

## Response to Letter to the Editors

### “Have we lost an essential link between coordination chemistry and medical applications?”

Geraldes, Carlos F.G.C.; Castro, M. Margarida C.A.; Peters, Joop A.

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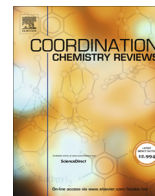
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## Letter to the Editor

### Response to Letter to the Editors: “Have we lost an essential link between coordination chemistry and medical applications?”



The authors of the above commentary, state that the referential significance of our review “Mn(III) porphyrins as potential MRI contrast agents for diagnosis and MRI-guided therapy” (Coord. Chem. Rev. 445 (2021) 214069. <https://doi.org/10.1016/j.ccr.2021.214069>) could be jeopardized because the virtue of this review article is mainly based on the rationale that “*The porphyrin complexes are particularly interesting because they have been shown to localize preferentially in tumors*”. We hope that this is not the case. As stated, a few sentences below the above-cited one: “*The focus of this review will be on relaxivity and the design of theranostics*”. So, we paid relatively little attention to biological issues such as the mechanisms behind the biodistributions of the Mn(III)-porphyrins. Actually, in our opinion, it is not incorrect to state that Mn(III)-porphyrins have been shown to localize preferentially in tumors because it was not specified where. Ni et al. have shown for several metalloporphyrins that the preferred tumor uptake is due to necrotic avidity rather than to tumor selectivity. This is for Mn(II)-porphyrins mentioned in our review on p.10, 4th paragraph on the righthand side. In the literature on Mn(III)-porphyrins, almost no further studies on the topic of necrosis avidity have been published. In our opinion, it would be speculative to specify all reported “preferential tumor uptakes” to “necrosis avidity” without proper histological evidence. Since many tumors, especially the aggressive ones, are characterized by accompanying necrosis, an observation that Mn(III) porphyrins tend to be preferentially incorporated into tumors, without specifying whether the cells involved are necrotic or alive, is still valuable for the detection of tumors.

We are grateful to the authors of the commentary for drawing our attention to several typographic errors in our paper. “... This contrasts with the classical Gd-based CAs which distribute almost

non-selectively over the intracellular space ...” indeed has a typographic error: “intracellular” obviously should be “extracellular”. The abbreviation “PPT” on p. 15 and 18 should read as “PTT”.

### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Carlos F.G.C. Geraldes<sup>a,b,\*</sup>

M. Margarida C.A. Castro<sup>a</sup>

Joop A. Peters<sup>c,\*</sup>

<sup>a</sup> Department of Life Sciences and Coimbra Chemistry Centre, Faculty of Science and Technology, University of Coimbra, Calçada Martim de

Freitas, 3000-456 Coimbra, Portugal

<sup>b</sup> CIBIT/ICNAS, University of Coimbra, Azinhaga de Santa Comba, 3000-548 Coimbra, Portugal

<sup>c</sup> Department of Biotechnology, Delft University of Technology, Van der Maasweg 9, 2629 HZ Delft, The Netherlands

\* Corresponding authors at: Department of Life Sciences and Coimbra Chemistry Centre, Faculty of Science and Technology, University of Coimbra, Calçada Martim de Freitas, 3000-456 Coimbra, Portugal and Department of Biotechnology, Delft University of Technology, Van der Maasweg 9, 2629 HZ Delft, The Netherlands. E-mail addresses: [geraldes@uc.pt](mailto:geraldes@uc.pt) (C.F.G.C. Geraldes), [geraldes@ci.uc.pt](mailto:geraldes@ci.uc.pt), [j.a.peters@tudelft.nl](mailto:j.a.peters@tudelft.nl) (J.A. Peters)

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