

Antimicrobial activity and comparative metabolomic analysis of *Priestia megaterium* strains derived from potato and dendrobium

**Jia-Meng Liu^{†,1}, Yan-Tian Liang^{†,2}, Shan-Shan Wang¹, Nuo Jin¹, Jing Sun¹, Cong
Lu¹, Yu-Feng Sun¹, Shu-Ying Li¹, Bei Fan^{1*}, Feng-Zhong Wang^{1*}**

1 Key Laboratory of Agro-products Quality and Safety Control in Storage and Transport
Process, Ministry of Agriculture and Rural Affairs, Beijing, China/Institute of Food
Science and Technology, Chinese Academy of Agricultural Sciences, Beijing, China

2 College of Pharmacy, Hunan University of Traditional Chinese Medicine, Hunan,
China

† These authors have contributed equally to this work and share first authorship.

*** Correspondence:**

Bei Fan: caasBFan@163.com

Feng-Zhong Wang: caasFZWang@163.com

Table S1. Indicator strains were used in this study.

Strain	Type strain	Disease
<i>P. atroseptica</i>	ACCC 19901	Potato blackleg disease
<i>A. rolfsii</i>	CBS719.83	Dendrobium southern blight
<i>S. aureus</i> drug-sensitive strain	ATCC 29213	
<i>S. aureus</i> drug-resistant strain	ATCC 33591	food-borne pathogenic microorganism
<i>E. coli</i>	ATCC 25922	

Table S2. Elution conditions of UPLC.

Time(min)	Flow rate(mL/min)	A (%)	B (%)	injection volume (μ L)	column temperature (°C)
0	0.4	95	5		
3	0.4	80	20		
9	0.4	5	95		
13.0	0.4	5	95	20	40
13.1	0.4	95	5		
16	0.4	95	5		

Table S3. Mass spectrometric parameters.

Options	Parameter
M/Z	50-1000
Ion Source Gas 1(psi)	50
Ion Source Gas 2(psi)	50
Curtain gas(psi)	30
Source temperature (°C)	500
IonSpray voltage floating (ESI+) (V)	5000
IonSpray voltage floating (ESI-) (V)	-4000
Interface heater	on
Declustering potential (V)	80
Collision energy (V)	5
MS/MS collision energy (V)	20-60(rolling)

Table S4. Biochemical and physiological test results of *P. megaterium* P-NA14 and *P. megaterium* D-HT207.

Physiological and biochemical reactions	P-NA14	D-HT207
Methyl red (M.R) test	+	+
Voges–Proskauer (V-P) test	–	–
Indole test	–	–

Hydrogen sulphide production test	+	+
Urea test	-	-
Catalase test	+	+
Starch hydrolysis test	+	+
Oxidase	+	+
Gelatin Liquefaction	+	+
Nitrate reduction	+	+