Author's response to reviews

Title: Allograft inflammatory factor 1 (AIF-1) is a new human adipokine involved in adipose inflammation

Authors:

Silvia Lorente-Cebrián (Silvia.Lorente-Cebrian@ki.se)
Pauline Decaunes (Paulines.decaunes@inserm.fr)
Elisabeth Dungner (Elisabeth.Dungner@ki.se)
Anne Bouloumie (anne.bouloumie@inserm.fr)
Peter Arner (Peter.Arner@ki.se)
Ingrid Dahlman (Ingrid.Dahlman@ki.se)

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Author's response to reviews:

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Dear Editor,

Please find attached a manuscript entitled ‘Allograft inflammatory factor 1 (AIF-1) is a new human adipokine and is involved in adipose inflammation’ by S. Lorente-Cebrián et al. that we are submitting to be considered for publication in BMC Endocrine Disorders.

Adipose tissue dysfunction in obesity has been linked to a pro-inflammatory state arising from an altered production of adipokines from adipocytes and other cell types within adipose tissue such as macrophages. To date, many of these adipokines have been described although not all of them have been identified and characterized yet. Allograft inflammatory factor-1 (AIF-1) is a protein which regulates the function of macrophages and inflammatory responses. AIF-1 stimulates production of inflammatory cytokines in mouse macrophages although the complete mechanism is poorly understood. In the present paper, we hypothesized that AIF-1 might be a potential adipokine that might participate in the regulation of adipose tissue inflammation.

We demonstrate that AIF-1 is a novel adipokine produced in human adipose tissue (macrophages) and its expression is altered in obesity. We also found that AIF-1 expression is correlated to insulin tolerance test and adiponectin which suggests a putative role of AIF-1 on insulin sensitivity and therefore, on the pathophysiology of insulin resistance. Our study provides new data on the complexity of adipose tissue as a secretory organ and highlights a role for AIF-1 as a novel candidate for future treatments of obesity and insulin resistance.

All experimental procedures were performed according to the guidelines in the Declaration of Helsinki and after the approval of the ethics committee at the Karolinska University Hospital and University Toulouse III Paul-Sabatier. The work described in this manuscript has not been previously published and it is not
under consideration for publication elsewhere. All the authors have contributed to the work and declare no conflict of interest. All the authors have approved the submission of this manuscript.

Sincerely yours,

Silvia Lorente-Cebrián, PhD (corresponding author)
Department of Medicine Huddinge, Lipid Laboratory
Karolinska Institutet
141 86 Stockholm
Sweden
Phone: +46 (0)8 5858 0623
Fax: +46 (0)8 5858 5470
e-mail: Silvia.Lorente-Cebrian@ki.se