

Document Version

Final published version

Citation (APA)

Geraldes, C. F. G. C., Castro, M. M. C. A., & Peters, J. A. (2022). Response to Letter to the Editors: "Have we lost an essential link between coordination chemistry and medical applications?". *Coordination Chemistry Reviews*, 461, Article 214494. <https://doi.org/10.1016/j.ccr.2022.214494>

Important note

To cite this publication, please use the final published version (if applicable).
Please check the document version above.

Copyright

In case the licence states "Dutch Copyright Act (Article 25fa)", this publication was made available Green Open Access via the TU Delft Institutional Repository pursuant to Dutch Copyright Act (Article 25fa, the Taverne amendment). This provision does not affect copyright ownership.
Unless copyright is transferred by contract or statute, it remains with the copyright holder.

Sharing and reuse

Other than for strictly personal use, it is not permitted to download, forward or distribute the text or part of it, without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license such as Creative Commons.

Takedown policy

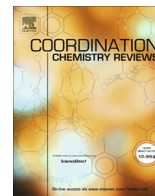
Please contact us and provide details if you believe this document breaches copyrights.
We will remove access to the work immediately and investigate your claim.

Green Open Access added to TU Delft Institutional Repository

'You share, we take care!' - Taverne project

<https://www.openaccess.nl/en/you-share-we-take-care>

Otherwise as indicated in the copyright section: the publisher is the copyright holder of this work and the author uses the Dutch legislation to make this work public.



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^{a,b,*}

M. Margarida C.A. Castro^a

Joop A. Peters^{c,*}

^a Department of Life Sciences and Coimbra Chemistry Centre, Faculty of Science and Technology, University of Coimbra, Calçada Martim de

Freitas, 3000-456 Coimbra, Portugal

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

^c 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 (C.F.G.C. Geraldes), geraldes@ci.uc.pt, j.a.peters@tudelft.nl (J.A. Peters)

Received 6 December 2021

Received in revised form 17 February 2022

Accepted 23 February 2022

Available online 15 March 2022