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(54) **Title**: METHODS AND COMPOSITION RELATED TO BROWN ADIPOSE-LIKE CELLS

(57) **Abstract**: Methods and therapeutics are provided for treating diseases, including metabolic diseases and other weight-related disorders. Generally, methods for making brown adipose-like including culturing a population of artery-derived cells in adipogenic induction medium for a period of time and under conditions sufficient to increase expression of at least one adipocyte marker at a higher level as compared to untreated artery-derived cells are disclosed. Isolated artery-derived, ex vivo differentiated brown adipose-like cells are also provided, including pharmaceutical compositions and cell delivery systems thereof. In another embodiment, a method of treating a subject is disclosed that includes obtaining a population of artery-derived brown adipose-like cells and administering the brown adipose-like cells into a target region in the subject.