

## Accepted Manuscript

Review

Platinum drugs: from Pt(II) compounds, Pt(IV) prodrugs, to Pt nanocrystals/  
nanoclusters

Xi Hu, Fangyuan Li, Nabila Noor, Daishun Ling

PII: S2095-9273(17)30132-9

DOI: <http://dx.doi.org/10.1016/j.scib.2017.03.008>

Reference: SCIB 83

To appear in: *Science Bulletin*

Received Date: 14 January 2017

Revised Date: 2 March 2017

Accepted Date: 3 March 2017

Please cite this article as: X. Hu, F. Li, N. Noor, D. Ling, Platinum drugs: from Pt(II) compounds, Pt(IV) prodrugs, to Pt nanocrystals/nanoclusters, *Science Bulletin* (2017), doi: <http://dx.doi.org/10.1016/j.scib.2017.03.008>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Review

Received 14 January 2017, Revised 2 March 2017; Accepted 3  
March 2017

## Platinum drugs: from Pt(II) compounds, Pt(IV) prodrugs, to Pt nanocrystals/nanoclusters

*Xi Hu, Fangyuan Li, Nabila Noor, Daishun Ling*

X. Hu, F. Li, N. Noor, D. Ling (✉)

Zhejiang Province Key Laboratory of Anti-Cancer Drug Research, College of Pharmaceutical Sciences, Zhejiang University, Hangzhou 310058, China

Key Laboratory of Biomedical Engineering of the Ministry of Education, College of Biomedical Engineering & Instrument Science, Zhejiang University, Hangzhou 310027, China

Email: lingds@zju.edu.cn

Xi Hu and Fangyuan Li contributed equally to this work.

**Abstracts** Platinum (Pt) based drugs, such as cisplatin, are widely used as anti-cancer agents, but their severe adverse reactions and resistance of cancer patients have limited their board clinical use. For the last few decades, Pt(II) compounds, Pt(IV) prodrugs as well as smart drug delivery systems have been developed to overcome these problems. However, most conventional strategies rely on the similar anti-cancer mechanism with cisplatin and consequently only achieve limited success. Recently, Pt nanocrystals/nanoclusters (Pt NCs), with a brand new anti-cancer mechanism, have shown a promising potential in targeted cancer therapy, especially in Pt resistance circumvention. This review is helpful to understand the research strategies of Pt drugs, particularly, the recent developments and medical applications of Pt NCs.

**Keywords** Platinum, Pt(II), Pt(IV), Pt Nanocrystals/Nanoclusters, Pt Resistance, Cancer Therapy

Download English Version:

<https://daneshyari.com/en/article/5788786>

Download Persian Version:

<https://daneshyari.com/article/5788786>

[Daneshyari.com](https://daneshyari.com)