# Article information:

Enzyme‐MOF Nanoreactor Activates Nontoxic Paracetamol for Cancer Therapy - Lian - 2018 - Angewandte Chemie International Edition - Wiley Online Library
<https://onlinelibrary.wiley.com/doi/full/10.1002/anie.201801378>

# Article summary:

1. Chemotherapy drugs have poor selectivity and often result in severe adverse effects, while resistance to chemotherapy occurs in certain cancer cell lines.

2. Enzymatic nanoreactors based on metal-organic frameworks (MOFs) can be potent prodrug activators, with encapsulated enzymes showing enhanced stability and protection from proteolytic degradation.

3. The use of enzyme-MOF nanoreactors for tumor-specific prodrug activation led to significant cytotoxicity in drug-resistant cancer cells and tumor regression, with the mechanism involving the activation of nontoxic prodrug paracetamol by tyrosinase.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

作为一篇科学论文，该文章并没有明显的偏见或宣传内容。然而，它可能存在一些片面报道和缺失的考虑点。

首先，文章提到化疗药物的毒性问题，但未提及其他治疗方法的优缺点。这可能导致读者对于治疗癌症的多种方法有所误解。

其次，文章强调了使用MOFs作为酶载体的优势，但未探讨其潜在风险或限制。例如，MOFs可能会引起免疫反应或产生不良副作用。

此外，在选择TYR作为激活酶时，文章未考虑到TYR在其他细胞类型中也存在，并且可能会导致非特异性激活。这可能会影响该策略的有效性和安全性。

最后，文章未探讨该策略与其他治疗方法相比的优劣，并且未提供足够的证据来支持其主张。因此，在评估该策略时需要更全面地考虑其效果、安全性和可行性。

# Topics for further research:

* Other cancer treatment methods
* Potential risks and limitations of MOFs as enzyme carriers
* Non-specific activation of TYR in other cell types
* Comparison with other treatment methods
* Evidence supporting the strategy
* Comprehensive evaluation of effectiveness
* safety
* and feasibility

# Report location:

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