



The necessity to use selective NADPH oxidase inhibitors

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To the Editor:

Kito et al. [1] have reported that acute hyperglycemia impairs endothelium-dependent dilation of the rat pial arteriole. They also have quoted in their publication [1] that the NADPH oxidase inhibitors restore the vascular dysfunction. We have several concerns regarding their methodology, as well as the conclusion [1]. Both apocynin and diphenylene iodonium (DPI) are flavoprotein inhibitors, which play roles as non-selective inhibitors of reactive oxygen species, whereas Kito et al. adopted the agents as NADPH oxidase inhibitors in their study [1–3]. Indeed, previous studies proved that apocynin and DPI are non-selective antioxidants, and therefore, we should not use them as NADPH oxidase inhibitors in studies related to the vascular system [2, 3]. Therefore, we strongly recommend Kito et al. [1] to employ selective NADPH oxidase inhibitors, including gp91ds-tat to conclude that NADPH oxidase contributes to the endothelial dysfunction of the rat pial arteriole caused by acute hyperglycemia [4]. Collectively, we would like to await additional studies to verify the conclusion by Kito et al. [1].

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Conflict of interest Hiroyuki Kinoshita is a consult of IMI Co. Ltd, Koshigaya, Saitama, Japan.

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