

**Reply: A potential role of the renin-angiotensin system in adipocyte**

To the Editor:

We have reported in this journal that plasma angiotensin II was associated with body weight, was decreased during weight loss, and was associated with adipocyte-derived factors and insulin resistance in obese subjects with type 2 diabetes mellitus [1]. The letter from Drs Fetissov and Thornton gave sophisticated comments and good suggestions for our work. They have commented that, in obesity and type 2 diabetes mellitus, hypovolemia and extracellular dehydration were observed and the mechanism was tightly linked with the renin-angiotensin system [2,3]. Furthermore, they have cited an article that mentioned that cell volume regulation would be dependent on body hydration state and that the cellular dehydration impaired insulin signaling and might be a major cause of insulin resistance [4]. We also agree with their theory that the increase in plasma angiotensin II and insulin resistance in obesity and type 2 diabetes mellitus may be derived from cellular dehydration and cell reduction. However, no report has been published regarding the relationship between angiotensin II and cellular dehydration in adipocyte.

We have also reported in this journal that angiotensin II lowered enlarging 3T3-L1 cell size and that the phenomenon was involved with the decrease in the expression of lipoprotein lipase [5]. One of our aims is to clarify the relationship between the “tension” of plasma membrane and the adipocyte-derived factors including the renin-angiotensin system during adipocyte differentiation. The

letter from Drs Fetissov and Thornton gave us a unique point of view to investigate this issue in the future.

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**References**

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