

Figure S1. MOTS-c involves in regulating metabolic pathway. (A) The plasma level of MOTS-c following 4 °C exposure and the standard curve and 450 nm absorption signaling are shown ($n = 8$ per group). (B) Significant changed genes shown in volcano plot (MOTS-c v.s. Control, fold change > 1.5 , p value < 0.05 , $n = 3$); (C) KEGG Pathway remarkably enriched in MOTS-c treated group, and Metabolic pathways and Fatty acid metabolism were highlighted by “#”. (D) Gene numbers in different metabolic signaling pathway.

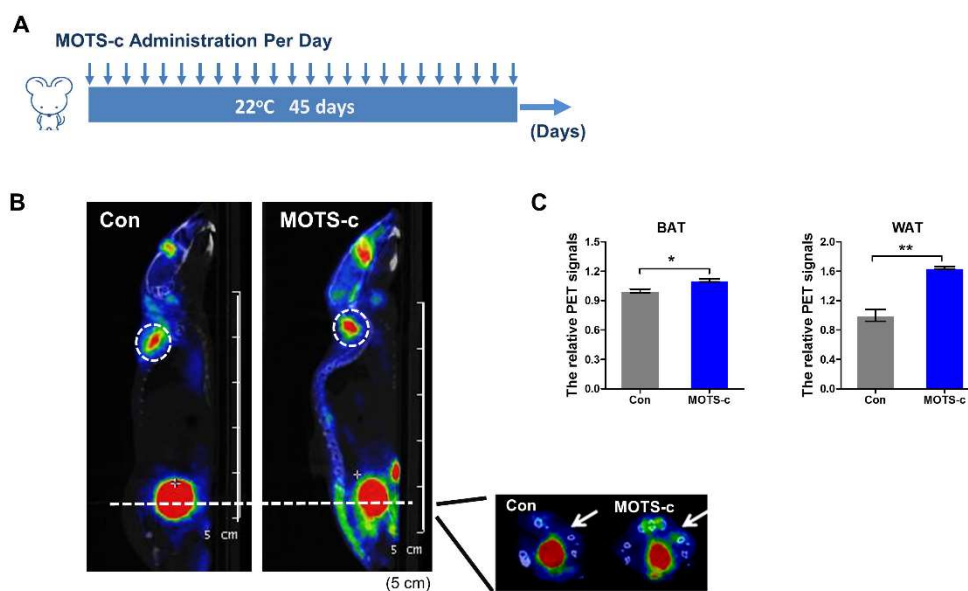


Figure 2. MOTS-c increases the activation of brown and white adipose under room temperature. (A) Experimental design for the study in MOTS-c administration under room temperature. (B) PET/CT image after injection of 18F-FDG into mice (15 weeks) treated with normal saline (Con) and MOTS-c (5 mg/kg, per day) for 45 days in sagittal view. (scale bar = 5 cm). Anatomical site within white circle represent the interscapular BAT. Anatomical site marked by white dotted line represent the

subcutaneous WAT, shown in coronal view. (C) The relative PET signals showed the activity of BAT and WAT. All data are represented as mean \pm SEM. Differences between the two groups were determined by a two-tailed Student's *t*-test. * $p < 0.05$, ** $p < 0.01$.