

Supplementary material

HPLC-DAD analysis, SFE-CO₂ extraction and antibacterial activity on bioactive compounds from *Mosla chinensis* maxim

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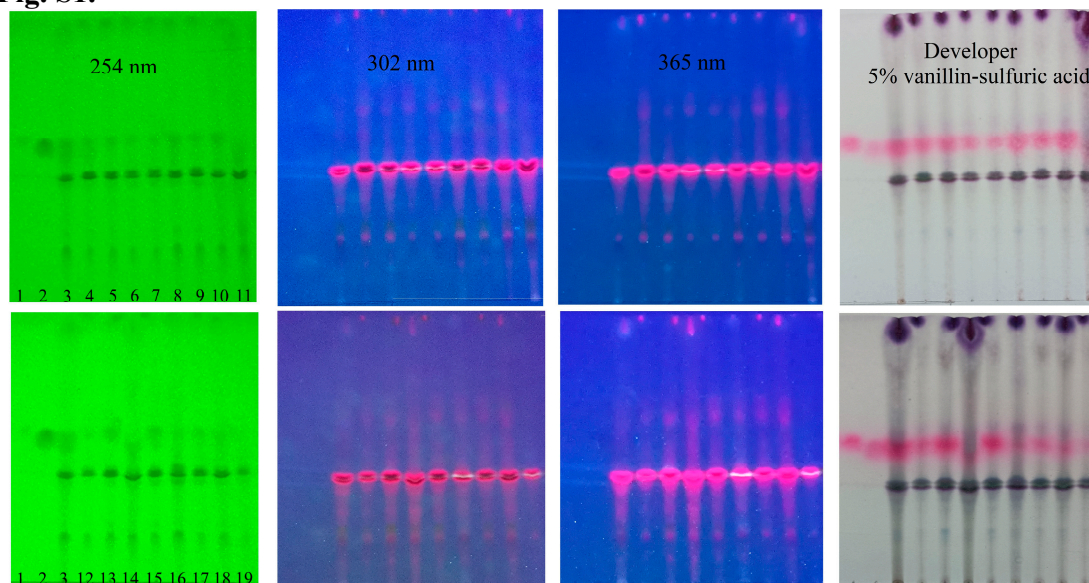
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Fig. S1.



Thin layer chromatography (TLC) results for bioactive compounds from *M. chinensis*.

Two main compounds in *M. chinensis*, thymol (**1**), carvacrol (**2**), together with the standard plant (**3**, *M. chinensis*, identified by National Institutes for Food and Drug Control, Beijing, China) and plants from 16 regions (**4-19**) were analysed and distinguished by UV (254, 302, 365 nm) and chromogenic developer (5% vanillin-sulphuric acid). The mobile phase was hexane:toluene:acetone:acetic acid (2:8:0.5:0.5, v/v).

16 regions were (**4-19**): Anguo (Hebei, **4**); Nanjing (Jiangsu, **5**); Bozhou (Anhui, **6**); Huoshan (Anhui, **7**); Chengdu (Sichuan, **8**); Shennongjia (Hubei, **9**); Panan (Zhejiang, **10**); Quzhou-1 (Zhejiang, **11**); Quzhou-2 (Zhejiang, **12**); Yichun (Jiangxi, **13**); Sanming (Fujian, **14**); Kunming (Yunnan, **15**); Guangzhou (Guangdong, **16**); Jieyang (Guangdong, **17**); Meizhou (Guangdong, **18**) and Yulin (Guangxi, **19**).

Fig. S2.



SFE-CO₂ pilot extraction of *M. chinensis*. 10 t plants were used for extraction, yielding 334 kg samples.

Fig. S3. Antibacterial zone results for *M. chinensis*, the concentration was 32 µg/mL.

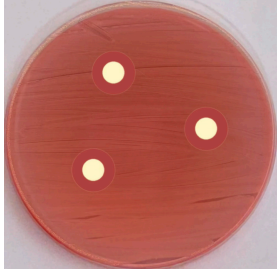

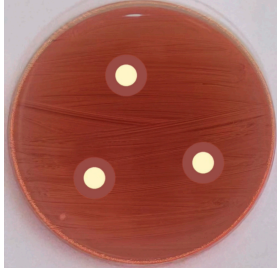


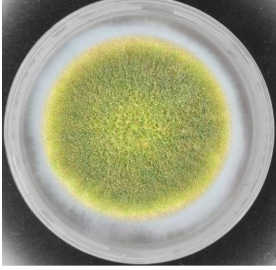
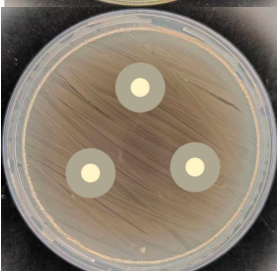


Name	Antibacterial zone	Name	Antibacterial zone
<i>Gardnerella vaginalis</i>		<i>Helicobacter pylori</i>	
<i>Propionibacterium acnes</i>		<i>Malassezia furfur</i>	
<i>Staphylococcus aureus</i>		<i>Aspergillus flavus</i>	
<i>Staphylococcus epidermidis</i>		<i>Epidermophyton floccosum</i>	
methicillin-resistant <i>Staphylococcus aureus</i>			

Table S1. Estimated production of *M. chinensis* and the planting information for the cultivated species.

Estimated total plant production	1900 t (2021), 2200 t (2020)
Planting information on cultivated <i>M. chinensis</i> in Jiangxi Province and Shaoyang city, Hunan province, China (2022)	
Planting scale	2000 mu, 133.4 hectares, 1.33 km ² (1 mu = 0.0667 hectares)
Production	300 kg/mu
Estimated total production	600 t

Table S2. First-hand market price (USD) of *M. chinensis*. Those data were collected from the herb markets in Anhui, Hubei, Hunan, Jiangxi and Hebei provinces, China.

Time (Year-Month)	Price (\$)/kg
2014-12	0.9117
2015-01	0.9117
2015-05	0.9117
2015-09	0.8682
2015-10	0.7235
2016-06	0.7235
2016-09	0.7235
2017-01	0.7235
2017-06	0.7235
2017-12	0.7235
2018-01	0.6512
2018-05	0.6512
2018-10	0.6512
2018-11	0.7959
2019-04	0.7959
2019-12	0.7959
2020-01	0.7959
2020-06	0.7959
2020-12	0.7959
2021-06	0.7959
2021-12	0.7959
2022-04	0.7959
2022-09	0.7959
2022-10	1.0130
2022-11	1.0130
2023-01	1.0130