Correction to « The bis-(1,2,3,4-tetrahydroisoquinoline) alkaloids Cepharanthine and Berbamine are ligands of SK channels »

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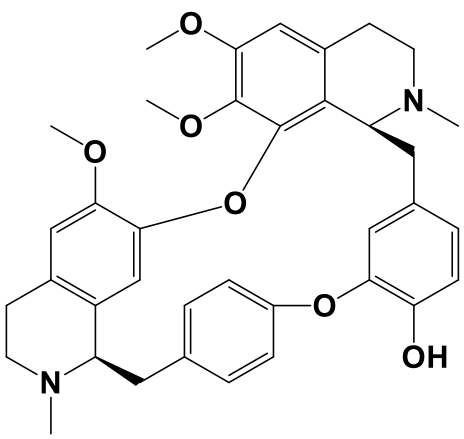
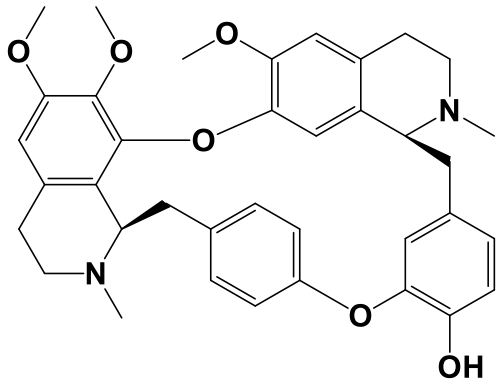
The sample of berbamine that was used in this study was purchased from abcr while a previous one was purchased from Sigma-Aldrich. At this time, we were interested to obtain crystallographic data of this compound. Further analysis of both samples by 3D electron diffraction (3D-ED), or microcrystal electron diffraction, has revealed that the compound is not berbamine but an isomer called oxyacanthine (Figure 1) (manuscript in preparation). This « misidentification » at the supplier has also been identified in parallel to our work by another group (Cheng et al., J Nat Prod 2025, 191-198).

Figure 1: Chemical structures of berbamine and oxyacanthine



Berbamine



Oxyacanthine

Therefore, the biological results reported in the original paper concern oxyacanthine and not berbamine. The sentence in the abstract must be changed as follows : …Respectively, the Ki values on SK2 and SK3 are 1,318 µM and 1,091 µM for cepharanthine and 0,284µM and 0,679 µM for oxyacanthine...

Corrected table and figures are just below.

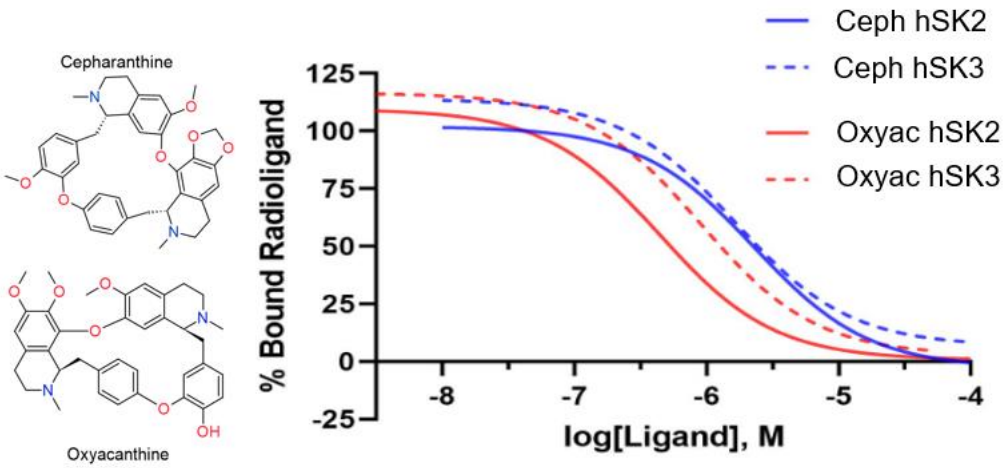
The title should mention the name of the compounds as follows : « The bis-(1,2,3,4-tetrahydroisoquinoline) alkaloids Cepharanthine and Oxyacanthine are ligands of SK channels »

In the future, when a sample of berbamine will be available, corresponding affinities will be determined and presented.

The general conclusion regarding the biological activity of this compound can be maintained. Oxyacanthine is less present in the scientific literature but is described to have also different biological and therapeutical effects also close to those of berbamine.

Corrected table and figures

Graphical abstract



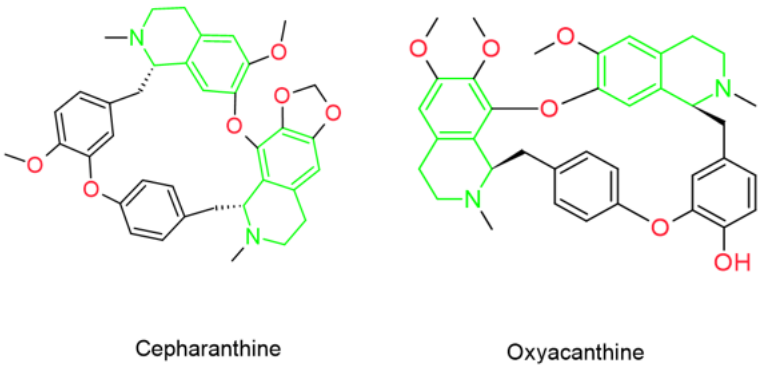


Fig. 3 : Chemical structures the bis-THIQ alkaloids Cepharanthine and Oxyacanthine. The THIQ moieties are highlighted in green in both compounds.

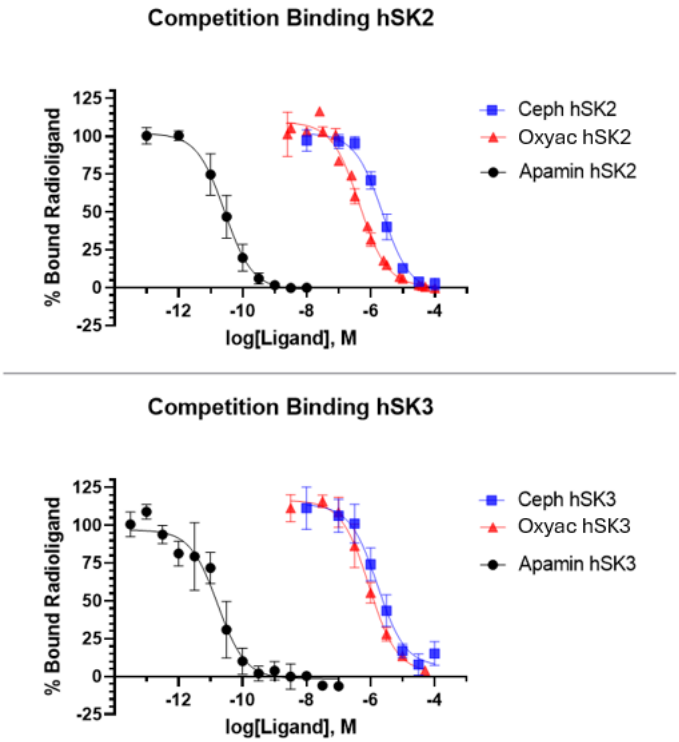


Fig. 4 : Binding competition curves obtained for the alkaloids on human SK2 channels (top), and on human SK3 channels (bottom) (n=3 to 5, confer Table 1). Results are presented in comparison to apamin obtained in the same procedure (n = 4). The displacement of ^{125}I-apamin, the radiolabeled ligand, is measured in relation to competitor concentration (Logarithmic). Curve points are means of the values from all experiments, standard deviation is represented by error bars.

Table1. Affinities of bis-THIQ Compounds for the SK2 and SK3 Channels[a]

Ligand	hSK2 Ki (μM) (no. of experiments)	hSK3Ki (μM) (no. of experiments)	SK2 Selectivity factor (subtype preference)
cepharanthine	1,318±0,281(3)	1,091±0,191(4)	0.83
oxyacanthine	0,284±0,066(5)	0,679±0,323(4)	2.17
AG525E1[b]	0,277±0,040	0,370±0,094	1,34
AG525E2[b]	1,256±0,170	1,625±0,238	1,29
AG525meso[b]	1,685±0,149	1,791±0,147	1,06
tetrandrine[b]	0,306±0,050	0,461±0,042	1,51

[a]Values are presented as mean ± SD. For original data,the number of experiments realized to obtain each value is reported in parentheses. [b]Published Ki affinities;[20−22] previous SK2 affinities were evaluated on the rat “rSK2” subtype.