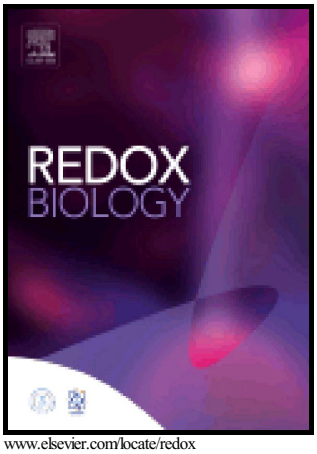

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Hyperhomocysteinemia potentiates diabetes-impaired EDHF-induced vascular relaxation: Role of insufficient hydrogen sulfide

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Keywords: hydrogen sulfide; endothelial dysfunction, microvasculature; T2DM, calcium-activated potassium channel (K_{Ca}).

ABSTRACT

Insufficient hydrogen sulfide (H_2S) has been implicated in Type 2 diabetic mellitus (T2DM) and hyperhomocysteinemia (HHcy)-related cardiovascular complications. We investigated the role of H_2S in T2DM and HHcy-induced endothelial dysfunction in small mesenteric artery (SMA) of db/db mice fed a high methionine (HM) diet. HM diet (8 weeks) induced HHcy in both T2DM db/db mice and non-diabetes db/+ mice (total plasma Hcy: 48.4 and 31.3 μM, respectively), and aggravated the impaired