addition, despite vaccination, NDV outbreaks are growing in the worldwide. Therefore, NDV is a serious public health concern worldwide. The aim of this study was to evaluate the anti-viral effects of the fractions from *Distylium racemosum* (*D. racemosum*) that naturally grows on Jeju Island, against the NDV, a Newcastle disease (ND)-inducing virus. The cell viability of fractions from *D. racemosum* was determined by the 3-(4,5-dimethylthiazol-2-yl) 2,5-diphenyl tetrazolium bromide (MTT) assay. To study its anti-viral effects, hemagglutination (HA) titer and cytopathogenic effect (CPE) reduction assay were conducted using a lentogenic NDV strain. Expression levels of viral gene were determined by quantitative reverse transcription–polymerase chain reaction (qRT-PCR). Among various fractions (hexane, ethyl acetate, butanol and water fraction), ethyl acetate fraction showed the anti-viral effects against NDV. The results showed a concentration-dependent inhibitory effect of ethyl acetate fraction treatment on HA titer, CPE and expression levels of viral gene. Based on these results, ethyl acetate fraction from *D. racemosum* can be used as an effective candidate material for the development of treatment for NDV.

Biography

Hye-Ran Kim has graduated from Catholic University of Pusan as Doctor of Science. Later on she obtained her Post-graduation from Catholic University of Pusan and then started studying at Catholic University of Pusan where she has continued her research. Presently, Presently she is studying at Busan City

hrkim308@gmail.com