

Bromotyrosine derivatives isolated from marine sponges as antiparasitary

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Tropical diseases caused by single-celled parasites are of particular importance: malaria, leishmaniasis and Chagas disease, it represents three most important diseases caused by parasitic protozoa. It is estimated that these three diseases are responsible for more than 110,000 deaths every year. In the absence of a long-term protecting vaccine, the control of these parasitic infections is based on a few chemotherapeutic agents, most of which nowadays have parasitic resistance, severe adverse effects and variable efficacy according to the phase of the disease. For this reasons development of new, safe and effective antiprotozoal agents are urgent needs. By these reasons, we are evaluating the potential of Colombian sponge as source of antiparasitic compound. Urabá Gulf is located in the Northwest Colombian Caribbean Sea, on the border with Panama. We are isolated 14 different bromotyrosine derivatives from marine sponges; structural determination of isolated compounds was assigned using one- and two-dimensional NMR, MS and other spectroscopy data. All compounds were evaluated in vitro, against the most important tropical parasitic: *Leishmania panamensis*, *Plasmodium falciparum* and *Trypanosoma cruzi*. The selectivity indices were realized comparing the activity against the toxicity of the compounds over the human promonocytic cell line U937. Four evaluated compounds showed high selective indices as antiparasitic *in vitro* at concentrations between 10 and 20 μ M.

Biography

Elkin GALEANO is Pharmaceutical Chemist, M. Sc. in Pharmaceutical Science and last year doctoral students in Pharmaceutical Science. He works in the Marine Natural Products Research Group at University of Antioquia, Colombia. He has published more than 10 papers in journals and recently, a review on marine natural products in drug development and new perspectives.