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THE ROLE OF CARDIOTROPHIN-1 AND ANNEXIN V IN MYOCARDIAL REMODELLING OF SPONTANEOUS HYPERTENSIVE RATS WITH EXPERIMENTAL DIABETES MELLITUS

ABSTRACT. Background. Cardiotrophin-1 is thought to be one of the key regulator of cardiac hypertrophy and hyperplasia, and has influence on apoptosis intensity and sensitivity to ischemia. **Objective.** The aim of the investigation was to study the role of cardiotrophin-1 in pathological myocardial remodeling in arterial hypertension with diabetes. **Methods.** Spontaneous hypertensive rats with experimental diabetes were used in the study. The expression of cardiotrophin-1 was analyzed by immunohistochemical method. Apoptotic cells were confirmed by annexin V detection. **Results.** It was found that cardiac content of cardiotrophin-1 was 2.6-fold higher in myocardium of hypertensive rats with diabetes in comparison with rats without diabetes. The concentration of annexin V was slightly increased in animals with experimental diabetes. **Conclusion.** The high content of cardiotrophin-1 in hypertension with diabetes is thought to be the factor which decreases the intensity of cardiomycytes' apoptosis.

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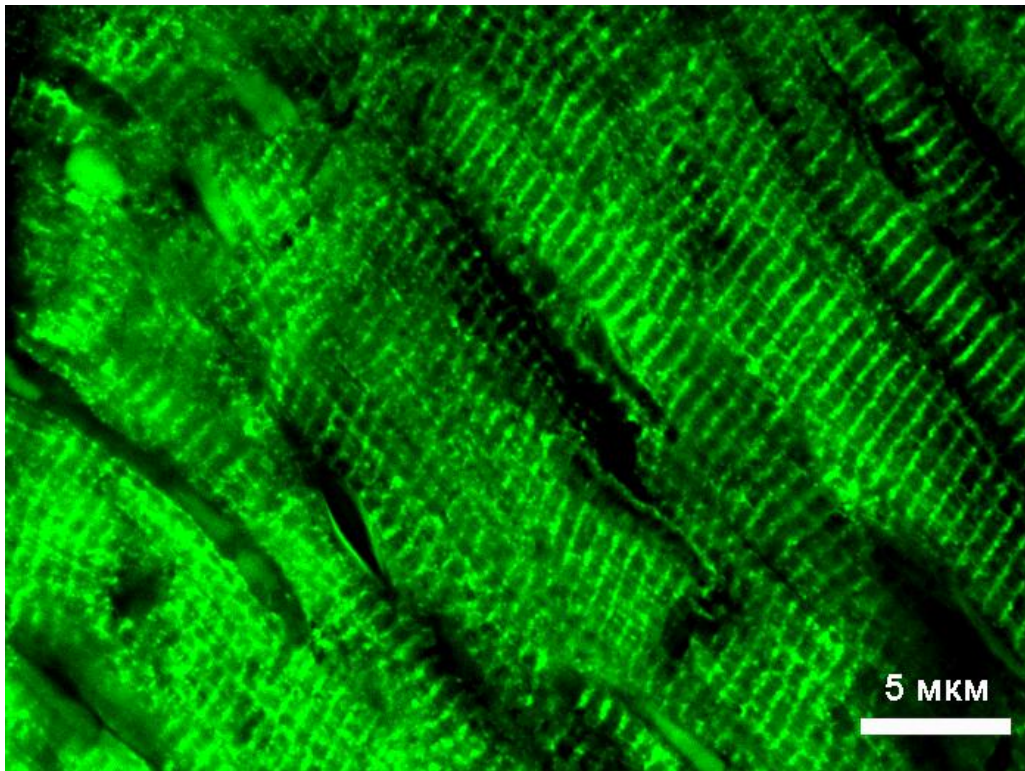


Fig. 1. SHR line rat myocardium with longitudinal fibers arrangement. Indirect immunofluorescence reaction with rabbit polyclonal antibodies to rat cardiotrophine-1. Lens $\times 63$.

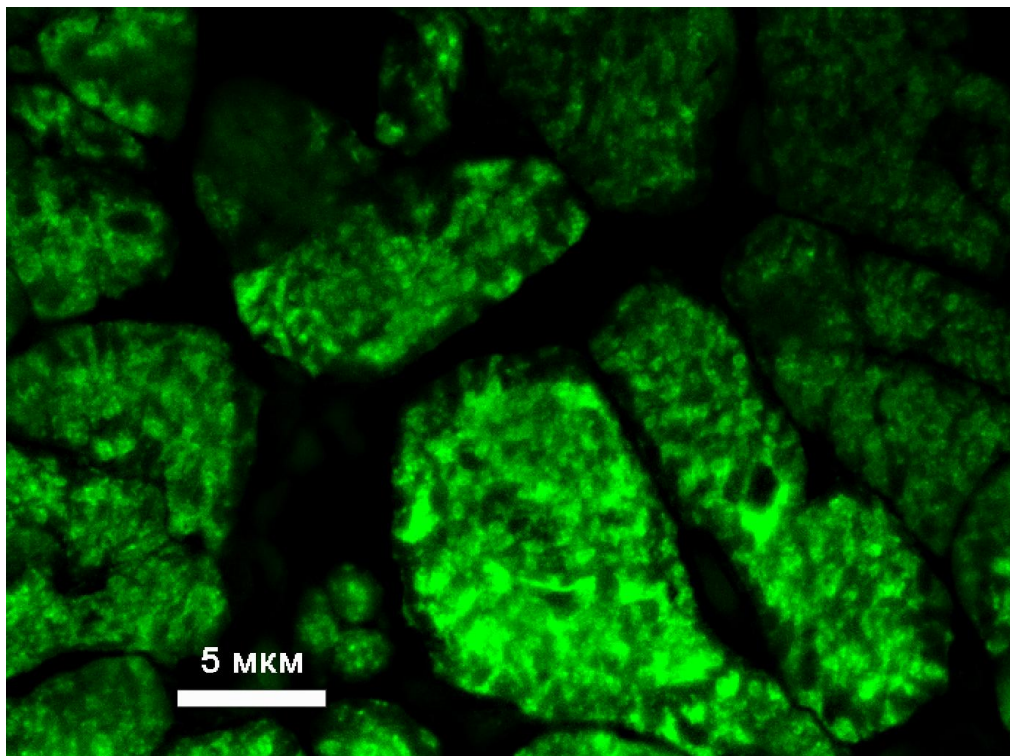


Fig. 2. SHR line rat myocardium with transverse fibers arrangement. Indirect immunofluorescence reaction with rabbit polyclonal antibodies to Rat Cardiotrophine-1. Lens $\times 63$.

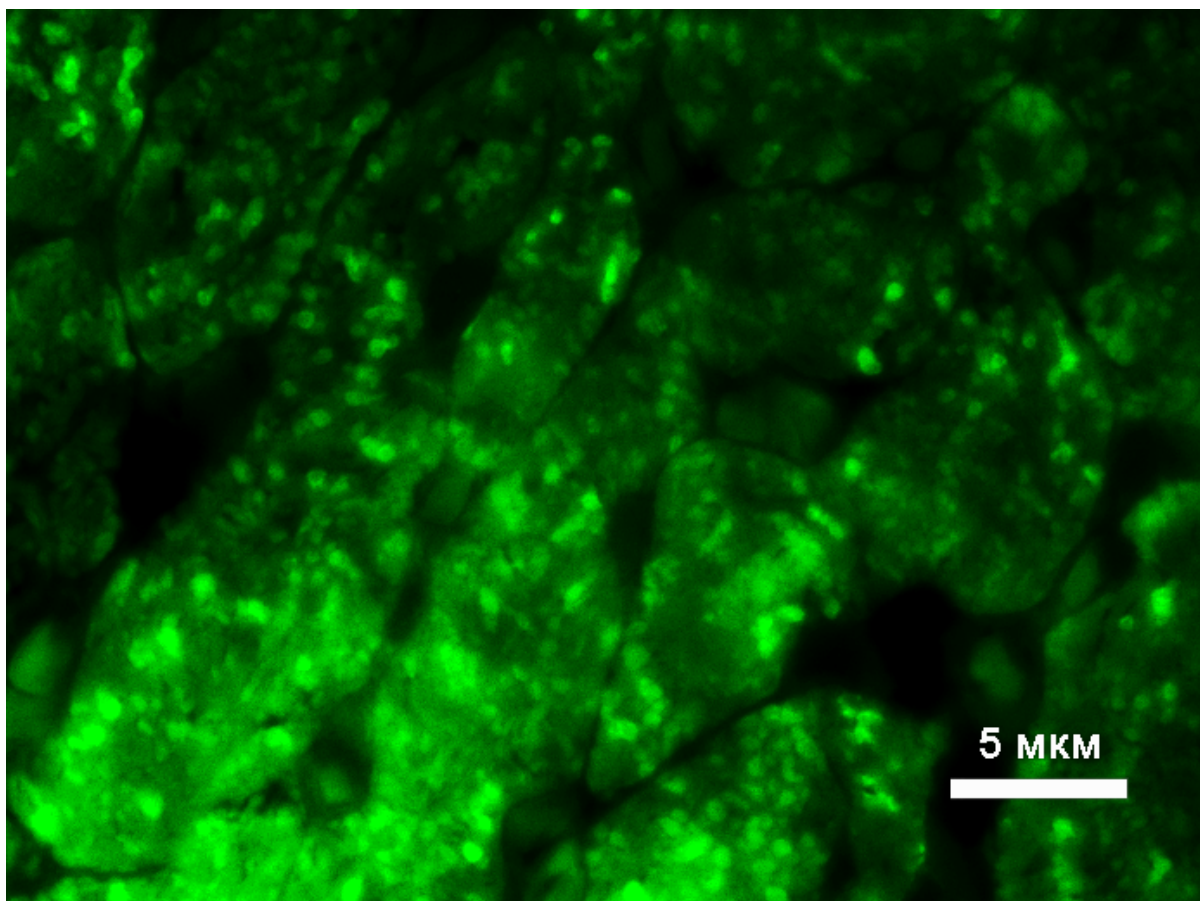


Fig. 3. SHR line rat myocardium. Indirect immunofluorescence reaction with rabbit polyclonal antibodies to Rat Annexin V. Lens $\times 63$.

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