

# 4<sup>th</sup> International Conference on **Clinical & Experimental Cardiology**

April 14-16, 2014 Hilton San Antonio Airport, TX, USA

## **Atherosclerosis: Infection & inflammation involvement, the continuous discussion**

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Atherosclerosis is a great problem of the human being about 30% of total responsible mortality around the world. Today, we recognize that cardiovascular risk factors, diabetes, smoking, dyslipidemia, hypertension and others, are very important to start endothelial dysfunction and inflammatory process in the arterial wall. During this process many factors are involved the angiotensin II, cytokines, chymokines, monocytes, lymphocytes, smooth muscle cell, perivascular adipose tissue, adventitia and the big star of atherosclerosis, LDL cholesterol. However, we have identified others components inside of the atherosclerotic plaque, rich in cholesterol, the bacteria's *Chlamydia pneumoniae*, *Mycoplasma pneumoniae* and *Archeae*. These bacteria live inside of unstable plaque, rich in cholesterol and, in our point of view in association, producing the inflammation and progression leading to plaque's rupture. Another internal and external stimuli to induce rupture/erosion of the plaque has been observed after infection, influenza, when increase in myocardial infarction identified was mortality. These finding has been observed in many countries in Europe, North and South America. Despite of direct internal and external stimuli by infection agents we have indirect, secondary mechanisms of immunocomplex response or cross reaction between antibodies against human proteins.

Currently, many bacteria and virus or their antibodies were found in atherosclerotic plaques, associated with intense inflammatory process at the core of cholesterol. Interesting fact is that this process facilitates the production and release of cytokines that digest collagen tissue, making it easier to rupture the plaque and its complications such as myocardial infarction or unstable angina.

### **Biography**

Jose Antonio F. Ramires Ph.D. has completed his medical degree at the age of 25 years from the University of Sao Paulo Medical School and Postdoctoral studies. He is currently working as a Professor of Cardiology at Heart Institute-INCOR, University of Sao Paulo, Brazil. He served as the Director of Clinical Cardiology Division during 1997 to 2011, President of the Council of the INCOR during 1999 to 2007 and also as a Director of Health's Department, during 2007 to 2011 at University of Sao Paulo, Brazil. In the University of Sao Paulo he is the President of the evaluation's committee of the all teachers. He has published more than 460 papers (pubmed: Ramires J) in reputed journals and has been serving as an Editorial Board Member of more than 20 reputed Journals.

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