lactuside B

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Pterocynselaelata

lactuside B

References:

Acknowledgments:
This research was supported by the Ministry of Education, Culture, Sports, Science, and Technology of Japan.
Chemical constituents in rhizome of *Pterocypsel a elata* and activity of lactuside B against brain ischemia

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**Abstract:** **Objective** To investigate the major chemical composition in rhizome of *Pterocypsel a elata* and explore the activity of lactuside B against brain ischemia. **Methods** The compounds were isolated and purified by silica gel column chromatography and elucidated by spectroscopic experiments. The model of partial brain ischemia was used to detect water content, MDA and SOD levels in brain tissue in order to observe the activity of lactuside B against brain ischemia. **Results** Ten compounds were obtained and established as lactuside B (1), 11β, 13-dihydrolactuside acetate (2), β-sitosterol (3), daucosterol (4), (24R)-5α-stigmast-7, 22 (E)-dien-3β-ol (5), 3, 5, 4-trimethoxylaglic acid (6), β-amyrin (7), oleic acid (8), α-hexacosanic acid (9), and stearic acid (10). Lactuside B was a key component, and its yield was 0.15%. Contents of water and MDA level in the brain tissue were significantly decreased, and the SOD content notably increased in all groups of lactuside B. **Conclusion** Ten compounds are all isolated from this plant for the first time. Compound 1 is a key component which possesses obvious activity against brain ischemia.

**Key words:** *Pterocypsel a elata* (Hemsl.) Shih in Act.; lactuside B; anti-brain ischemia
2 1 2 3 4
2 1 2 3 4
3.0 kg
2 1 2 3 4
4 (7) d
2 1 2 3 4
200 g
7 d
2 1 2 3 4
(1: 0, 30: 1, 20: 1, 10: 1, 5: 1, 3: 1, 2: 1, 0: 1)
2 1 2 3 4
z 1, C 1, C 2, H 2, O 2
2 1 2 3 4
(21 mg)
6 (24 mg)
2 1 2 3 4
1 (2.2 g)
2 1 2 3 4
(9 mg)
2 1 2 3 4
(11 mg)
2 1 2 3 4
(30 mg)
2 1 2 3 4
(12 mg)
10 (17 mg)
2 1 2 3 4
1 (56 mg)
2 1 2 3 4

1: C 21 H 22 O 5
2: C 19 H 20 O 6
3: C 19 H 20 O 6

13C-NMR (100 MHz, CD3OD) δ 128 6 (C -1), 33 3 (C -2), 84.0 (C -3), 141.4 (C -4), 128 4 (C -5), 82.5 (C -6), 55.4 (C -7), 29.3 (C -8), 37.0 (C -9), 142.0 (C -10), 43.3 (C -11), 181.3 (C -12), 13.3 (C -13), 58.8 (C -14), 11.7 (C -15), 102.5 (C -16), 75.1 (C -17), 78.0 (C -18), 71.7 (C -19), 78.0 (C -20), 62.8 (C -21)

lactside B δ 1, 0 (C -22), B δ 1, 0 (C -23)

2: C 19 H 20 O 6

3: C 21 H 22 O 5

4: C 33 H 60 O 6

5: C 33 H 60 O 6

6: C 33 H 60 O 6

7: C 33 H 60 O 6

8: C 33 H 60 O 6

9: C 33 H 60 O 6

10: C 33 H 60 O 6

11: C 33 H 60 O 6

12: C 33 H 60 O 6

13: C 33 H 60 O 6

14: C 33 H 60 O 6

15: C 33 H 60 O 6

16: C 33 H 60 O 6

17: C 33 H 60 O 6

18: C 33 H 60 O 6

19: C 33 H 60 O 6

20: C 33 H 60 O 6

21: C 33 H 60 O 6

22: C 33 H 60 O 6

23: C 33 H 60 O 6

24: C 33 H 60 O 6

25: C 33 H 60 O 6

26: C 33 H 60 O 6

27: C 33 H 60 O 6

28: C 33 H 60 O 6

29: C 33 H 60 O 6

30: C 33 H 60 O 6

31: C 33 H 60 O 6

32: C 33 H 60 O 6

33: C 33 H 60 O 6

34: C 33 H 60 O 6

35: C 33 H 60 O 6

36: C 33 H 60 O 6

37: C 33 H 60 O 6

38: C 33 H 60 O 6

39: C 33 H 60 O 6

40: C 33 H 60 O 6

41: C 33 H 60 O 6

42: C 33 H 60 O 6

43: C 33 H 60 O 6

44: C 33 H 60 O 6

45: C 33 H 60 O 6

46: C 33 H 60 O 6

47: C 33 H 60 O 6

48: C 33 H 60 O 6

49: C 33 H 60 O 6

50: C 33 H 60 O 6

51: C 33 H 60 O 6

52: C 33 H 60 O 6

53: C 33 H 60 O 6

54: C 33 H 60 O 6

55: C 33 H 60 O 6

56: C 33 H 60 O 6

57: C 33 H 60 O 6

58: C 33 H 60 O 6

59: C 33 H 60 O 6

60: C 33 H 60 O 6

61: C 33 H 60 O 6

62: C 33 H 60 O 6

63: C 33 H 60 O 6

64: C 33 H 60 O 6

65: C 33 H 60 O 6

66: C 33 H 60 O 6

67: C 33 H 60 O 6

68: C 33 H 60 O 6

69: C 33 H 60 O 6

70: C 33 H 60 O 6

71: C 33 H 60 O 6

72: C 33 H 60 O 6

73: C 33 H 60 O 6

74: C 33 H 60 O 6

75: C 33 H 60 O 6

76: C 33 H 60 O 6

77: C 33 H 60 O 6

78: C 33 H 60 O 6

79: C 33 H 60 O 6

80: C 33 H 60 O 6
23.1 SD: SD 180–220 g; kg ip: scxk ( ) 12005-0001.

23.2 SD: SD 8 h, 6 h, 4 h, 2 h, 1 h/d( ) 20 mL/kg ip.

23.3 10% 24 h, 12 h, 6 h, 2 h, 1 h.

23.4 Young [11,12] 15 h 

23.5 MDA: SOD: MDA

23.6 : SPSS10

23.7 1

23.8 MDA: SOD

Table 1 Effects of compound 1 on water content among brain tissue in partial brain ischemia ( \( \bar{x} \pm s, n=8 \) )

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Table 2 Effects of compound 1 on MDA and SOD levels in partial brain ischemia ( \( \bar{x} \pm s, n=8 \) )

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[1] [2] [3]
Isolation and identification of flavonoids from Baoyuan Decoction

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Abstract: Objective To investigate the chemical constituents of Baoyuan Decoction. Methods Many chromatographic techniques and spectral analysis means were employed for isolation and identification of the constituents. Results Fifteen flavonoids were isolated from Baoyuan Decoction and their structures were identified as licariside (1), formononetin-7-O-β-D-glucoside (2), formononetin (3), isomucronulatol (4), daviligenin (5), 4', 7-dimethoxy-3'-hydroxysophoridin 6-O-β-D-glucoside (6), (6aR, 11aR) 9, 10-dihydroxypterocarparr 3-O-β-D-glucoside (7), calycosin (8), liquiritigenin (9), 5-dehydroxykaempferol (10), liquiritin (11), isoliquiritin (12), isoliquiritigenin (13), 7, 5, 4'-trihydroxy-5, 6-dimethoxyflavone (14), and odorisflavone (15). Conclusion All fifteen compounds are isolated from Baoyuan Decoction for the first time.

Key words: Baoyuan Decoction; flavonoids; Chinese materia medica formula

References