## SUPPLEMENTARY MATERIAL

## Bioactive Compounds from *Polygala tenuifolia* and Their Inhibitory Effects on Lipopolysaccharide-Stimulated Pro-inflammatory Cytokine Production in Bone Marrow-Derived Dendritic Cells

Le Ba Vinh <sup>1,2,†</sup>, Myungsook Heo <sup>1,†</sup>, Nguyen Viet Phong <sup>2</sup>, Irshad Ali <sup>3</sup>, Young Sang Koh <sup>3</sup>, Young Ho Kim <sup>1,\*</sup>, Seo Young Yang <sup>1,\*</sup>

<sup>1</sup> College of Pharmacy, Chungnam National University, Daejeon 34134, Republic of Korea; vinhrooney@gmail.com (L.B.V.); inyl1110@naver.com (M.H.)

<sup>2</sup> Institute of Marine Biochemistry (IMBC), Vietnam Academy of Science and Technology (VAST), Hanoi 100000, Vietnam; vinhrooney@gmail.com (L.B.V.); ngvietphong@gmail.com (N.V.P.)

<sup>3</sup> School of Medicine and Jeju Research Center for Natural Medicine, Jeju National University, Jeju 63243, Korea; irshad.qau200@gmail.com (I.A.); yskoh7@jejunu.ac.kr (Y.S.K.)

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

\* Correspondence: yhk@cnu.ac.kr (Y.H.K.); syyang@cnu.ac.kr (S.Y.Y.); Tel.: +82-42-821-5933 (Y.H.K.); +82-42-821-7321 (S.Y.Y.)



Figure S1. <sup>1</sup>H-NMR spectrum (MeOD, 400 MHz) of compound (1)



Figure S2. <sup>13</sup>C-NMR spectrum (MeOD, 100 MHz) of compound (1)



**S**3











Figure S9. <sup>1</sup>H-NMR spectrum (MeOD, 400 MHz) of compound (5)





Figure S11. <sup>1</sup>H-NMR spectrum (MeOD, 400 MHz) of compound (6)



Figure S12. <sup>13</sup>C-NMR spectrum (MeOD, 100 MHz) of compound (6)





**S**8



Figure S15. <sup>1</sup>H-NMR spectrum (MeOD, 400 MHz) of compound (8)





Figure S17. <sup>1</sup>H-NMR spectrum (MeOD, 400 MHz) of compound (9)





S11





S12





Figure S24. LC-MS spectrum of compound (10)





Figure S27. COSY spectrum (MeOD, 600 MHz) of compound (11)



Figure S28. HMQC spectrum (MeOD, 600 MHz) of compound (11)





Figure S30. LC-MS spectrum of compound (11)









Figure S36. LC-MS spectrum of compound (12)





Figure S39. COSY spectrum (MeOD, 600 MHz) of compound (13)



Figure S40. HMQC spectrum (MeOD, 600 MHz) of compound (13)







<sup>220</sup> <sup>210</sup> <sup>200</sup> <sup>190</sup> <sup>180</sup> <sup>170</sup> <sup>160</sup> <sup>150</sup> <sup>140</sup> <sup>130</sup> <sup>120</sup> <sup>110</sup> <sup>100</sup> <sup>90</sup> <sup>80</sup> <sup>70</sup> <sup>60</sup> <sup>50</sup> <sup>40</sup> <sup>30</sup> <sup>20</sup> <sup>10</sup> <sup>0</sup> <sup>-10</sup> <sup>-20</sup> <sup>-20</sup> **Figure S44.** <sup>13</sup>C-NMR spectrum (MeOD, 150 MHz) of compound (14)



Figure S45. COSY spectrum (MeOD, 600 MHz) of compound (14)



Figure S46. HMQC spectrum (MeOD, 600 MHz) of compound (14)



Figure S47. HMBC spectrum (MeOD, 600 MHz) of compound (14)



Figure S48. LC-MS spectrum of compound (14)



Figure S49. <sup>1</sup>H-NMR spectrum (C<sub>5</sub>D<sub>5</sub>N, 600 MHz) of compound (15)



Figure S50. 13C-NMR spectrum (C5D5N, 150 MHz) of compound (15)



Figure S52. HMQC spectrum (C5D5N, 600 MHz) of compound (15)



Figure S53. HMBC spectrum (C<sub>5</sub>D<sub>5</sub>N, 600 MHz) of compound (15)



Figure S54. LC-MS spectrum of compound (15)