



Visualization of Activated BAT in Mice, with FDG-PET and its relation to UCP1

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Mots-clés	Brown Adipose Tissue [10], FDG [11], Mice [12], PET [13], Uncoupling Protein 1 [14]
Résumé en anglais	<p>The visualization of symmetric structure by [^{18}F]-FluoroDeoxyGlucose-Positron Emission Tomography (FDG-PET), corresponding to adipose density in computed tomography (CT), has led to the idea that Brown Adipose Tissue (BAT) could be present in adult human.</p> <p>This article studies the FDG uptake in a mice model deficient on Uncoupling Protein 1 (UCP1), in a simple thermal activation protocol. Methods: FDG were injected in mice, control and knock out (K.O.) for the UCP1. Before imaging mice were placed either in cold or warm environment. BAT uptake was evaluated by ratio named RISC. Results: In warm condition, mean value of the Ratio of Inter-Scapular uptake (RISC) was 1.34 ± 0.27. After cold exposure, RISC increased 2 fold for control mice, male K.O. did not increase their RISC, female K.O. increased their RISC up to 2.45.</p> <p>Conclusion: Our study brought a further confirmation that FDG-PET visualised activated Brown Adipose Tissue. It gives a direct proof of the role of UCP1 in this process. The FDG uptake by cold female K.O. mice was unexpected.</p>
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