Author's response to reviews

Title: Bradykinin and adenosine receptors mediate desflurane induced postconditioning in human myocardium: role of reactive oxygen species

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Cover Letter

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to: Melissa Norton, MD
Editor-in-Chief BMC Anesthesiology

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Re: Manuscript Title: "Bradykinin and adenosine receptors mediate desflurane induced postconditioning in human myocardium: role of reactive oxygen species"

Dear Doctor Norton,

On behalf of my co-authors, I am submitting the enclosed material for possible publication in BMC Anesthesiology.

Although desflurane is one of volatile anesthetics currently used in clinical practice, few studies observed mechanism involved in desflurane induced postconditioning (Lange M et al. Anesthesiology 2009;110:516-28; Lemoine S et al. Anesthesiology 2008,109:1036-44). Although some studies have shown that ischemic postconditioning activated the adenosine and bradykinin receptors, no data are available in the literature on the involvement of these receptors in desflurane induced cardioprotection and in human myocardium. Then, reactive oxygen species a pivotal role in cardioprotective mechanisms at the time of reperfusion it is well established that reactive oxygen species production may mediate and trigger the preconditioning signalling cascade, but at the present time, only one study suggested the role of reactive oxygen species production in isoflurane-induced postconditioning in mouse heart in vivo (Tsutsumi YM et al, Life Sci 2007,81:1223-7).
In the present study, we wished to evaluate the participation of adenosine and bradykinin receptors and reactive oxygen species production in desflurane-induced postconditioning; in addition we have determined whether adenosine and bradykinin given at the beginning of reoxygenation could mimic postconditioning, and whether adenosine and bradykinin receptors activation induced myocardial postconditioning via reactive oxygen species production.

Finally, the abstract of this present study has been selected among the 973 Euroanaesthesia 2010 accepted abstracts for presentation during the BAPC Runner-up Session 1 of the European anaesthesiology congress 2010.

I certify that:

1. I am authorized by my co-authors to enter into these arrangements.

2. I warrant, on behalf of myself and my co-authors, that:

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Sincerely yours

Sandrine Lemoine