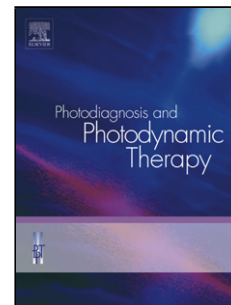


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## Influence and mechanism of 5-aminolevulinic acid-photodynamic therapy on the metastasis of esophageal carcinoma

*Xiaona Zhang<sup>a</sup>, Longmei Cai<sup>b</sup>, Jingcai He<sup>c</sup>, Xiaoyan Li<sup>a</sup>, Libo Li<sup>d,\*</sup>, Xiaohua Chen<sup>e,\*</sup>, Ping Lan<sup>a,\*</sup>*

a. The sixth affiliated hospital of SUN YAT-SEN University, Guangzhou, China, (E-mail: xiaona217@163.com).

b. Department of Radiation Oncology, Nanfang Hospital, Southern Medical University, Guangzhou, China.

c. Cancer Center, Traditional Chinese Medicine-Integrated Hospital, Southern Medical University, Guangzhou, China.

d. Cancer Center, Traditional Chinese Medicine-Integrated Hospital, Southern Medical University, Guangzhou, China.

e. Department of Oncology, Panyu Central Hospital, Cancer Institute of Panyu, Guangzhou, China.

\*Correspondence author: Libo Li (E-mail: [786311178@qq.com](mailto:786311178@qq.com)), Xiaohua Chen (E-mail: [cxh0663@126.com](mailto:cxh0663@126.com)), or Ping Lan (E-mail: [lanping@mail.sysu.edu.cn](mailto:lanping@mail.sysu.edu.cn)).

### Highlights

- This study provided a new modality of ALA-PDT combining with small molecule inhibitors.
- This study indicated the molecule mechanism of ALA-PDT on esophageal carcinoma.
- This study revealed the ALA-PDT effect on esophageal carcinoma in vitro and in vivo.

### Abstract

Background: 5-Aminolevulinic acid (ALA) mediated photodynamic therapy (PDT) for the treatment of esophageal cancer was more and more popularly used since it was approved for the treatment of advanced esophageal cancer in 1996. It has been reported to influence the tumor growth and metastasis via a variety of signaling pathways, but its mechanism remains to be further studied. This research studied the effects of ALA-PDT on esophageal carcinoma in vitro and in vivo, discovering its molecular regulating mechanism and the way to enhance the PDT effect.

Methods: Eca-109 cells were incubated with a medium containing EGFR tyrophostin AG1478 or PI3K inhibitor LY294002, then with ALA, and the cells were irradiated

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