SUPPLEMENTARY MATERIAL

A New Macrolactin Antibiotic from deep sea derived Bacteria *Bacillus subtilis*

B5

Wei Li^{a, †}, Xi-Xiang Tang^{c, d, †}, Xia Yan^b, Zhen Wu^b, Zhi-Wei Yi^{c, d}, Mei-Juan Fang^b, Xin Su^{a*}, Ying-Kun Qiu^{b*}

^a. School of life Science and Biopharmaceutical, Shenyang Pharmaceutical University, Shenyang 110016, China;

^b. School of Pharmaceutical Sciences, Xiamen University, Xiamen 361102, China;

^c Key Laboratory of Marine Biogenetic Resources, The Third Institute of Oceanography, The State Oceanic Administration, Xiamen 361005, China;

^d South China Sea Bio-Resource Exploitation and Utilization Collaborative Innovation Center, Xiamen 361005, China.

[†] These authors contribute equally to this paper.

A new macrolactin derivate, 7-*O*-2'-*E*-butenoyl macrolactin A (**1**), together with three known macrolactin compounds, macrolactin A (**2**), 7-*O*-malonyl macrolactin A (**3**) and 7-*O*-succinyl macrolactin A (**4**), was isolated from the bacterial strain *Bacillus subtilis* B5, which was isolated from the 3000 metres deep sea sediment of the Southwest Pacific Ocean. The structures of the new compounds were assigned by spectroscopic methods including 1D/2D NMR and MS analysis techniques. Compounds **1** and **2** demonstrated antifungal activities against tea pathogenic fungi *Pestalotiopsis theae* and *Colletotrichum gloeosporioides*.

Keywords: *Bacillus subtilis* B5; 7-*O*-2'-*E* -butenoyl macrolactin A; antifungal activity.

List

Figure S1. The ^1H -NMR Spectrum of Compound **1** in $\text{DMSO-}d_6$

Figure S2. The ^{13}C -NMR Spectrum of Compound **1** in $\text{DMSO-}d_6$

Figure S3. The HSQC Spectrum of Compound **1** in $\text{DMSO-}d_6$

Figure S4. The HMBC Spectrum of Compound **1** in $\text{DMSO-}d_6$

Figure S5. The ^1H - ^1H COSY Spectrum of Compound **1** in $\text{DMSO-}d_6$

Figure S6. The HRESI-MS Spectrum of Compound **1**

Figure S7. Detection of inhibitory activity of compound **1** (1) and compound **2** (2) against pathogenic fungi *Colletotrichum gloeosporioides* (A) and *Pestalotiopsis theae* (B)

Figure S1. The ^1H -NMR Spectrum of Compound **1** in $\text{DMSO}-d_6$

Figure S2. The ^{13}C -NMR Spectrum of Compound **1** in $\text{DMSO}-d_6$

Figure S3. The HSQC Spectrum of Compound **1** in DMSO- d_6

Figure S4. The HMBC Spectrum of Compound **1** in DMSO- d_6

Figure S5. The ^1H - ^1H COSY Spectrum of Compound **1** in $\text{DMSO-}d_6$

Figure S6. The HR-ESI-MS Spectrum of Compound **1**.

T: FTMS + p ESI Full ms [100.00-1000.00]

Figure S7. Detection of inhibitory activity of compound **1** (1) and compound **2** (2) against pathogenic fungi *Colletotrichum gloeosporioides* (A) and *Pestalotiopsis theae* (B)