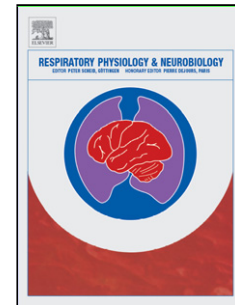


## Accepted Manuscript

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PII: S1569-9048(16)30258-0  
DOI: <http://dx.doi.org/doi:10.1016/j.resp.2017.06.008>  
Reference: RESPNB 2826

To appear in: *Respiratory Physiology & Neurobiology*

Received date: 1-11-2016  
Revised date: 21-6-2017  
Accepted date: 23-6-2017

Please cite this article as: {<http://dx.doi.org/>

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***Participation of locus coeruleus in breathing control in female rats***

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**Highlights**

- LC noradrenergic neurons of intact female rats exert an excitatory role in the hypercapnic ventilatory response.
- LC noradrenergic neurons of ovariectomized female rats provide a tonic excitatory drive to maintain breathing frequency.
- Ovariectomy decreased CO<sub>2</sub> chemosensitivity and no further ventilation reduction is observed after LC lesion.

**Abstract**

Several evidences indicate that the locus coeruleus (LC) is involved in central chemoreception responding to CO<sub>2</sub>/pH and displaying a high percentage of chemosensitive neurons (> 80%). However, there are no studies about the LC-mediated hypercapnic ventilation performed in females. Therefore, we assessed the role of

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