

## Accepted Manuscript

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PII: S1734-1140(17)30331-6  
DOI: <http://dx.doi.org/10.1016/j.pharep.2017.08.010>  
Reference: PHAREP 782

To appear in:

Received date: 10-5-2017  
Revised date: 29-7-2017  
Accepted date: 23-8-2017

Please cite this article as: Naeima Eftekhar, Ali Moghimi, Mohammad Hossein Boskabady, Prophylactic effect of rosmarinic acid on tracheal responsiveness, white blood cell count and oxidative stress markers in lung lavage of sensitized rats (2010), <http://dx.doi.org/10.1016/j.pharep.2017.08.010>

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# **Prophylactic effect of rosmarinic acid on tracheal responsiveness, white blood cell count and oxidative stress markers in lung lavage of sensitized rats**

**Running head: Rosmarinic acid affects lung inflammation, oxidative stress and tracheal responsiveness**

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## **Abstract**

*Background:* Rosmarinic acid (RA) as an active component of several medicinal plants, has shown anti-inflammatory and anti-oxidant effects. In this study, the effect of RA on tracheal responsiveness (TR), lung inflammatory cells, oxidant biomarkers in sensitized rats were evaluated.

*Methods:* TR to methacholine and ovalbumin (OVA) as well as total and differential white blood cell (WBC) count and levels of nitrogen dioxide, nitrate, malondialdehyde, thiol, superoxide dismutase, and catalase in bronchoalveolar lavage fluid were measured in control (group C) rats, sensitized animals to OVA and given drinking water alone (group S), S groups receiving

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