

# miR-211 Plays a Critical Role in *Cnidium officinale* Makino Extract-Induced, ROS/ER Stress-Mediated Apoptosis in U937 and U266 Cells

Jin Ah Cha <sup>1,†</sup>, Hyo-Sook Song <sup>2,†</sup>, Beomku Kang <sup>1</sup>, Moon Nyeo Park <sup>1</sup>, Kyoung Sun Park <sup>3</sup>, Sung-Hoon Kim <sup>1</sup>, Bum-Sang Shim <sup>1,\*</sup> and Bonglee Kim <sup>1,2,\*</sup>

<sup>1</sup> Department of Pathology, College of Korean Medicine, Graduate School, Kyung Hee University, 1 Hoegi-dong, Dongdaemun-gu, Seoul 130-701, Korea; nicesh89@khu.ac.kr (J.A.C.); beomkukang@khu.ac.kr (B.K.); mnpark@khu.ac.kr (M.N.P.); sungkim7@khu.ac.kr (S.-H.K.)

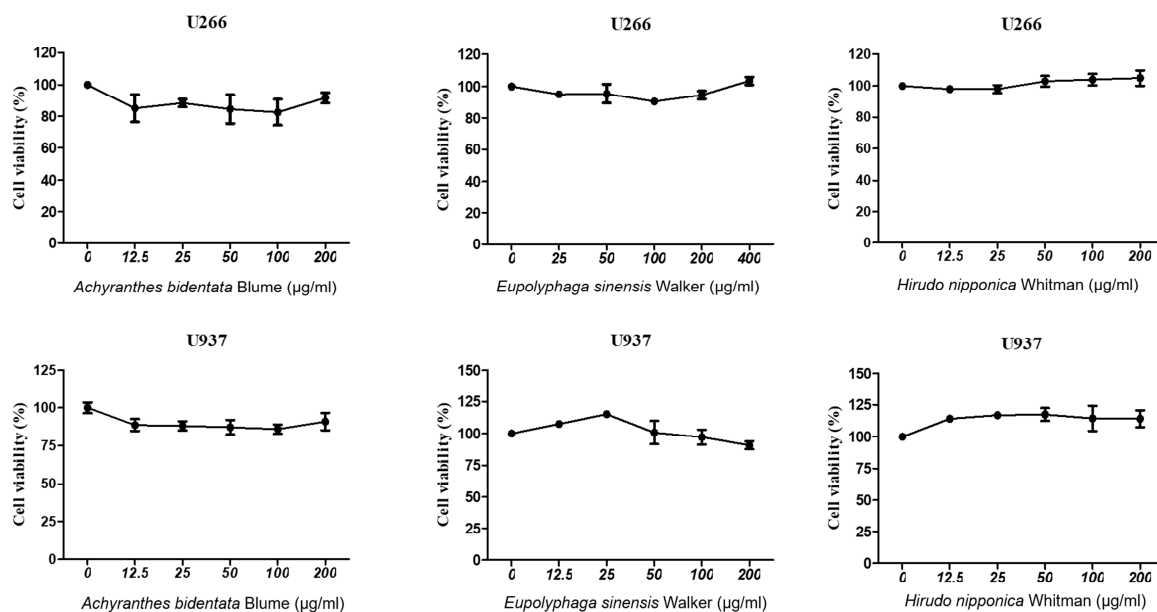
<sup>2</sup> Department of Science in Korean Medicine, College of Korean Medicine, Graduate School, Kyung Hee University, 1 Hoegi-dong, Dongdaemun-gu, Seoul 130-701, Korea; shs331@khu.ac.kr

<sup>3</sup> Department of Korean Medicine Obstetrics & Gynecology, College of Korean Medicine, Kyung Hee University, 1 Hoegi-dong, Dongdaemun-gu, Seoul 130-701, Korea; lovepks@khnmc.or.kr (K.S.P)

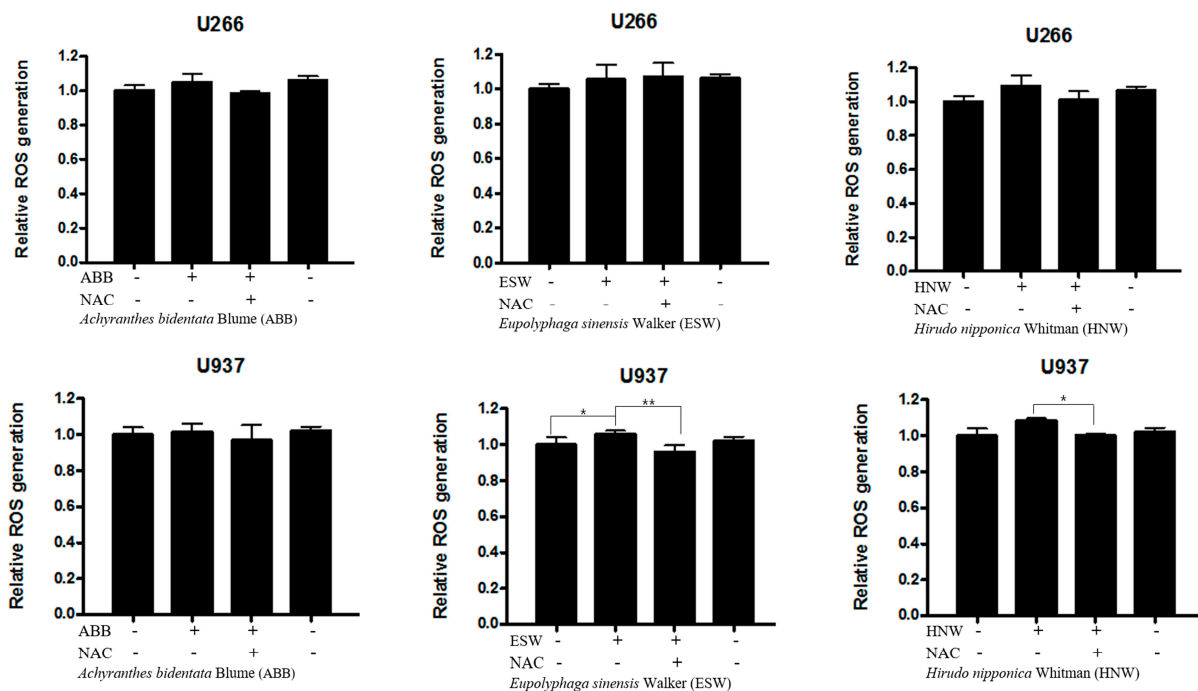
\* Correspondence: bongleekim@khu.ac.kr (B.K.); Tel.: +82-2-961-9217 (B.K.)

\* Co-correspondence: eshimbs@khu.ac.kr (B.-S.S.); Tel.: +82-2-961-0047 (B.-S.S.)

† These authors contributed equally to this work.



**Supplementary Figure S1.** Cytotoxic effect of *Achyranthes bidentata* Blume (ABB), *Eupolyphaga sinensis* Walker (ESW) and *Hirudo nipponica* Whitman (HNW) in U937 and U266 cells. Cells were seeded into 96 well microplates at a density of  $2 \times 10^4$  cells/well and treated with various concentrations of ABB, ESW and HNW (0, 12.5, 25, 50, 100 or 200 μg/ml) for 24 h. Cell viability was measured by EZ-cytox Enhanced cell viability assay kit. Values represent the means of 3 experiments  $\pm$  SD.



**Supplementary Figure S2.** The effect of COM on ROS production in *Achyranthes bidentata* Blume (ABB), *Eupolyphaga sinensis* Walker (ESW), *Hirudo nipponica* Whitman (HNW) treated U937 and U266 cells. Cells were treated with indicated extracts (80  $\mu\text{g}/\text{ml}$ ) for 24 h with or without pre-treatment of NAC (5 mM) for 1 h. ROS production was determined by cellular reactive oxygen species detection assay kit. Values represent the means of 3 experiments  $\pm$  SD.