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Stress biomarkers identification protocol in modern clinical practice

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The current research approaches to measure psycho physiological stress biomarkers limit to collecting self-reports, impact on physiology, and other measures of stressor exposure because stress, unlike any other pathological condition, triggers a non-specific response and influences multiple physiological systems. A clear mechanistic understanding of stress is still evasive and ideally, a context would use a set of biomarkers that are closer to the clinical manifestation of the disease, to measure stress response as a tool to customize therapy outcomes in clinical practice are still not done. This paper seeks to generate more mechanistic studies that lead to a much well rounded understanding or act as a review of various indices currently available for measuring chronic stress response pathways in subjective stress characterization also are discussed. These biomarkers to aid of chronic stress and a consequent discovery of biomarkers for epidemiological and diagnostic use are metabolic; cholesterol levels, albumin, waist-hip ratio and glycosylated hemoglobin, immunological; IL-6, TNF-α, CRP, and IGF-1 and neuro-endocrine including Pregnenolone steal or cortisol escape. The stress responses are multiply determined while using any single biomarker so the challenge is to identify novel biomarkers or a combination of biomarkers and other parameters that can effectively measure stress, independent of other existing conditions for an individual. Further research steps in developing a protocol to measure stress response will be a promising new direction of research; thus shall be used for effective therapeutic outcome aimed treatments.

Biography

Thomas Abhilash is a Research Scholar of J.S.S. College of Pharmacy, J.S.S. University, Ooty, Tamil Nadu from the year of 2013. He is qualified with MPharm (Clinical Pharmacy Practice-Dr. M.G.R. Medical University), PDCR and has been working in the field of Clinical Pharmacology, Clinical Research since 2008. In career, he had worked with Apollo Hospitals Group Ltd, Fortis Healthcare Ltd and Reliance Life Sciences Ltd. He is currently doing his Doctoral Research in the area of hepatic CYP450 enzyme Dysregulations in response to stressors, drug pharmacokinetics and dose optimization in human population.

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