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#### P-MIS-061

##### The role of Na<sup>+</sup>K<sup>+</sup> ATPase activity in the vasodilatory effect of N-acetylcysteine

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**Introduction:** Spasm occurred at the stage of and after the preparation of arterial grafts used in coronary artery bypass surgery (CABG) is effective on morbidity and mortality in the first 24 hours of postoperative patients. N-acetyl cysteine (NAC) that vasodilatory effect is known, may be considered as a suppressor agent for vasospasm developing during CABG. However, for the prevention of complications that may arise during or after CABG mechanism of these vasodilatory effects should be described. This study was aimed to investigate the role of ATPase enzyme on the vasodilatory effect of NAC.

**Materials and Methods:** In this study, 28 adult male Wistar albino rats were used. Rats were separated into four groups as control rats (G1), 2 mM NAC (G2), 5 mM NAC (G3) and 10 mM NAC (G4). A portion of the thoracic aorta isolated from rats was used for the relaxation response recording, and the other portion was used for measurement of NaKATPase activity. Isolated smooth muscle rings are suspended in the 20 ml organ bath containing Krebs solution for relaxation responses. In all groups, level of smooth muscle contraction were allowed to reach a plateau by adding 60 mM KCl to the organ bath. Then, in the first

medium. The enzyme activity was studied in the pH range of 5.0–12.0. The optimum temperature for keratinase activity was investigated by varying the incubation temperature between 20°C and 80°C. Optimum keratinolytic activity was observed at 60°C and pH 10.5. The enzyme was stable at 60°C. The activity was investigated in the presence of some chemicals, including SDS, Tween 80, DMSO, Triton X-100, EDTA, NaCl, ZnCl<sub>2</sub>, CaCl<sub>2</sub>, glucose. The keratinolytic activity was inhibited by all chemicals tested to some degree. The molecular weight of keratinase was determined by polyacrylamide gel (10%) using standard molecular weight marker and estimated about 37 kDa by SDS-PAGE. The keratinase isolated from Bacillus UK69 could be used in biotechnological processes i.e. feather degradation, wastewater treatment and in industrial processes, such as detergent, food and leather industries.

#### P-MIS-064

##### Alpha/Beta globin mRNA ratio informs the gene function for personalized mutation data in molecular screening of thalassemia carriers

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**Introduction:** Hemoglobinopathies, including thalassemia, abnormal hemoglobins, constitutes a major group of inherited disorders of hemoglobin synthesis. The reduced or absent of the beta (β) or alpha (α) globin chains of the adult human hemoglobin molecule results beta or alpha thalassemias, leading to imbalanced α-globin/non α-globin chains. The aim of this study was to give a quick decision with α/β-globin mRNA ratio for sequencing of α or β gene, when the anemia is not detectable.

**Materials and Methods:** mRNA and cDNA extraction of 25 β-thalassemia and 15 α- (including two of 3.7 Kb Del./HbS) thalassemia subjects and normal controls were accomplished using the High Pure RNA Isolation Kit and Transcriptor First Strand cDNA Synthesis kit, respectively, following the manufacturer's instructions. We used cDNA as a template in the real-time PCR amplification

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