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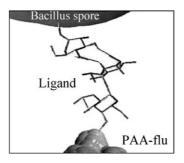
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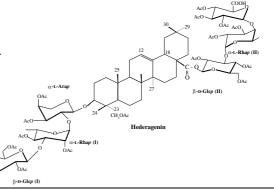


Structure elucidation by NMR spectroscopy of a new acetylated saponin from Centratherum anthelminticum

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A new glycosylated triterpene 3-O-[β -D-glucopyranosyl-($1\rightarrow 3$)- α -L-rhamnopyranosyl-($1\rightarrow 2$)- α -L-arabinopyranosyl]-28-O-[β -D-glucuronopyranosyl-($1\rightarrow 4$)- α -L-rhamnopyranosyl-($1\rightarrow 3$)- β -D-glucopyranosyl]-hederagenin was isolated from the seeds of *Centratherum anthelminticum*.



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$$\begin{array}{c} \alpha\text{-D-Glc-}(1\rightarrow7)\text{-}\alpha\text{-L-Hep-}(1\rightarrow7)_{\boxed{}}\\ \mathbf{Q}\rightarrow3)\text{-}\alpha\text{-D-GlcNAc-}(1\rightarrow2)\text{-}\beta\text{-D-Man-}(1\rightarrow3)\text{-}\beta\text{-D-ManNAc-}(1\rightarrow3)\text{-}\alpha\text{-Hep-}(1\rightarrow3)\text{-}\alpha\text{-L-Hep-}(1\rightarrow5)\text{-}\alpha\text{-Kdo}\\ \alpha\text{-L-Fuc-}(1\rightarrow6)\text{-}\beta\text{-D-Man-}(1\rightarrow4)^{\boxed{}} \end{array}$$

where Q = 3-O-Me- α -L-QuiNAc-(1 \rightarrow or H (~3:2).

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** Supplementary data available via ScienceDirect

COVER

Well-defined glycoforms of glycoproteins can easily be obtained by oxidative coupling of synthetic thioaldoses with proteins that have a cysteine moiety in lieu of an asparagine residue carrying natural N-linked oligosaccharides. In vitro glycosylation offers several advantages such as quantitative conjugation, incorporation of oligosaccharides that display high bioactivities and the possibility of using convenient bacterial or yeast protein expression systems. The figure is related to Geert-Jan Boons' *Carbohydrate Research Award* paper, Carbohydr. Res., **2004**, *339*, 181–193.



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