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**Name of Journal:** *World Journal of Stem Cells*
**Manuscript NO:** 54971

**Manuscript Type:** REVIEW

**Photodynamic therapy regulates fate of cancer stem cells through reactive oxygen species**

 Zhang ZJ *et al.* Mechanism of PDT against CSCs

Zi-Jian Zhang, Kun-Peng Wang, Jing-Gang Mo, Li Xiong, Yu Wen

## Match Overview

|   |   |     |
|---|---|-----|
| 1 | <b>Internet</b> 76 words<br>crawled on 15-May-2020<br><a href="http://molecular-cancer.biomedcentral.com">molecular-cancer.biomedcentral.com</a>  | 1%  |
| 2 | <b>Crossref</b> 50 words<br>Huifeng Gu, Tianhe Huang, Yicheng Shen, Yin Liu, Fuling Zhou, Yanxia Jin, Haseeb Sattar, Yongchang Wei. "Reactiv      | 1%  |
| 3 | <b>Crossref</b> 26 words<br>Su Yeon Lee, Eui Kyong Jeong, Min Kyung Ju, Hyun Min J eon et al. "Induction of metastasis, cancer stem cell phen ... | <1% |
| 4 | <b>Crossref</b> 20 words<br>Hirokazu Ohata, Daisuke Shiokawa, Yuuki Obata, Ai Sato et al. "NOX1-Dependent mTORC1 Activation via S100A9 ...        | <1% |
| 5 | <b>Crossref</b> 17 words<br>Garg, Abhishek, and Patrizia Agostinis. "Cell Death and F... T-Based Photooxidative (Phox) Stress", Handbook of Phot  | <1% |
| 6 | <b>Crossref</b> 17 words<br>Jin Dai, Yanli Ji, Wei Wang, Donghern Kim, Leonard Yenw<br>an Fei-Li Wang, Jin-Luo Zhuo Zhang, "Loss of function      | <1% |





PDT regulates the fate of cancer stem cells through ROS



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## Stem cells and the impact of ROS signaling

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4302918>

Nov 15, 2014 - We describe the various sources of ROS in **stem cells**, as well as what is known about oxygen metabolism in **stem cells** and how this might influence **stem cell fate**. The role of ROS in regulating **stem cell** dynamics has implications for various diseases, including **cancer** ...

Cited by: 193

Author: Carolina L. Bigarella, Raymond Liang, Sa...

Publish Year: 2014

## MST1 Suppresses Pancreatic Cancer Progression via ROS ...

<https://mcr.aacrjournals.org/content/17/6/1316>

Jun 01, 2019 - Pancreatic ductal adenocarcinoma (PDAC) is a deadly disease, and its incidence is increasing annually. It is critical to reveal and delineate the molecular mechanism promoting PDAC development and progression. Mammalian STE20-like kinase 1 (MST1) is a proapoptotic cytoplasmic kinase and also one of the core components of the Hippo pathway. Here, we showed that MST1 ...

Cited by: 5

Author: Jiujie Cui, Zhuqing Zhou, Haiyan Yang, Fe...

Publish Year: 2019

## Images of Pdt regulates the Fate of cancer Stem cells Throug...

[bing.com/images](https://bing.com/images)



Photodynamic therapy regulates fate of cancer stem cell:



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## Reactive Oxygen Species in Photodynamic Therapy ...

<https://www.sciencedirect.com/science/article/pii/S0898883817300211>

**Reactive oxygen species (ROS)** play key roles in **cell signaling systems and homeostasis**, and they are also fundamental to **photodynamic therapy (PDT)**. **PDT efficacy** can be affected by the nature and persistence of ROS.

Cited by: 18

Author: Janusz M. Dąbrowski

Publish Year: 2017

## Hyperthermia enhances photodynamic therapy by regulation ...

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6367329>

Photodynamic therapy (PDT) is a cancer treatment that make use of the cancer-specific accumulation of **porphyrins**. We have reported that mitochondrial reactive oxygen species (**mitROS**) **upregulate uptake transporter of porphyrins, heme carrier protein-1 (HCP-1)**.

Cited by: 6

Author: Hiromi Kurokawa, Hiromu Ito, Masahiko T...

Publish Year: 2019

## Perfluorocarbon nanoparticles enhance reactive oxygen ...





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## Reactive Oxygen Species in Photodynamic Therapy ...

<https://www.sciencedirect.com/science/article/pii/S0898883817300211>

**Reactive oxygen species (ROS)** play key roles in **cell signaling systems and homeostasis**, and they are also fundamental to **photodynamic therapy (PDT)**. **PDT efficacy** can be affected by the nature and persistence of ROS.

Cited by: 18

Author: Janusz M. Dąbrowski

Publish Year: 2017

## Enhanced photodynamic therapy and effective elimination of ...

<https://www.ncbi.nlm.nih.gov/pubmed/25061685>

Sep 02, 2014 · **Photodynamic therapy** is a potentially **curative treatment** for various types of **cancer**. It involves **energy transfer** from an excited **photosensitizer** to surrounding **oxygen molecules** to produce **cytotoxic singlet oxygen species**, a process termed as type II reaction.

Cited by: 25

Author: Marina Usacheva, Suresh Kumar Swami...

Publish Year: 2014

## Photodynamic Therapy for Cancer - National Cancer Institute

<https://www.cancer.gov/about-cancer/treatment/...>

**Photodynamic therapy (PDT)** is a **treatment** that uses a **drug**, called a photosensitizer or photosensitizing agent, and a particular type of light. When photosensitizers are exposed to a specific wavelength of light, they produce a form of **oxygen** that kills nearby **cells** (1□3).

## Roles of Reactive Oxygen Species in the Fate of Stem Cells

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3967382>

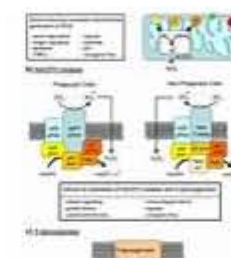
Apr 20, 2014 · Significance: **Stem cells** are characterized by the properties of self-renewal and the ability to differentiate into multiple **cell** types, and thus maintain tissue homeostasis. **Reactive oxygen species (ROS)** are a natural byproduct of aerobic metabolism and have roles in **cell** signaling. Regulation of ROS has a vital role in maintaining "stemness" and differentiation of the **stem cells**, as well ...

Cited by: 99

Author: Pooja Chaudhari, Zhaohui Ye, Yoon Youn...

Publish Year: 2014

## Reactive Oxygen Species

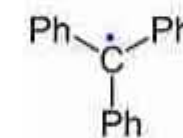


Reactive oxygen species (ROS) are chemically reactive chemical species containing oxygen. Examples include peroxides, superoxide, hydroxyl radical, singlet oxygen, and alpha-oxygen.

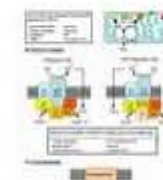
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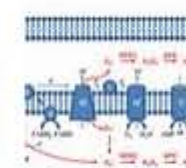
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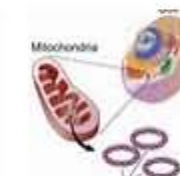
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