

Supporting Information

Identification of the toxic components in *Semen Strychni* and their metabolites in rat serum by high performance liquid chromatography coupled with Q Exactive high-resolution benchtop quadrupole Orbitrap mass spectrometer

Shujuan Li^a, Meiyu Zhang^b, Pengyi Hou^c, Ruowen Zhang^d, Chenzhi Hou^a,
Kaishun Bi^a, Xiaohui Chen^{a*}

^aSchool of Pharmacy, Shenyang Pharmaceutical University, Shenyang Pharmaceutical University, No. 103, Wenhua Road, Shenyang, China. E-mail: cxh_syphu@hotmail.com; Fax: +86-02423986259; Tel: +86-02423986259

^bSchool of Traditional Chinese Material Medica, Shenyang Pharmaceutical University, No.103, Wenhua Road, Shenyang, China

^cThermo Fisher Scientific, Shanghai, China

^dStem Cell Institute, Department of Biochemistry and Molecular Genetics, University of Alabama at Birmingham, Birmingham, AL 35294-0024, USA

*Corresponding author at: School of Pharmacy, Shenyang Pharmaceutical University, Shenyang, 110016, China.

Email address: cxh_syphu@hotmail.com

Tel.: +8602423986259;

Fax: +8602423986259

Supporting Information

Glomerular atrophy and tubular dilation were observed in the kidney sections (Figure S1A) of rats in SAs extract group. However, the kidney sections (Figure S1B) of rats in blank group apparently showed normal nephrocyte structures. Results illustrated that a successive administration of this dose could induce rat renal damages.

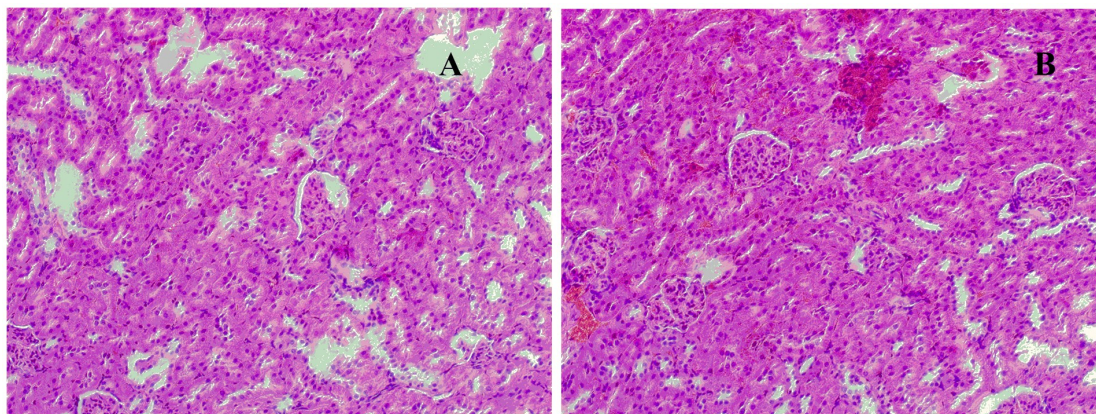


Figure S1 Representative histopathological photographs of Sprague-Dawley rat kidney sections (100×) from rats in SAs extract group (A) and rats in blank group (B), on the 7th day after oral administration of strychnos alkaloids extract at a dose of 12mg/kg/day.

Supporting Information

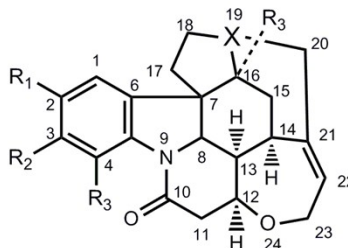
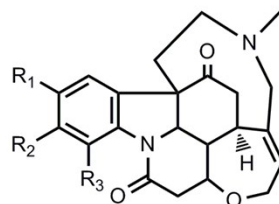
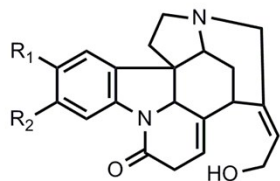

										
		R ₁	R ₂	R ₃	X			R ₁	R ₂	R ₃
A2	Strychnine	H	H	H	N	A10	Vomicine	H	H	OH
A3	2-hydroxystrychnine	OH	H	H	N	A8	Icajine	H	H	N
A4	3-hydroxystrychnine	H	OH	H	N	A14	Novacine	OCH ₃	OCH ₃	N
A5/6	α-Colubrine	OCH ₃	H	H	N					
A5/6	β-Colubrine	H	OCH ₃	H	N					
A7	N-methyl-hydroxystrychnine	OH+H		H	N-CH ₃					
A9	16-OH- α (β)-colubrine	OCH ₃ +H		OH	N					
A12	Brucine	OCH ₃	OCH ₃	H	N					
A13	Brucine-N-oxide	OCH ₃	OCH ₃	H	N-O	A1	Isostrychnine	H	H	
						A11	Isobrucine	OCH ₃	OCH ₃	

Figure S2 Chemical structures of the constituents identified in SAs extract.