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Editorial

Marine natural products☆

Rosângela de Almeida Epifanio started her scientific career at the Universidade Federal do Rio de Janeiro (UFRJ) as an undergraduate pharmacy student (1984). She got her Masters (1988) and PhD (1992) degrees in Organic Chemistry under the supervision of Prof. Angelo C. Pinto. She received the Ambriex Award of the São Paulo Society of Pharmacy and Chemistry in 1988. During her PhD, she discovered her truest passion in science: the chemistry of the marine environment.

At that time, studies of marine natural products in Brazil were just emerging and included some papers on the isolation of steroids, diterpenes and sesquiterpenes, mainly from echinoderms, cnidarians, sponges, tunicates, molluscs and algae. To pursue her dream, Rosângela spent a year during her PhD at the "*Istituto di Chimica Biomolecolare, Consiglio Nazionale delle Ricerche*" (Naples, Italy) with the co-supervision of Dr. Guido Cimino, a well known researcher in this field. Together, they developed some of the first studies on the chemical ecology of nudibranchs and sponges.

She joined the Department of Organic Chemistry of the Universidade Federal Fluminense (UFF) in 1992 where she remained for her entire career. With fellowship funding from the International Foundation for Science (Sweden) in 1993, she joined Prof. William Fenical's group at SIO-UCSD (CA, USA). During this period she developed a strong collaborative program in marine chemical ecology that resulted in a series of expeditions to the Cabo Frio area, Ilha Grande, the Abrolhos Islands and Fernando de Noronha. She was also an enthusiastic participant on several ship-board expeditions to the Bahamas Islands.

In 1995, Prof. Rosângela received a PADCTII-EQF grant that allowed her to initiate in depth research in the chemistry and ecology of Brazilian marine invertebrates at UFF. Since that time, she guided dozens of Scientific Initiation students, three master's students and one PhD student resulting in the publication of 40 plus scientific articles. The chemistry of the octocoral *Carijoa riisei* (Fig. 1) is a good example of her contribution to the marine natural products research in Brazil. For her work in natural products chemistry and marine chemical ecology, in 2000 she received the First Prize in Science and Technology in Category Junior Researcher in Natural Products, Oswaldo Cruz Foundation and EMS Sigma Pharma Group.

From the middle of the 2000s, Prof. Rosângela found a new inspiration, the diffusion of scientific knowledge. She created beautiful texts and lectures in simple language, with the same dedication as if she was creating a scholarly scientific paper. This work illustrated Prof. Rosângela's, dedication and perfection to the extreme, and it was with this care that she conceived and founded the Revista Virtual de Química-RVq, from the Brazilian Chemical Society, launched in 2009 at the 32nd Annual Meeting of the SBQ.

Dedicating this issue of the journal is a way to celebrate the pioneering contribution of Dr. Epifanio to the marine natural products field in Brazil. Brazilian and foreign researchers that collaborated with Prof. Rosângela during her brief, but very significant career, were invited to present papers on their studies combining different aspects of marine environment chemistry.

The research on marine environment has gained increasing attention during the past 50 years, demonstrating the amazing biological and chemical diversity of the world's oceans. Colorful, soft-bodied, sessile marine invertebrates, and more recently marine microbes, have been shown to be a prolific source of

Fig. 1. Photograph of octocoral *Carijoa riisei*. Author: Tito Monteiro da Cruz Lotufo.

☆ Dedicated to the memory of Prof. Rosângela de Almeida Epifanio (1962–2014).

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natural products with biomedical potential. The influence of these metabolites on drug discovery and development was significantly felt in the past years with the approval of ziconotide (Prialt®), trabectedin (Yondelis®), the halicondrin B derivative eribulin mesylate (Halaven®), and the antibody conjugate brentuximab vedotin (SGN-35, Adcetris®), while an increasing number of marine natural products continue to enter human clinical trials. Rosângela's significant contributions to this field helped to provide the foundation in Brazil for our current progress in this field.

Conflicts of interest

The authors declare no conflicts of interest.

Norberto P. Lopes[a,*], Claudia M. Rezende[b], Leticia V. Costa-Lotufo[c], William Fenical[d]
[a] *Universidade São Paulo, Ribeirão Preto, SP, Brazil*
[b] *Universidade Federal do Rio de Janeiro, Rio de Janeiro, RJ, Brazil*
[c] *Universidade São Paulo, São Paulo, SP, Brazil*
[d] *Scripps Institution of Oceanography, University of California in San Diego, United States*

* Corresponding author.
E-mail: npelopes@fcfrp.usp.br (N.P. Lopes).