



Anais da Academia Brasileira de Ciências

ISSN: 0001-3765

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Academia Brasileira de Ciências

Brasil

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Anais da Academia Brasileira de Ciências, vol. 88, núm. 3, 2016, pp. 1601-1602

Academia Brasileira de Ciências

Rio de Janeiro, Brasil

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EDITORIAL NOTE

Potential Therapeutical Compounds and Scientific Performance of Brazilian Researchers

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This new supplement of issue 88 of the *Annals of the Brazilian Academy of Sciences* (AABC) gathers both original and review papers from outstanding Brazilian and international researchers. Several of them show compounds acting as protective agents in different diseases, including selenium and selenium-containing compounds. Selenium is an essential nutrient for human metabolism, especially due its antioxidant properties (Maldonado et al. 2012, Liu et al. 2013, Noguchi 2016). In this context, Ellwanger et al. (2016) revisited some biological functions of selenium and the impact of a dysregulation of its levels in the organism. In the same paper, the authors also discussed the beneficial effects of selenium in animal models of Parkinson's disease, a severe neurodegenerative disease. Moreover, Oliveira et al. (2016) demonstrated that the organoselenium compound HBD is atheroprotective by preventing Cu^{2+} -induced oxidation of low-density lipoprotein (LDL), the main factor that causes atherosclerosis (Spence 2016).

Herein it is also shown the beneficial angiogenic activity of the oil obtained from *Curcuma longa*, which Araújo et al. (2016) suggested to be a potential compound for medical applications (e.g. promoting tissue healing). The authors also suggested that this effect is secondary to activation of inflammatory response induced by a specific phytoconstituent in synergy with curcumin, the most studied pharmacological active compound found in this plant (Maheshwari et al. 2006). Furthermore, Melo Neto et al. (2016) demonstrated that *Zanthoxylum rhoifolium* protects against infection and infectivity of macrophages by *Leishmania amazonensis*, the protozoan parasite that causes leishmaniasis. The authors observed that this antileishmanial effect is probably due to activation of defense mechanisms in macrophages, such as increase in phagocytic capability and nitrite content.

In this issue it is also provided evidence of gastroprotective effect of *Memora nodosa* roots, popular known as carobe, by Silva et al. (2016). The authors demonstrated that carobe oral administration was protective in an experimental murine model of gastric ulcer induced by indomethacin administration, and it was attributed to an increase of adhered gastric mucus. A paper by Sharma et al. (2016) demonstrated that dope zinc oxide nanoparticles *per se* showed antimicrobial effect against different pathogenic bacterial and fungal strains. When combined with ciprofloxacin and ampicillin, two antibiotics that act against multi drug resistant microorganisms, the effect of these nanoparticles was synergic, which, as suggested by the authors, it may be beneficial against microorganism resistance.

Finally, this issue also contains an interesting paper describing the scientific performance of Brazilian researchers that received grants from Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq). Kamdem et al. (2016) evaluated and compared senior's investigator profiles from different levels of productivity grant (1A-1D) in pharmacology, including citation and *h*-index. The results showed difference among researchers from the higher categories (1A and 1B), but not among researchers from lower categories (1C and 1D). The authors suggested that these findings may help to define better allocations of grants in Brazil.

We hope that the readers enjoy the content of this supplement.

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