Andrea Romani, J Obes Weight Loss Ther 2015, 5:6
http://dx.doi.org/10.4172/2165-7904.C1.023

OMICS International
conferenceseries.com

4th International Conference and Exhibition on
Obesity and Weight Management
December 07-09, 2015 Atlanta, USA

Andrea Romani
Case Western Reserve University, USA

Metabolic syndrome, obesity, nafld and insulin resistance: how inflammation and dysmetabolism consort to epidemic levels worldwide

The last thirty years have registered a progressive and dramatic increase in the incidence of type 2 diabetes mellitus (T2DM) and obesity in the population of USA and developed countries, as well as developing countries. Combined, these two medical conditions affect about one-third of the adult population, as well as adolescent and children, with some differences, at times significant, in terms of age, race, ethnicity, and gender. Currently, it is estimated that between 500 million to 1 billion people worldwide are obese, diabetic, or at risk of developing one or both these conditions. The interplay between obesity and T2DM onset are not completely understood, making difficult to establish short- and long-term health guidelines and therapeutic approaches that can help containing and possibly reversing the incidence and progression of these conditions. More worrisome, the incidence of the metabolic syndrome has also increased in proportion over the same period of time. The term 'metabolic syndrome' refers to a group of risk factors that raises significantly the risk for heart disease and other health problems including stroke, diabetes, and particular forms of cancer. Currently, liver steatosis, with or without inflammation (steatohepatitis) and progression to NAFLD is considered pathognomonic of metabolic syndrome, and represents the most common manifestation of the disease. The etiology of these diseases is multi-facet. From the pathological standpoint, metabolic syndrome, NAFLD, obesity and T2DM are characterized by major lipid dysmetabolism both systemic and within liver and adipose tissue. Inflammation is a key component of these pathologies, in that enhanced levels of inflammatory cytokines have been observed both systemically and within specific organs, in which they impair insulin responsiveness and hematic glucose homeostasis.

Altogether, metabolic syndrome, NAFLD, obesity and insulin resistance pose major financial burdens on the affected individuals, and on the medical and productive systems of the various countries. The predisposition to various complications and the associated financial costs for their treatment point to the necessity to better understand the underlying causes of these diseases and to identify more effective therapeutic approaches and treatments.

Biography

Andrea Romani obtained his medical degree from the University of Siena, Italy and his PhD from the University of Turin, Italy. Upon completing his postdoctoral studies under Dr. Scarpa, he joined the faculty in the Department of Physiology and Biophysics, Case Western Reserve University, where he is currently Associate Professor. Dr. Romani has published over 90 peer review articles in high profile journals together with numerous invited reviews and book chapters. He is currently serving as an Editorial Board Member and an *ad hoc* reviewer for numerous international journals.

amr5@case.edu

Notes: