10th Brazilian Conference on Natural Products
XXXVI RESEM
4-7 November 2025, Belo Horizonte, MG, Brazil

Section: 03

MONTEVERDIA SALICIFOLIA REISSEK: A SOURCE OF METABOLITES WITH ANTIDIABETIC POTENTIAL

Cássia Gonçalves Magalhães[1,2*], Lucienir Pains Duarte[2], Maria Cecília Cardoso dos Santos[3], Bruna Gonçalves Lopes[3], Micheli Debiasi Alberton[3]

cgmagalhaes@uepg.br

1- Departamento de Química, SEXATAS, UEPG, Av. Carlos Cavalcanti, 4748, Ponta Grossa, PR, Brazil. 2- Departamento de Química, ICEx, UFMG, Av. Antônio Carlos, 6627, Belo Horizonte, MG, Brazil. 3- Departamento de Ciências Farmacêuticas, CCS, FURB, Rua Antônio da Veiga, 140, Blumenau, SC, Brazil.

Diabetes mellitus is a multifactorial global health disorder that is rising at an alarming rate. One effective therapeutic approach for controlling hyperglycemia associated with type-2 diabetes is to target enzymes that catalyze starch and maltose hydrolysis in the intestine, such as α-glucosidase. Plant extracts are widely studied as potent candidates in the prevention and treatment of type 2 diabetes. *Monteverdia salicifolia* (syn. *Maytenus salicifolia,* Celastraceae) occurs in Southeast of Brazil. Its leaves are used in the traditional medicine for treatment of gastric ulcers and skin allergies. This species is a source of pentacyclic triterpenes, quinonemethides and flavonoids. In a continuation of the studies about the bioactive potential of *M. salicifolia*, this work aimed to evaluate the *in vitro* antiglycation activity and α-glucosidase inhibition of 4'-O-methyepigallocatechin and 16-*β*-hydroxypristimetin, previously isolated of this species, and its roots ethanolic extract. *In vitro* antiglycation activity by oxidative pathway was performed as described by Ramos *et al*. (2019) using glyoxal as substrate. Quercetin (1 mg mL^{-1}) was used as standard and DMSO as the negative control. Results were expressed as percentage of inhibition. The α-glucosidase inhibitory assay will be performed according to Kim, Wang, & Rhee, (2004). All the tests were performed in triplicate. The isolated compounds and the extract were able to inhibit effectively the enzyme as well as the glycation, showing a better performance than quercetin. These results support the traditional use of *Monteverdia species* in diabetes and stimulate the continuation of evaluation of the activity of these metabolites *in vivo* models. The authors thank the support from their institutions and the financial support of CAPES and CNPq.

Keywords: *quinonemethides, catechins, Monteverdia salicifolia*