

Article

# A Novel Antibiotic Mechanism of L-Cyclopropylalanine Blocking the Biosynthetic Pathway of Essential Amino Acid L-Leucine

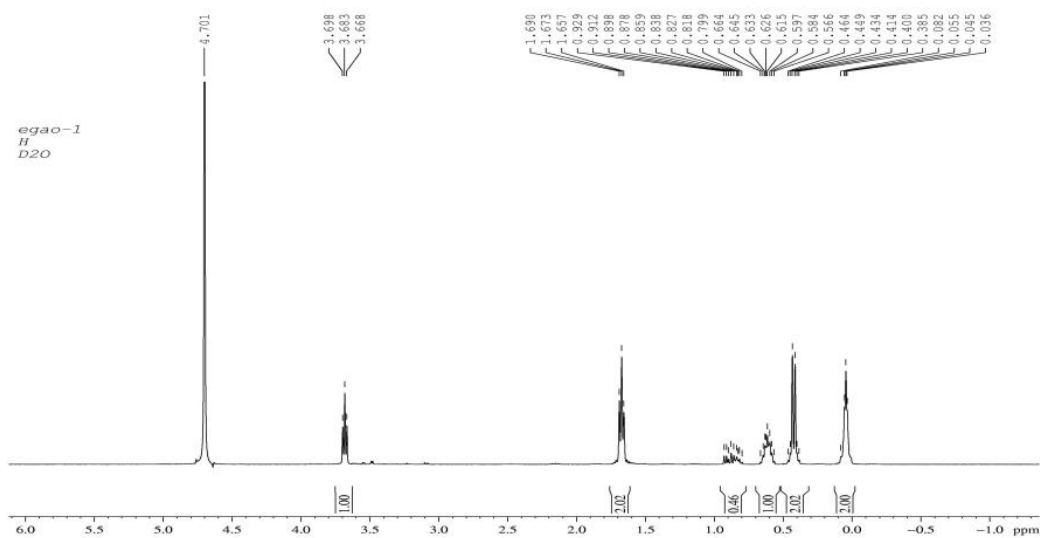
Bingji Ma <sup>1,\*</sup>, Jinwen Shen <sup>2</sup>, Wandee Yindeeyoungyeon <sup>3</sup> and Yuan Ruan <sup>1</sup>

<sup>1</sup> Department of Traditional Chinese Medicine, Henan Agricultural University, Zhengzhou 450002, China; ruanyuanmbj@163.com

<sup>2</sup> Department of Microbiology, Henan Agricultural University, Zhengzhou 450002, China; shenjinwen369@163.com

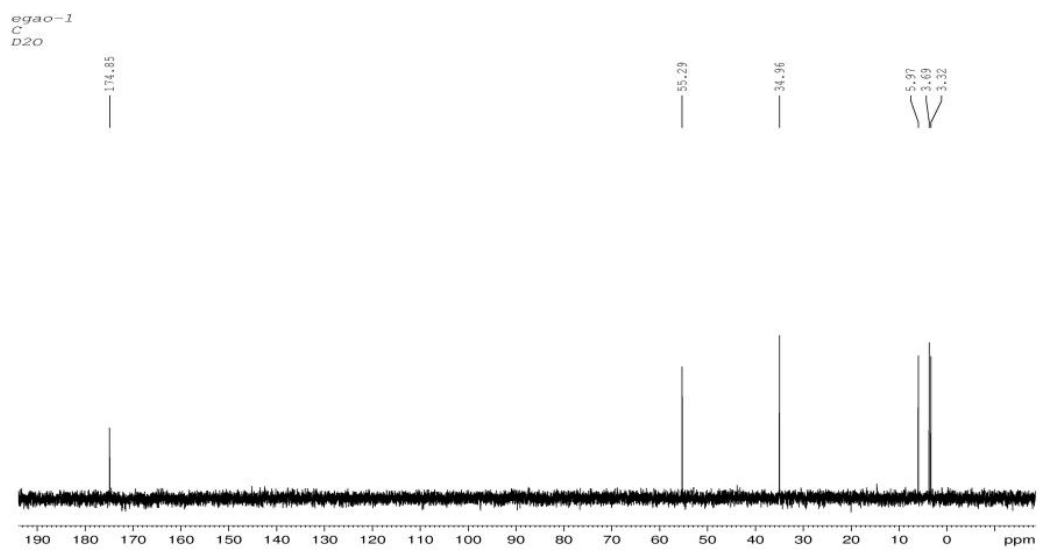
<sup>3</sup> National Center for Genetic Engineering and Biotechnology, NSTDA, Pathum Thani 12120, Thailand; wandee@biotec.or.th

\* Correspondence: mbj123@sina.com; Tel.: +86-371-6350-4463

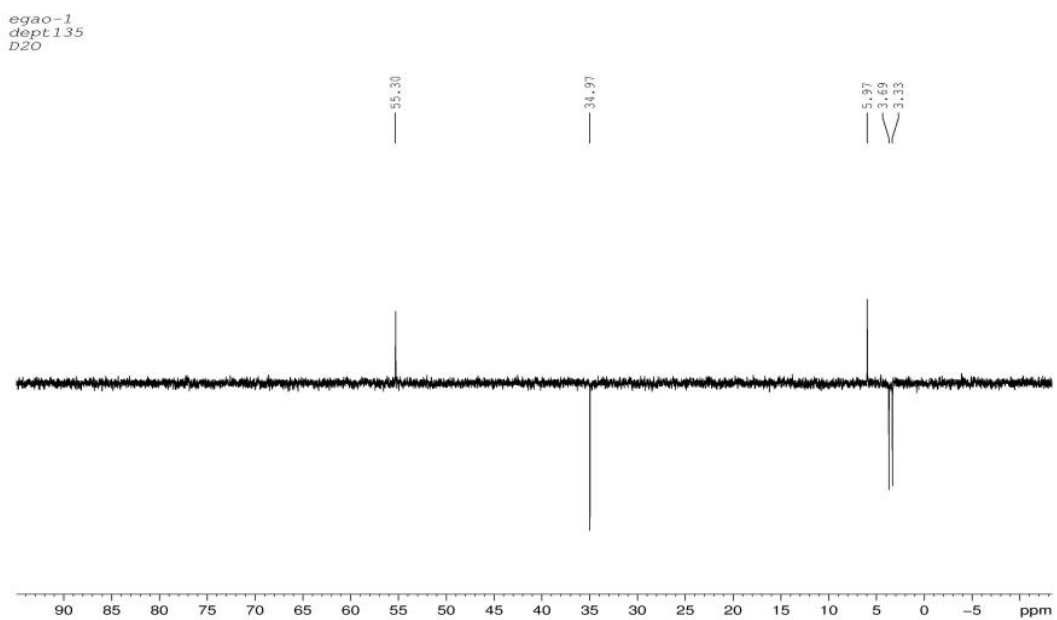


(a)

Figure S1. Cont.

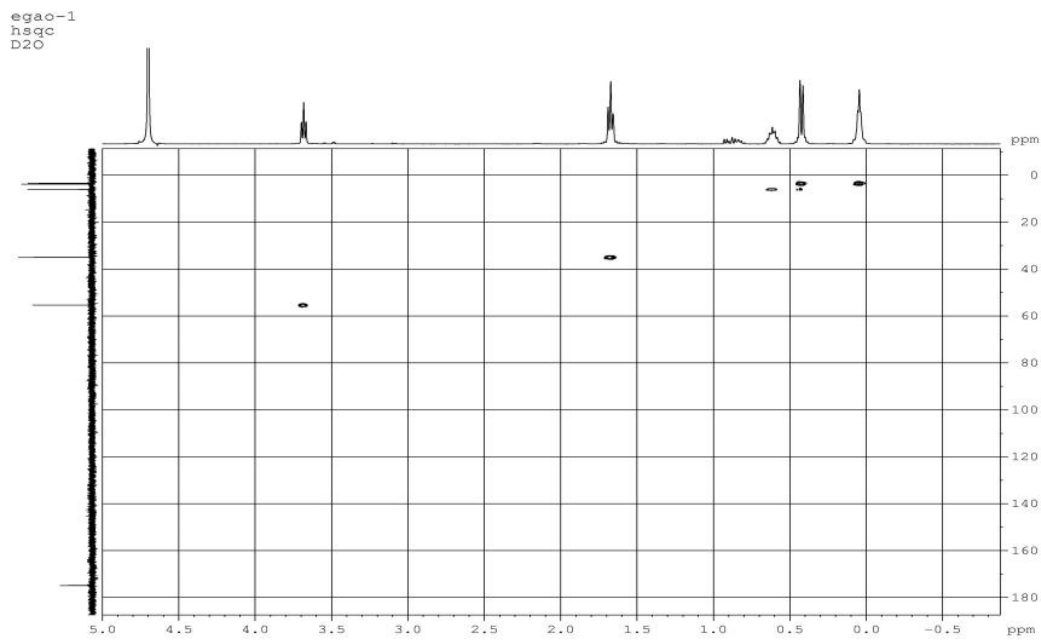


(b)

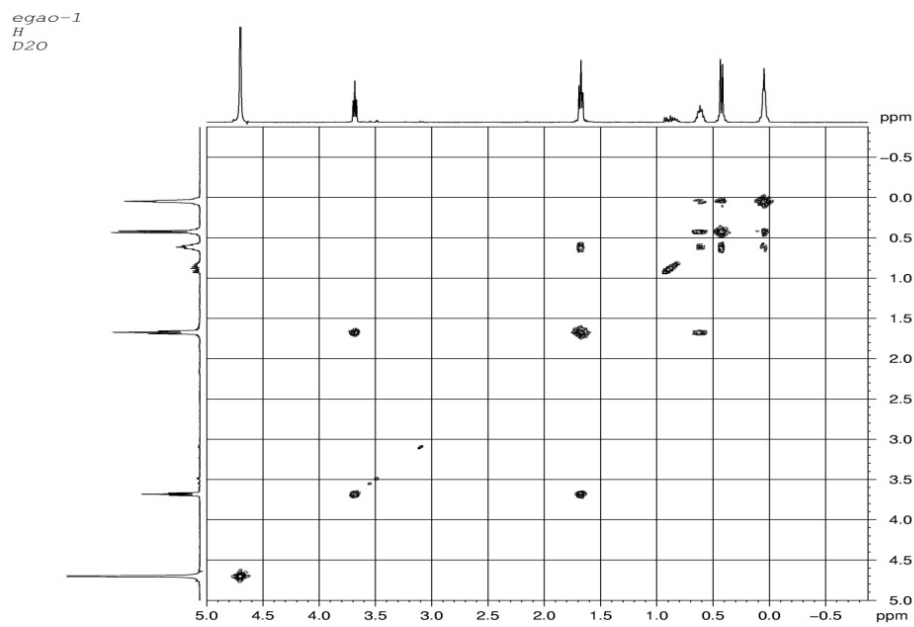


(c)

Figure S1. Cont.

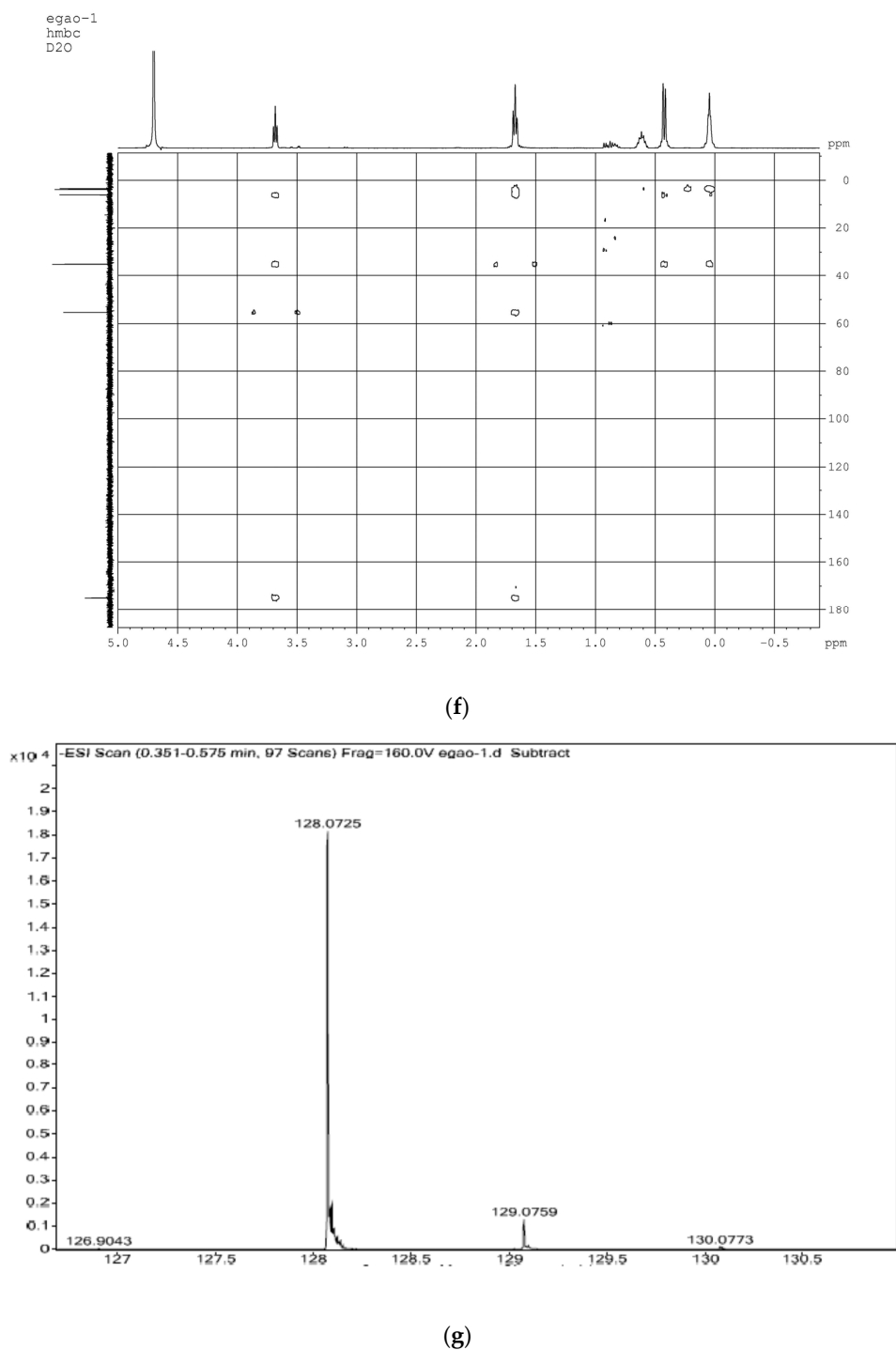


(d)



(e)

Figure S1. Cont.



**Figure S1.** NMR and MS spectral of L-cyclopropylalanine (a:  $^1\text{H}$ -NMR; b:  $^{13}\text{C}$ -NMR; c: DEPT 135; d: HSQC; e:  $^1\text{H}$ - $^1\text{H}$  COSY; f: HMBC; g: MS)

**Table S1.** Inhibitory effects of L-cyclopropylalanine and its derivatives **1**, **2** and **3** on *F. graminearum* Schw

<b>Compounds</b>	<b>IR at 50 µg/mL</b>	<b>IR at 5 µg/mL</b>
L-cyclopropylalanine	77.2	65.5
<b>1</b>	62.8	45.5
<b>2</b>	9.2	8.8
<b>3</b>	5.9	5.0