

## ESR, electrochemical and ORAC studies of nitro compounds with potential antiprotozoal activity

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Cyclic Voltammetry (CV) and electron spin resonance (ESR) techniques were used in the investigation of several potentially antiprotozoal nitro derivatives of dihydroquinoxaline and indazole. A self-protonation process involving protonation of the nitro group due to the presence of an acidic proton in the structure of the nitro compound was observed in the first step of an EC<sub>E</sub>rev reduction mechanism. ESR spectra of the free radicals obtained by electrochemical reduction in situ were characterized and analyzed. The ESR spectra showed three different hyperfine patterns for both families of compounds. In order to evaluate the free radical scavenger properties of these nitrocompounds we carried out ORAC-FI (Oxygen Radical Antioxidant Capacity) assay. These derivatives showed a low antioxidant capacity.