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BOOK OF ABSTRACTS

EFFECT OF BIO-CATALYZER α•ρ N° 11 SUPPLEMENTATION ON THE CARDIAC ISCHEMIA-REPERFUSION DAMAGE IN RAT HEART

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Bio-Catalyzer α•ρ No. 11 (BioNormalizer), a product of yeast fermentation of *Carica papaya* Linn, *Pennisetum pupureum* Schum., and *Sechium edule* Swartz, is a natural health food in Japan which has recently been reported to possess antioxidant properties. In the present study, the effect of BioNormalizer on cardiac ischemia-reperfusio n injury of the isolated rat heart was investigated. BioNormalizer was supplemented to rats in the drinking water at a concentration of 0.1% (w/v) for 6 weeks and hearts are perfused using a Langendorff technique. During reperfusion following 40 min of ischemia, the hearts isolated from the supplemented animals showed significantly lower level of lactate dehydrogenase leakage compared to those of control rats. This suggests that cardiac tissue membrane were protected against ischemia-reperfusion damage. To further characterize the protective effect of BioNormarlizer, we studied the susceptibility of cardiac tissue homogenate to the oxidative stress generated by the lipophilic azo-initiator of peroxyl radical, AMVN. A significantly lower value of TBARS and protein carbonyl content were observed in BioNormalizer supplemented as compared to those in control hearts. These results suggest that BioNormalizer supplementation decreases the susceptibility to the oxidations of tissue lipids and proteins. Hence, an antioxidant action may be involved in he cardioprotection of BioNormalizer against ischemia-reperfusion injury.