SUPPLEMENTARY MATERIAL

Two new benzolactones from the leaves of *Nicotiana tabacum* and their anti-tobacco mosaic virus activities

Qinpeng Shen ^a, Xingmeng Xu ^{a,b}, Fengmei Zhang ^a, Nengjun Xiang ^a, Pei He ^a, Xiaoxi Si ^a,
Ruizhi Zhu ^a, Kunmiao Wang ^a, Zhihua Liu ^a, Chunbo Liu ^{a*} and Mingming Miao ^{a*}

^a Key Laboratory of Tobacco Chemistry of Yunnan Province, China Tobacco Yunnan Industrial Co., Ltd,
Kunming 650231, P.R. China;

^b School of Pharmaceutical Science & Yunnan Key Laboratory of Pharmacology for Nature Products,
Kunming Medical University, Kunming, Yunnan 650500, P.R. China

*Corresponding author. Tel: +86 871 68315280. E-mail addresses: jszxtq_2015@163.com

Abstract: Two new benzolactones, 5-methyl-6-prenyl-isobenzofuran-1(3H)-one (**1**), 5-hydroxymethyl-6-prenyl- isobenzofuran-1(3H)-one (**2**), together with four known phenolic compounds (**3-6**), were isolated from the leaves of *Nicotiana tabacum*. Their structures were elucidated by spectroscopic methods, including extensive 1D- and 2D NMR techniques. Compounds **1-6** were evaluated for their anti-tobacco mosaic virus (anti-TMV) activities. The results showed that

compound **1-6** exhibited high anti-TMV activities with inhibition rates in the range of 16.9~26.2%, respectively.

Keywords: *Nicotiana tabacum*; benzolactones; anti-tobacco mosaic virus activities

Figure S1 ¹³C NMR spectrum of 5-methyl-6-prenyl-isobenzofuran-1(3H)-one (**1**)

Figure S2 ¹H NMR spectrum of 5-methyl-6-prenyl-isobenzofuran-1(3H)-one (1)

Figure S3 ¹³C NMR and DEPT spectra of 5-hydroxymethyl-6-prenyl-isobenzofuran-1(3H)-one (2)

Figure S4 ^{13}C NMR and DEPT spectra of 5-hydroxymethyl-6-prenyl-isobenzofuran-1(3H)-one (**2**)

Figure S5. Key HMBC correlations of **1**

Table S1. ^1H NMR and ^{13}C NMR Data (in $\text{C}_5\text{D}_5\text{N}$) of compounds 1 and 2

No.	Compound 1		Compound 2	
	δ_{C} (m)	δ_{H} (m, <i>J</i> , Hz)	δ_{C} (m)	δ_{H} (m, <i>J</i> , Hz)
1	136.2 s		133.7 s	
2	142.5 s		146.1 s	
3	127.5 d	6.73 s	125.9 d	6.77 s
4	144.3 s		145.0 s	
5	121.9 s		122.7 s	
6	129.1 d	7.40 s	130.7 d	7.44 s
7	28.0 t	3.40 (d) 6.9	28.9 t	3.39 (d) 6.9
8	124.2 d	5.12 (t) 6.8	124.7 d	5.40 (t) 6.8
9	133.8 s		133.1 s	
10	17.7 q	1.57 s	16.1 q	1.51 s
11	25.4 q	1.78 s	26.1 q	1.67 s
1'	16.9 q	2.29 s	63.3 t	4.41 s
2'	69.2 t	5.48 s	69.0 t	5.50 s
3'	168.1 s		168.2 s	