

# Three New Steroidal Saponins from *Smilax officinalis*

Bernadete P. da Silva and José P. Parente

Laboratório de Química de Plantas Medicinais, Núcleo de Pesquisas de Produtos Naturais,  
Universidade Federal do Rio de Janeiro, PO Box 68045 CEP 21941-971 Rio de Janeiro, Brazil

Reprint requests to Prof. Dr. J. P. Parente. Fax: +55-21-2562-6791. E-mail: parente@nppn.ufrj.br

*Z. Naturforsch.* **2008**, 63b, 95 – 100; received August 3, 2007

Three new steroidal saponins were isolated from the roots of *Smilax officinalis* Kunth. Their structures were established as (3 $\beta$ ,5 $\beta$ ,22 $\alpha$ ,25 $S$ )-26-( $\beta$ -D-glucopyranosyloxy)-22-hydroxyfurostan-3-yl *O*- $\alpha$ -L-arabinopyranosyl-(1 $\rightarrow$ 6)-*O*-[ $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranoside, (3 $\beta$ ,5 $\alpha$ ,22 $\alpha$ ,25 $S$ )-26-( $\beta$ -D-glucopyranosyloxy)-22-hydroxyfurostan-3-yl *O*- $\alpha$ -L-arabinopyranosyl-(1 $\rightarrow$ 6)-*O*-[ $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranoside and (3 $\beta$ ,5 $\alpha$ ,6 $\beta$ ,22 $\alpha$ ,25 $S$ )-26-( $\beta$ -D-glucopyranosyloxy)-6,22-dihydroxyfurostan-3-yl *O*- $\alpha$ -L-arabinopyranosyl-(1 $\rightarrow$ 6)-*O*-[ $\beta$ -D-glucopyranosyl-(1 $\rightarrow$ 4)]- $\beta$ -D-glucopyranoside. Their structure elucidations were performed using detailed analyses of  $^1\text{H}$  and  $^{13}\text{C}$  NMR spectra including 2D NMR spectroscopic techniques (DEPT, COSY, HSQC, HMBC and HMQC) and chemical conversions.

*Key words:* *Smilax officinalis*, Liliaceae, Steroidal Saponins, Furostanol Glycosides