ISSN 0972-3757
International Journal of
HUMAN GENETICS

PRINT: ISSN 0972-3757 ONLINE: 2456-6360
Int J Hum Genet, 10(4): 235-238 (2010)
DOI: 10.31901/24566330.2010/10.04.05

AAT: A Comparative Study in HCM and DCM

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KEYWORDS HCM. DCM. AAT. Phenotypes. Cardiac Remodelling

ABSTRACT Cardiomyopathies are the sub-acute, chronic disorders of the myocardium that result in cardiac muscle injury thus disrupting the normal contractile function of the heart. HCM and DCM are inflammatory disorders where the role of AAT as a disease marker and cardiac remodeler has been identified. AAT acts as a major serine protease inhibitor and immunomodulator with high degree of polymorphism. Its main role is inhibition of the matrix metalloproteinases, collagen and the enzyme elastase apart from ECM and microfibrillar components degradation. The present study aims to evaluate the role of AAT, in 83 HCM, 97 DCM patients and 100 Control individuals to identify its association with cardiomyopathy. Our results implicate the role of the Z and S alleles in the etiopathogenesis of HCM and DCM, and also their role in cardiomyocyte remodelling through ECM changes. Thus decreased production of AAT may lead to further damage of the myocardiocytes.