

XVIII



Congress of the
PORTUGUESE
BIOCHEMICAL
SOCIETY

Coimbra | December 17-20 2014





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FROM THE LOCAL ORGANIZERS

We are pleased to invite you to the XVIII Congress of the Portuguese Biochemical Society (SPB), which will be held at the Hotel Vitis Gale in the beautiful city of Coimbra from December 17-20, 2014. The SPB Meetings have been a forum for discussion and interaction of Portuguese and foreign scientists and students in the field of biomedicine and biomolecular sciences during the last decades. For the 2014 edition, we invited highly-recognized international scientists to present keynote and plenary lectures.

Besides the keynote and plenary lectures (a total of 6), a total of ten topic-oriented sessions will be organized:

- 1) Molecular neuroscience and disease (co-sponsored by the Portuguese Society for Neurosciences)
- 2) Mitochondrial metabolism in health and disease (co-sponsored by the UK Biochemical Society)
- 3) Aging and cellular redox signaling (co-sponsored by the Spanish Society for Biochemistry and Molecular Biology, SEBBM)
- 4) Education in biochemistry and communication in science
- 5) Natural products: the drugs of tomorrow? (co-sponsored by the Brazilian Society for Biochemistry and Molecular Biology, SBBq)
- 6) Innovation and entrepreneurship in Biosciences: creating your own company
- 7) Biochemistry towards nanomedicine
- 8) Plant-environment interactions – implications in development and adaptation (co-sponsored by the Portuguese Society for Plant Physiology)
- 9) Stem cells and regenerative medicine
- 10) Epigenetic gene expression mechanisms and epigenetic regulation

We expect that by bridging together excellent national and international researchers in this Meeting, we will attract a large number of students and senior scientists, generate new synergies and contributing to foster the scientific careers of young students, contributing to increase the internationalization of Biochemical sciences in Portugal.



In behalf of the local organization,
Paulo J. Oliveira, Ph.D.
Center for Neuroscience and Cell Biology,
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C.17

Polyphenols characterization and toxicological evaluation of *Pterospartum tridentatum* leaf extracts

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Pterospartum tridentatum Wikk. (prickled broom) is an autochthonous and common plant in Portugal. Leaves and stems are normally used in cooking, to flavour rice, roast meat or hunting animals. Leaves are also used as a condiment in fresh salads and, despite of its traditional use, no toxicological evaluation has been performed.

P. tridentatum leaves aqueous extract ESI-MS spectrum revealed the presence of several luteolin and isorhamnetin derived phenolic compounds, which can be associated to the health benefits claimed for this plant species. Still, *P. tridentatum* leaves extract (up to 100 µg plant extract.mg⁻¹ protein) stimulated state 4 and FCCP-stimulated liver mitochondria respiratory rates and inhibited the state 3 respiratory rate. Respiratory control ratio was decreased, indicating a dysfunction in respiratory activity induced by *P. tridentatum* leaves extract and, in good agreement with the previous results, cytotoxicity evaluation by MTT assay (50 and 125 µg plant extract.10⁵ cells) showed a decrease on HepG2 cell viability. Overall, the present study suggests that the consumption of *P. tridentatum* leaves in high amounts or continuously should be regarded as noxious.

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C.18

Implications of Maternal Nutrient Reduction on Fetal Nonhuman Primate Cardiac Mitochondria at 0.65 Gestation (G).

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