Seminar „Between physics, biology and medicine”

Organized by Department of Medical Physics
and Department of Experimental Particle Physics and Applications, Institute of Physics JU

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„ Fibrosis in the aging heart”

Abstract

Repair processes after myocardial infarction (MI) replace necrotic tissue with extracellular matrix (ECM) to provide a *mechanically stable scar* and restore the *damaged structural scaffold*. Insufficient replacement fibrosis leads to infarct expansion and heart failure. By contrast, interstitial fibrosis is a pathological process that increases *passive stiffness* and contributes significantly to impaired diastolic function leading to cardiac hypertrophy and heart failure with preserved ejection fraction. Adaptive, replacement fibrosis after MI is impaired in the aging heart. Concomitantly, the prevalence of non-adaptive, pathological interstitial fibrosis of unknown etiology increases in the aging heart. The cellular and molecular mechanisms causing these dysfunctions in the aging heart as well as the possible rescue strategies will be discussed.

when: 15th October 2019, 4:00 p.m.

where: A 1-08 (Aula), FAIS, Łojasiewicza 11