

# Albert Szent-Györgyi Medical School

## Department of Biochemistry

### Topic list

Supervisor	Topic
Dr habil. Csaba Csonka PhD Prof. Dr. Tamás Csont PhD Dr. Márton Pipicz PhD Dr. Gergő Szűcs PhD Dr. Virág Demjén PhD Dr. Márton Szabó PhD	Cardiovascular effects of metabolic diseases (hyperlipidemia, diabetes, uremia) in experimental models. Epigenetic alterations in hypercholesterolemia Molecular mechanisms of cellular damage in stress conditions. Conditioning against myocardial injury. Cellular effects of proteoglycans. MicroRNAs in the cardiovascular system. The role of extracellular matrix components in cardioprotection. The effects of natural compounds and/or pharmaceuticals on cardiomyocytes in disease models. Cardiac adverse effects of oncotherapy Conditioning by stimulation of skeletal muscle
Dr. Renáta Molnár-Gáspár PhD	Mapping the molecular mechanisms of cardiomyocyte damage induced by antitumor therapies. Investigation of the cardioprotective effects of kynurenic acid in various stress adaptation models. Examination of the potential effects of synthetic kynurenic acid analogs on cardiomyoblasts. Study of endogenous metabolites and their synthetic analogs in cardiac muscle stress adaptation. Investigation of the stress tolerance capacity of cardiomyocytes in an in vitro acute myocardial infarction model.
Dr. Dávid Kovács PhD	Investigation of adipocyte metabolism

<p>Dr. Anikó Keller-Pintér PhD</p>	<p>Signal transduction during cell proliferation and differentiation</p> <p>Investigation of cell migration in vitro, the role of extracellular vesicles</p> <p>Investigation of the molecular background of insulin resistance and glucose uptake of tissues</p> <p>Molecular basis of skeletal muscle regeneration</p> <p>Investigation of stem cells (satellite cells) of the skeletal muscle</p> <p>Therapeutic possibilities for local increase of atrophied skeletal muscle</p>
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