



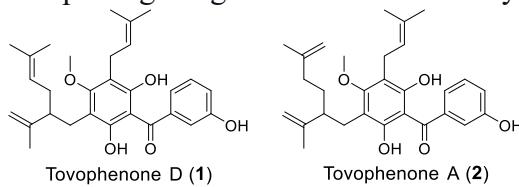
## TOVOPHENONE A AND D: PRENYLATED BENZOPHENONES FROM *Tovomitopsis Paniculata* (Spreng.) Planch. & Triana (Clusiaceae)

**Mateus de Freitas Brito**<sup>1\*</sup>, Adriana Quintella Lobão<sup>2</sup>, Leandro Machado Rocha<sup>3</sup>, Lucas Silva Abreu<sup>1</sup>

mateusfb@id.uff.br

1-LQPN, Departamento de Química Orgânica, Instituto de Química, UFF, Outeiro de São João Batista, S/N, Niterói, RJ, Brazil. 2- Herbario de Niterói, Instituto de Biologia, UFF, Outeiro São João Batista, S/N, Niterói, RJ, Brazil. 3-LTPN, Departamento de Tecnologia Farmacêutica, Faculdade de Farmácia, Niterói, RJ, Brazil.

Brazil is one of the most biodiverse countries in the world, making Brazilian flora a rich source for the search for new pharmaceutical products. Among Brazilian biomes, the Atlantic Forest is known for its numerous medicinal plants and for using ethnopharmacology as a reference for popular knowledge in this region, but its biodiversity is still poorly studied.<sup>1</sup> One example is *Tovomitopsis paniculata* (Spreng.) Planch. & Triana (Clusiaceae), a species endemic to the Brazilian Atlantic Forest, which has not yet been studied phytochemically. With the aim of exploring the chemical diversity of native plants belonging to the Atlantic Forest, this study describes the identification of tovophenone D (**1**), a new benzophenone that is an isomer of tovophenone A (**2**). The methodology involved maceration of *T. paniculata* roots in hexane, ethyl acetate, and methanol. The hexane extract was analyzed by HPLC-DAD and indicated that the chemical composition was mainly formed by a compound that was subsequently analyzed by NMR. The NMR spectra showed that the major component was a mixture of benzophenone tovophenone A and an isomer not yet reported in the literature, allowing the structural proposal of tovophenone D. The compound tovophenone A has already been tested for oral carcinoma cell line KB and has an  $IC_{50}=10$   $\mu$ g.mL<sup>-1</sup>, but the authors consider it inactive.<sup>2</sup> Therefore, in this study, it was possible to report the identification of tovophenone A and propose the structure of a new benzophenone. This is the first report of the identification of these compounds in *T. paniculata*, a species endemic to the Atlantic Forest, reinforcing the need to continue exploring the great chemical diversity of Brazilian plants.



1-Valli, M.; Russo, H.M.; Bolzani, V. S. *AABC* 2018, 90, 763.  
2- Seo, E-K. *et al. Phytochemistry* 1999, 52, 669.

**Keywords:** atlantic forest, Clusiaceae, *Tovomitopsis paniculata*, prenylated benzophenone