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Molecular and cellular characterization of cardiac overload-induced hypertrophy and failure

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Molecular and Cellular Characterization
of Cardiac Overload-induced
Hypertrophy and Failure

Soban Umar

COLOPHON

The studies described in this thesis were performed at the department of Cardiology of the Leiden University Medical Center, Leiden, The Netherlands.

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Chapter 1

General introduction and outline of the thesis.

Submitted for publication

Chapter 2

Integrin stimulation-induced hypertrophy in neonatal rat cardiomyocytes is NO-dependent.

Molecular and Cellular Biochemistry 2009;320:75-84

Chapter 3

Myocardial collagen metabolism in failing hearts before and during cardiac resynchronisation therapy.

European Journal of Heart Failure 2008;10:878-883

Chapter 4

Activation of signaling molecules and matrix metalloproteinases in right ventricular myocardium of rats with pulmonary hypertension.

Pathology – Research and Practice 2007;203:863-872

Chapter 5

Novel approaches to treat pulmonary arterial hypertension.

Submitted for publication

Chapter 6

Stem cells from rats with pulmonary hypertension reduce pulmonary parenchymal damage, medial hypertrophy of pulmonary arterioles, and right ventricular hypertrophy in rats with pulmonary hypertension.

Submitted for publication

Chapter 7

Intravenous cell therapy with mesenchymal stem cells from donor rats with pulmonary hypertension reduces right ventricular pressure overload and reverses right ventricular hypertrophy in recipient rats with pulmonary artery hypertension.

Submitted for publication

Chapter 8

An exploration of the role of Kv channels in excitability of right ventricular cardiomyocytes from normal adult rats.

Chapter 9

Summary, conclusions, future perspectives and Samenvatting.

List of publications

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Curriculum Vitae