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## Electrochemical Halogenation of Naphthoquinones: A Modular and Sustainable Strategy towards Trypanocidal Compounds

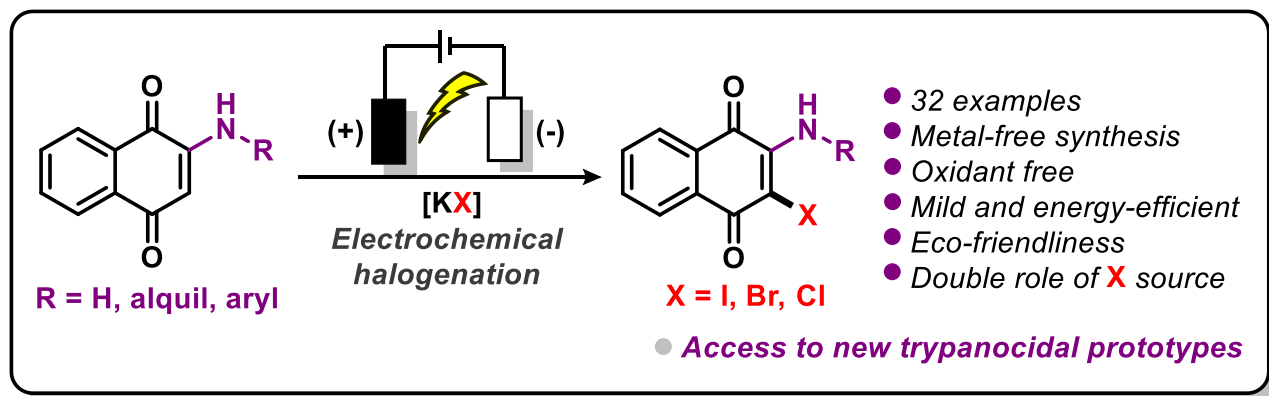
Eduardo F. S. Guimarães,<sup>1</sup> Gabriela A. P. Graça,<sup>1</sup> Emílly B. T. Diogo,<sup>1</sup> Renata G. Almeida,<sup>1</sup> Dandara S. Borges,<sup>1</sup> Ícaro A. O. Bozzi,<sup>1</sup> Maria H. Araújo,<sup>1</sup> Cláudia C. Gatto,<sup>2</sup> Victor F. S. Ramos,<sup>3</sup> Rubem F. S. Menna-Barreto,<sup>3</sup> Guilherme A. M. Jardim<sup>1\*</sup> and Eufânio N. da Silva Júnior<sup>1\*</sup>

- 1) Instituto de Ciências Exatas, Departamento de Química, Universidade Federal de Minas Gerais, UFMG, 31270-901, Brazil
  - 2) Instituto de Química, Universidade de Brasília, UnB 70910-900, Brazil
  - 3) Laboratory of Cellular Biology, IOC, FIOCRUZ, Rio de Janeiro, RJ, 21045-900, Brazil
- \*e-mail: [guilhermeamj@ufmg.br](mailto:guilhermeamj@ufmg.br), [eufranio@ufmg.br](mailto:eufranio@ufmg.br)

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### ABSTRACT

Quinones are a class of privileged scaffolds, widely found in nature. Historically, these molecules have been used since antiquity as dyes and in popular medicine. Among quinoidal compounds, 1,4-naphthoquinones stand out due to their immense potential as pharmacological prototypes.<sup>[1]</sup> In recent years, several 1,4-naphthoquinones containing amino and/or halogenated moieties have been identified as potent anti-infective agents, showing potential in combating *T. cruzi*, the causative agent of Chagas' disease.<sup>[2]</sup> Electrochemistry has emerged as a powerful strategy for the structural modification of molecules, particularly through the insertion of halogens by electrochemical halogenation methods.<sup>[3]</sup> This research aims to develop an environmentally friendly electrochemical halogenation of 2-amino-1,4-naphthoquinones. This new methodology works in the absence of oxidants, featuring a dual role of the employed salt, acting both as halogen source and electrolyte, resulting in 32 amino-halogenated derivatives with good yields under mild conditions. This novel approach provides access to new potent trypanocidal prototypes.



**Scheme 1.** Electrochemical halogenation of 2-amino-1,4-naphthoquinones.

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