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5 *Basic Study*

6 Expression of matrix metalloproteinase-11 is increased under conditions of

7 insulin resistance

8

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12

13 **Abstract**

14 AIM: To investigate MMP-11 expression in adipose tissue dysfunction, using *in*

15 *vitro* and *in vivo* models of insulin resistance.

16 METHODS: Culture of mouse 3T3-L1 preadipocytes were induced to

17 differentiation into mature 3T3-L1 adipocytes. Cellular insulin resistance was

18 induced by treating differentiated cultured adipocytes with hypoxia and/or

19 TNF- α , and transcriptional changes were analyzed in each condition thereafter.

20 For the *in vivo* studies, MMP-11 expression levels were measured in white

21 adipose tissue (WAT) from C57BL/6J mice that underwent low fat diet or high-

22 fat feeding in order to induce obesity and obesity-related insulin resistance.

23 Statistical analysis was carried out with GraphPad Prism Software.

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