

## MS01-5 **BMAL1, a mastercomponent of circadian rhythm, is a possible target for anti-metabolic syndrome**

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There are growing numbers of epidemiological evidences indicating that shift work increases the risk of metabolic syndrome. This is suspected as a result of disorder of circadian rhythm. Circadian rhythm is regulated by transcriptional feedback loops composed of several clock genes. Among them, the brain and muscle Arnt-like protein-1 (BMAL1) plays central roles. Interestingly, SNPs analysis revealed that BMAL1 is associated with type II diabetes and hypertension. Also, BMAL1 activity is disturbed in visceral fat of metabolic syndrome patients. These results suggest that disorder of BMAL1 functions may leads to onset of metabolic syndrome. To elucidate the physiologic role of BMAL1 in the regulation of metabolism, in this study, we analyzed metabolic features of BMAL1 KO mice.