This is how your abstract will appear in the book of abstracts:

Chemical and biological studies of a mixed valent diruthenium tetraacetate containing the metronidazole drug

Denise de Oliveira Silva[a*], Ana C. Valderrama N.[a*], Nilton Lincopan[b], Elsa M. Mamizuka[b], Izilda Bagatin[a], Sizue O. Rogero[c]

[a] Departamento de Quimica Fundamental/ Química Inorgânica, Instituto de Química da Universidade de São Paulo, Cx. Postal 26077, 05513-970, São Paulo, Brazil. [b] Faculdade de Ciências Farmacêuticas, Universidade de São Paulo, 05508-900, São Paulo, Brazil. [c] Instituto de Pesquisas Nucleares, IPEN/CNEN, Cx. Postal 11049, São Paulo, Brazil
Email: deosilva@iq.usp.br

Metronidazole (MTZ, 1-[2-hydroxyethyl]-2-methyl-5-nitroimidazole) a potent antiparasitic and antibacterial drug worldwide clinically used, was reacted with $[Ru_2]^{5+}$ carboxylate core giving the $[Ru_2(\mu\text{-}O_2CCH_3)_4(MTZ)_2]PF_6 \cdot H_2O$ correspondent metallodrug. A paddle-wheel type structure and a metal-metal multiple bond for the new complex are supported by electronic spectroscopy, FTIR and Raman vibrational spectroscopies and magnetic susceptibility. Both MTZ ligands axially coordinate to the metal centers by nitrogen atoms of the imidazole rings. Thermal stability of the solid was determinated by TGA and its behavior in solution was monitored by electronic spectroscopy, cyclic voltammetry and conductivity measurements. Biological assays *in vitro* show that the metallodrug exhibits higher toxicity for *HeLa* cancerous cells than for NCTC-clone L929 normal cells. The metal complex has antibacterial activity for anaerobic (*B. fragilis*) and micro-aerophilic (*C. coli*) cells. No activity was detected for aerobic cells (*E. coli*, *P. aeuginosa* and *S. aureus*).

Authors thank FAPESP and CNPq Brazilian agencies for financial support.

Print Close