Tipo	Periódico
Título	Extracellular matrix remodeling and matrix metalloproteinase inhibition in visceral adipose during weight cycling in mice
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Programa/Curso (s)	Programa de Pós-Graduação Stricto Sensu em Ciências da Saúde
DOI	10.1016/j.yexcr.2017.08.026
Assunto (palavras chaves)	GM6001; Ilomastat; Matrix metalloproteinase; Extracellular matrix remodeling; Adipose tissue
Idioma	Inglês
Fonte	Título do periódico: Experimental Cell Research ISSN: 0014-4827 Volume/Número/Paginação/Ano: v. 359, p. 431-440, 2017
Data da publicação	15 October 2017
Formato da produção	Digital https://doi.org/10.1016/j.yexcr.2017.08.026
Resumo	Extracellular matrix (ECM) remodeling is necessary for a health adipose tissue (AT) expansion and also has a role during weight loss. We investigate the ECM alteration during weight cycling (WC) in mice and the role of matrix metalloproteinases (MMPs) was assessed using GM6001, an MMP inhibitor, during weight loss (WL). Obesity was induced in mice by a high-fat diet. Obese mice were subject to caloric restriction for WL followed by reintroduction to high-fat diet for weight regain (WR), resulting in a WC protocol. In addition, mice were treated with GM6001 during WL period and the effects were observed after WR. Activity and expression of MMPs was intense during WL. MMP inhibition during WL results in inflammation and collagen content reduction. MMP inhibition during WL period interferes with the period of subsequent expansion of AT resulting in improvements in local inflammation and systemic metabolic alterations induced by obesity. Our results suggest that MMPs inhibition could be an interesting target to improve adipose tissue inflammation during WL and to support weight cyclers.
Fomento	