

Retraction

RETRACTED: Sabir et al. DNA Based and Stimuli-Responsive Smart Nanocarrier for Diagnosis and Treatment of Cancer: Applications and Challenges. *Cancers* 2021, 13, 3396

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The journal retracts the article “DNA Based and Stimuli-Responsive Smart Nanocarrier for Diagnosis and Treatment of Cancer: Applications and Challenges” [1], cited above.

Following publication, concerns were brought to the attention of the Editorial Office regarding the relevance of several references presented in this article [1].

In accordance with standard journal procedures, the Editorial Office and Editorial Board conducted an investigation that confirmed the presence of a number of inappropriate citations. Additionally, the investigation identified unacknowledged overlaps with eight other published articles [2–9], without appropriate acknowledgement or citation. Consequently, the Editorial Board has lost confidence in the reliability of the findings and decided to retract this publication [1], as per MDPI’s retraction policy (https://www.mdpi.com/ethics#_bookmark30) (19 May 2026).

This retraction was approved by the Editor-in-Chief of the journal *Cancers*.

The authors have been informed of this retraction and have indicated their disagreement with this decision.



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References

1. Sabir, F.; Zeeshan, M.; Laraib, U.; Barani, M.; Rahdar, A.; Cucchiari, M.; Pandey, S. RETRACTED: DNA Based and Stimuli-Responsive Smart Nanocarrier for Diagnosis and Treatment of Cancer: Applications and Challenges. *Cancers* **2021**, *13*, 3396. [[CrossRef](#)] [[PubMed](#)]
2. Wu, D.; Wang, L.; Li, W.; Xu, X.; Jiang, W. DNA nanostructure-based drug delivery nanosystems in cancer therapy. *Int. J. Pharm.* **2017**, *533*, 169–178. [[CrossRef](#)] [[PubMed](#)]
3. Mi, P. Stimuli-responsive nanocarriers for drug delivery, tumor imaging, therapy and theranostics. *Theranostics* **2020**, *10*, 4557–4588. [[CrossRef](#)] [[PubMed](#)]
4. Kim, T.; Nam, K.; Kim, Y.M.; Yang, K.; Roh, Y.H. DNA-assisted smart nanocarriers: Progress, challenges, and opportunities. *ACS Nano* **2021**, *15*, 1942–1951. [[CrossRef](#)] [[PubMed](#)]
5. Chen, H.; Liu, D.; Guo, Z. Endogenous Stimuli-responsive Nanocarriers for Drug Delivery. *Chem. Lett.* **2016**, *45*, 242–249. [[CrossRef](#)]
6. Chi, Q.; Yang, Z.; Xu, K.; Wang, C.; Liang, H. DNA Nanostructure as an Efficient Drug Delivery Platform for Immunotherapy. *Front. Pharmacol.* **2020**, *10*, 1585. [[CrossRef](#)] [[PubMed](#)]
7. Zhan, P.; Jiang, Q.; Wang, Z.-G.; Li, N.; Yu, H.; Ding, B. DNA Nanostructure-Based Imaging Probes and Drug Carriers. *ChemMedChem* **2014**, *9*, 2013–2020. [[CrossRef](#)] [[PubMed](#)]
8. Xu, F.; Xia, Q.; Wang, P. Rationally Designed DNA Nanostructures for Drug Delivery. *Front. Chem.* **2020**, *8*, 751. [[CrossRef](#)] [[PubMed](#)]
9. Bae, W.; Kocabey, S.; Liedl, T. DNA nanostructures in vitro, in vivo and on membranes. *Nano Today* **2019**, *26*, 98–107. [[CrossRef](#)]

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