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ABSTRACT BOOK

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P-177 PHENOLIC PROFILE AND ANTIMICROBIAL ACTIVITY OF DIETARY SUPPLEMENTS BASED ON *COCHLOSPERMUM ANGOLENSIS* WELW.

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Cochlospermum angolensis Welw. (borututu) is a widespread tree in Angola that belongs to the *Cochlospermaceae* family. Its bark infusion is used in the traditional medicine of Angola for the treatment of jaundice, hepatic diseases and for the prophylaxis of malaria [1]. In the present work, three formulations based on this plant (infusion, pills, and syrup) were characterized by HPLC-DAD-ESI/MS regarding phenolic composition, and evaluated by their *in vitro* antimicrobial activity against isolates of multiresistant bacteria (*Escherichia coli*, *Escherichia coli* spectrum extended producer of β-lactamases (ESBL), *Proteus mirabilis*, methicillin-resistant *Staphylococcus aureus* (MRSA) and *Pseudomonas aeruginosa*).

The infusion and pills revealed the highest variety of phenolic compounds, with eleven compounds identified. Protocatechuic acid was only present in infusions, being the most abundant compound, while (epi)gallocatechin-*O*-gallate and eucaglobulin/globulusin were the main molecules identified in pills and syrup, respectively. Methyl ellagic acids, eucaglobulin/globulusin B (Fig. 1) and (epi)gallocatechin-*O*-gallate were found in all the formulations. The infusion revealed antimicrobial activity against all the studied bacteria with the exception of *P. mirabilis* whereas the pills revealed activity in *E. coli* ESBL and MRSA. No significant antimicrobial activity was detected in the syrup, in agreement with its low concentrations of phenolic compounds. None of the tested formulations inhibited *P. mirabilis*.

Considering the obtained results, *C. angolensis* infusion can be considered a good source of phenolic compounds as well as a good antimicrobial agent.

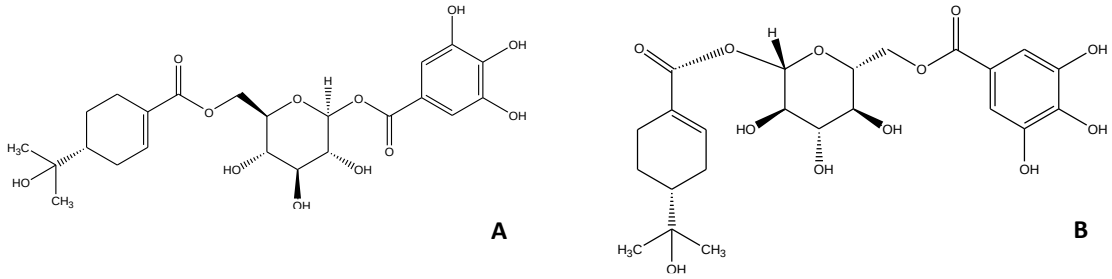

Figure 1. Chemical structures of eucaglobulin (**A**) and globulusin B (**B**).

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[1] H. -H. Poppendieck, New York Botanical Gardens, Bronx, NY, 1981.