independent of oestrogen pathways, such as metabolic dysfunction (Gangwisch *et al*, 2007) and chronic inflammation (Irwin *et al*, 2006).

Again, we thank Yang *et al* for this letter and are glad that more studies, such as the population-based case–control study in Jiujiang city mentioned by Yang *et al*, are using objective measures along with questionnaires to better assess both the quantity and quality of sleep in relation to breast cancer risk and other health outcomes.

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Comment on 'Possible pro-carcinogenic association of endotoxin on lung cancer among Shanghai women textile workers'

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Sir,

In a recent article in this Journal, Checkoway *et al* (2014) suggest that the exposure to endotoxin in industrial environments is associated with an increase in the risk of lung cancer.

A number of studies over the past 50 years has demonstrated a decreased risk in different environments involving a high exposure to endotoxin such as cotton handling and farming (Rylander, 1992; Maestrangelo *et al*, 2005; Lenters *et al*, 2010). Plausible cellular mechanisms for this defence have been discussed. In the data now presented there are no significant differences in risk—all are within the 95% confidence limit—and no significance for trend in relation to exposure duration. The only observation, thoroughly discussed, is a small, non-significant increase in risk in a subgroup. It is difficult to understand how such data can be used as a support to challenge a previously well-established relationship.

More serious is the lack of control of possible confounding factors. It is well known that indoor air pollution from cooking fuels is a risk factor for lung cancer. Such exposures change over the years and are closely related to socio-economic factors. The problem is discussed but in the absence of data the discussion remains speculative. Diet modulates the risk of lung cancer but is not discussed (Seow *et al*, 2002; Rylander and Axelsson, 2006). Finally, possible changes in endotoxin exposure over the years are not dealt with. Also in China, work hygiene standards have improved over the years since the measurements were made and could result in a change of exposure to endotoxin.

In view of the above, a correct conclusion from the material presented is that 'no relation between endotoxin exposure and lung cancer risk could be detected'.

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Reply to Comment on: 'Possible pro-carcinogenic association of endotoxin on lung cancer among Shanghai women textile workers'

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Sir,

We appreciate the thoughtful comments by Rylander and Jacobs (2015) on our paper (Checkoway *et al*, 2014). The absence of an inverse exposure–response relation for endotoxin and lung cancer in the extended follow-up was somewhat unexpected in view of the reported consistent findings from numerous prior studies, including our initial follow-up of the