Ramzi El Feghali, J Clin Exp Cardiolog 2018, Volume 9
DOI: 10.4172/2155-9880-C1-089

EPPB-AH: Early predictive protein biomarkers of atherosclerosis and hypertension

Ramzi El Feghali
Omics & Nanotech, France

Statement of the Problem: Metabolic alterations and hypertension are the major risk factors of heart diseases. Today a panel of 40 biomarkers jointly with clinical markers is adopted by the cardiologists for the diagnosis of coronary and heart diseases. Some predictive biomarkers are used for the prognostic of the coronary and heart diseases but those biomarkers present a lack of accuracy due to the complex molecular system of the blood, the vessels and the heart. For this reason, I have proposed a new study design coupled to a robust biostatistics analysis in order to select the most relevant predictive protein biomarkers of atherosclerosis and hypertension.

Materials & Methods: The plasma of 30 patients with 6 different phenotypes (hypertension, hypercholesterolemia, diabetes mellitus, stroke/transient ischemic attack, coronary artery diseases and healthy controls) included by the Utrecht Medical Centre University in Netherlands was profiled with the LC-MS/MS proteomics mass spectrometry technique after the depletion of the major proteins and the digestion of the proteome. A coupled robust comparative statistical analysis allowed to sort the identified proteins and to validate the most discriminative and predictive set of proteins that are under patenting. Conclusion: Twenty robust predictive biomarkers including RAAS proteins, apolipoproteins, extracellular matrix proteins and and complement factors proteins were selected after this pilot study as a predictive set of biomarkers for the prognosis of atherosclerosis and hypertension.

Acknowledgements: This work has been partly funded with a grant from the French Research Institute for Development of Marseille; the first experiments were realized by the CLinical Innovation Proteomic Platform of Dijon in France..

Biography

Ramzi EL FEGHALI has completed his PhD at the age of 27 years from Lyon 1 University and his attached lecturer, postdoctoral, and young research engineer studies from the University of Versailles, the French National Center for Scientific Research and the French National Institute for Medical Research respectively. Currently he is the Director of Omics & Nanotech and a lecturer of science at private schools. He has published over 10 papers and was a member of the International Society of Computational Biology and the International Society of Clinical Biostatistics and a peer reviewer for Dove Medical Press.

omicstech@outlook.fr

Notes: