

# 2<sup>nd</sup> World Congress on **CARDIOLOGY**

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#### ESTIMATE PULMONARY ARTERIAL HYPERTENSION BY HEART SOUND

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**S**tenosis and mitral insufficiency may induce pulmonary arterial hypertension. The underlying mechanisms depend on the intrinsic characteristics of the pulmonary circulation and the acute or chronic character of left atrial hypertension. Since the main complication is right heart failure, treatment of left pathology (valve replacement) is aimed at reducing pulmonary pressures and decreasing the post-load of the right ventricle. Finally, various treatments, mainly medications, can be considered to reduce the effect of pulmonary hypertension and correct its symptoms. The results obtained show the clinical utility of our extraction methods for the recognition of heart sounds (or PCG signal), the estimation of pulmonary arterial hypertension. The results obtained also show that the severity of mitral stenosis involves severe pulmonary arterial hypertension.

### BIOGRAPHY

Hamza Cherif Lotfi has received his PhD in Biomedical Electronics from the Faculty of Technology, University of Aboubekr Belkaid Tlemcen, Algeria in 2013. He is currently a Researcher in audible and ultrasonic processing physiological signals in the Genie-Biomedical Laboratory (GBM), Department of Genie-Biomedical, University of Tlemcen, Algeria. His current interests include phonocardiogram signal processing by applying the transform discrete wavelet transform and wavelet packet and spectro-temporal internal components of the first and second heart sound.

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