

## Glycyrrhizin: antiviral activity against SARS coronavirus

Glycyrrhizin inhibits the replication of SARS\*-associated coronavirus *in vitro*, report researchers from Germany.

They investigated the antiviral activities of ribavirin, 6-azauridine, pirazofurin, mycophenolic acid and glycyrrhizin against two clinical isolates of coronavirus (FFM-1 and FFM-2) from patients with SARS. Specifically, the researchers assessed virus-induced cytopathogenicity in Vero cells.

Glycyrrhizin was the most potent inhibitor of virus replication with a selectivity index of  $> 67$  when applied both during and after virus adsorption.\*\* The selectivity indices of 6-azauridine and pirazofurin were 6 and 12, respectively, whereas ribavirin and mycophenolic acid had no effect on virus replication.

As well as inhibiting viral replication, glycyrrhizin inhibited adsorption and penetration of the virus. Glycyrrhizin had a selectivity index of  $> 8.3$  when applied during virus adsorption and  $> 33$  when applied after virus adsorption.

*"Since the side-effects of this compound are known and can be controlled for, proper monitoring could lead to effective use of glycyrrhizin as a treatment for SARS",* comment the researchers.

\* severe acute respiratory syndrome

\*\* The selectivity index was the ratio of the drug concentration that reduced cell viability by 50% to the drug concentration that reduced the cytopathological effect of the virus by 50%.

Cinatl J, et al. Glycyrrhizin, an active component of liquorice roots, and replication of SARS-associated coronavirus. *Lancet* 361: 2045-2046, 14 Jun 2003 800943046