Comparative studies of phytonutrients content and therapeutic potential of fruits parts of *Dialium guineense* Willd (Fabaceae) and *Ziziphus mauritiana* Lam. (Rhamnaceae) used in traditional pediatric in Burkina Faso

Alphonsine RAMDE-TIENDREBEOGO1, 4*, David BADO2, Jules YODA1, Samson GUENNE2, Martin KIENDREBEOGO2, Innocent Pierre GUISSOU3, Aliou GUISSE4
1 Research and Development of Phytomedicines and Medicines Laboratory /Health Sciences Research Institute / National Center for Scientific and Technological Research (L-RD/PM / IRSS)/ CNRST), 03 BP 7047 Ouagadougou 03, Burkina Faso.
2 Laboratory of Applied Biochemistry and Chemistry/ Joseph KI-ZERBO University, 03 BP 7021 Ouagadougou 03, Burkina Faso.
3 St Thomas d’Aquin University/ Faculty of Health Sciences, 06 BP 10212 Ouagadougou 06 Burkina Faso.
4International Research Laboratory IRL 3189 Environment, Health, Societies (CNRST/USTTB/UCAD/UGB/CNRST).
* Corresponding author. E-mail: ramdalphonsine@gmail.com Tel: +226 74 49 43 55

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ABSTRACT
*Objective:* The objective of the present study was to determine the phytonutrients content and selected biological activities of fruit parts of *Dialium guineense* commonly known as velvet tamarind and *Ziziphus mauritiana* called jujube tree used in the management of childhood diseases.

*Methodology and Results:* Phytochemical components were determined by specific reagents and biological activities by antiradical and antibacterial test. The fruit pulp of *Ziziphus mauritiana* had the best antioxidanat activity (IC$_{50}$ = 0.27 mg/mL) due to its high contents ( p < 0.05 ) of total phenolic compounds (31.18 ± 0.06 mg GAE/g), flavonoids (0.73 ± 0.50 mg RE/g), hydrolysable tannins (11.37 ± 0.05 mg TAE/g) and condensed tannins (9.86 ± 0.30 mg CE/g). It also exhibited the highest contents of β-carotene (72 ± 0.01 mg/100g) and macroelements Na (12 ± 0.00 mg/100g), K (605 ± 0.20 mg/100g). On the other hand, the fruit pulp of *Dialium guineense* had the best contents of vitamin C (36 ± 0.07 mg/100g), vitamin E (0.109 ± 0.07 mg/100g) and microelements (Fe, Zn) with 8.00 ± 0.01 mg/100g and 1.10 ± 0.02 mg/100g respectively. The fruits pulp of these two species showed antibacterial activity against *E. coli* with the best minimum inhibitory concentration (MIC) of 3.12 mg/mL.

*Conclusions and application of results:* Recommendations of enhancement and promotion of these two fruit species could constitute important sources for the development of new nutraceuticals and phytomedicines in the prevention and treatment of childhood diseases.

*Keywords:* Childhood diseases, *Dialium guineense, Ziziphus mauritiana*, Nutraceuticals.