

Accepted Manuscript

Research paper

Macrophages in obesity

Roksana M. Pirzgalska, Ana I. Domingos

PII: S0008-8749(18)30188-6

DOI: <https://doi.org/10.1016/j.cellimm.2018.04.014>

Reference: YCIMM 3804

To appear in: *Cellular Immunology*

Received Date: 30 October 2017

Revised Date: 25 April 2018

Accepted Date: 26 April 2018

Please cite this article as: R.M. Pirzgalska, A.I. Domingos, Macrophages in obesity, *Cellular Immunology* (2018), doi: <https://doi.org/10.1016/j.cellimm.2018.04.014>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.



Macrophages in obesity.

Roksana M. Pirzgalska¹, Ana I. Domingos^{1,2,*}

1. Obesity Laboratory, Instituto Gulbenkian de Ciência, Oeiras, 2780-156

Portugal

2. The Howard Hughes Medical Institute (HHMI), New York, New York, USA.

*Correspondence: dominan@igc.gulbenkian.pt

Abstract

Obesity is a worldwide public health concern yet no safe therapies are currently available. The activity of sympathetic neurons is necessary and sufficient for fat mass reduction, via norepinephrine (NE) signaling. Macrophage accumulation in the adipose tissue is thought to play the central role in the onset of obesity, yet their relation to NE has been controversial. We have identified a population of sympathetic neuron-associated macrophages (SAMs) that control obesity via the uptake and clearing of NE. Here we focus on the neuro-immune regulation of obesity by discussing the genetic, cellular and functional signatures of SAMs vis-a-vis adipose tissue macrophages (ATMs).

Introduction

Excessive accumulation of the adipose tissue, which is commonly known as obesity has become one of the major health-related concerns around the world (Haslam and James, 2005). Obesity is a complex disease (Ghosh and Bouchard, 2017). However, its incidence in the majority of the cases is preventable. Sedentary lifestyle and easy access to processed, high-caloric foods have created favorable conditions for the epidemic of obesity. Obesity

Download English Version:

<https://daneshyari.com/en/article/8943876>

Download Persian Version:

<https://daneshyari.com/article/8943876>

[Daneshyari.com](https://daneshyari.com)