### **Supporting Information**

# Secondary Metabolites of The Endophytic Fungus *Alternaria alternata* JS0515 Isolated from *Vitex rotundifolia* and Their Effects on Pyruvate Dehydrogenase activity

Changyeol Lee,<sup>1,#</sup> Wei Li,<sup>2,#</sup> Sunghee Bang,<sup>1</sup> Sun Joo Lee,<sup>3</sup> Nam-young Kang,<sup>4</sup> Soonok Kim,<sup>5</sup> Tae In Kim,<sup>2</sup> Younghoon Go,<sup>2,\*</sup> and Sang Hee Shim<sup>1,\*</sup>

<sup>1</sup> College of Pharmacy, Duksung Women's University,144 Gil 33,Dobong-gu, Seoul 01369, Republic of Korea; jaber29@naver.com (C.Y.L.); scbsh4331@hanmail.net (S.H.B.); sangheeshim@duksung.ac.kr (S.H.S.)

<sup>2</sup> Korean medicine (KM)-Application Center, Korea Institute of Oriental Medicine (KIOM), Daegu 41062, Republic of Korea; liwei1986@kiom.re.kr (W.L.); tikim@kiom.re.kr (T.I.K.); gotra827@kiom.re.kr (Y.H.G.)

<sup>3</sup> New Drug Development Center, Daegu-Gyeongbuk Medical Innovation Foundation, 80 Cheombok-ro, Dong-gu, Daegu 41061, Republic of Korea; disjrk@dgmif.re.kr (S.J.L.)

<sup>4</sup> Department of Creative IT Engineering, Pohang University of Science and Technology (POSTECH), 77 Cheongam-ro, Namgu, C5 building, room203, Pohang, Kyungbuk 37673, Republic of Korea; knysg@postech.ac.kr (N.Y.K.)

<sup>5</sup> Biological Resources Assessment Division, National Institute of Biological Resources, Incheon 22689, Republic of Korea; sokim90@korea.kr (S.O.K.)

<sup>#</sup> These authors contributed equally to this work.

\* Correspondence: gotra827@kiom.re.kr (Y.H.G.); sangheeshim@duksung.ac.kr (S.H.S.)

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Figure S1. <sup>1</sup>H NMR spectrum (500 MHz) of **1** in DMSO-*d*<sub>6</sub>.



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Figure S3. HSQC spectrum (500 MHz) of **1** in DMSO-*d*<sub>6</sub>.



Figure S4. HMBC spectrum (500 MHz) of **1** in DMSO-*d*<sub>6</sub>.



Figure S5. ROESY spectrum (500 MHz) of **1** in DMSO-*d*<sub>6</sub>.

### Figure S6. HR-ESI-MS of 1.

### Compound Spectrum SmartFormula Report



#### +MS, 0.2-0.5min #10-28 Intens. x106 +MS, 0.2-0.5min #10-28 1.0-357,0591 0.5 413.2663 691.1271 0.0 491.0533 11 827.7067 200 300 400 500 600 700 800 900 m/z Meas. m/z Ion Formula Score e Conf N-Rule \* mSigma rdb # Sigma m/zerr [ppm] C14H9N606 C11HN16 C13H13N2010 C10H5N1204 357.0578 3.5 7.3 7.3 -11.1 357.0591 2.7 69.48 22.58 13.5 even ok ok 2 even 2 357.0565 357.0551 29.91 5.33 8.5 3 0.0 3 even 12.5 13.4 16.1 4567 4587 even C18H13O8 C15H5N10O2 C19H9N4O4 C16H14NaO8 4.0 -0.2 -7.7 -2.8 8.5 12.5 357.0605 357.0591 69.31 100.00 even even 17.5 9.5 15.5 10.5 14.5 19.5 357.0618 357.0581 28.7 2.5 7.0 13.11 even 100.00 even even 1 1 C13H6N10NaO2 C12H10N6NaO6 C17H10N4NaO4 C18H6N8Na 2 357.0567 357.0554 2 27.11 -10.3 1.0 -4.7 3 11.0 3 6.89 even even 80.34 27.43 4 5 357.0594 16.3 4 5 357 0608 38.0 #WHIT



**Fig. S8.** (A) and (C) Immunofluorescence analysis to quantify p-PDH E1 $\alpha$  (Ser300) in AD-293 cells cultured with **3** and **11**. Phosphorylation inhibition by **3** and **11** was normalized against DCA inhibition. (B) and (D) Dose-response curves for p-PDH E1 $\alpha$  (Ser300) from (A) and (C). The dose-response curves were generated using the Prism 6 software package.

