

K.I.Dyagovets

State institution
“Dnipropetrovsk medical academy of the Ministry of Health of Ukraine”

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HISTOTOPOGRAPHY OF THE CHROMAFFIN TISSUE OF THE MOUSE HEART ON CRITICAL STAGES OF THE NORMAL CARDIOEMBRYOGENESIS

ABSTRACT. Background. Pheochromocytoma is tumor of chromaffin tissue, which is very hard to diagnose. Chromaffin tissue present not only in the adrenal gland, but also some cells determined in all organs of the head, neck and body. Heart population of chromaffin tissue has signs of the high developmental level during the embryonic period. It's known, that chromaffin cells develop from neuroectoderm, like neural crest cells. There is an opinion that neural crest cells differentiate into the chromaffin tissue. **Objective.** Determine histotopography of the chromaffin tissue of the mouse heart on critical stages of the normal cardioembryogenesis. **Methods.** Embryonic mice hearts line C56BL/6 were fixed by 10%-formalin and then were subjected to the standard histological procedures. The sections 5 μ m thickness were stained by Wiesel. **Results and conclusion.** It was established that among neural crest cells or condense mesenchyma determined cells with specific granules. These granules had specific semilunar shape and bilberry color. Cells which have same granules named like chromaffin cells. They differentiate from neural crest cells according to the opinions of some scientists. These cells have much less proliferation activity than neuroblasts. Chromaffin cells still had a few of phenotypic differences during the migration from the aortic arches. They might to be determined since the beginning of this migration. We observed that in our results. Summing up, there were defined two populations of chromaffin cells in embryo heart during the critical rotation and septation stages. They were located on subendocardial regions of the embryo heart mostly and had focal signs.

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✉ **katdyaga@gmail.com**

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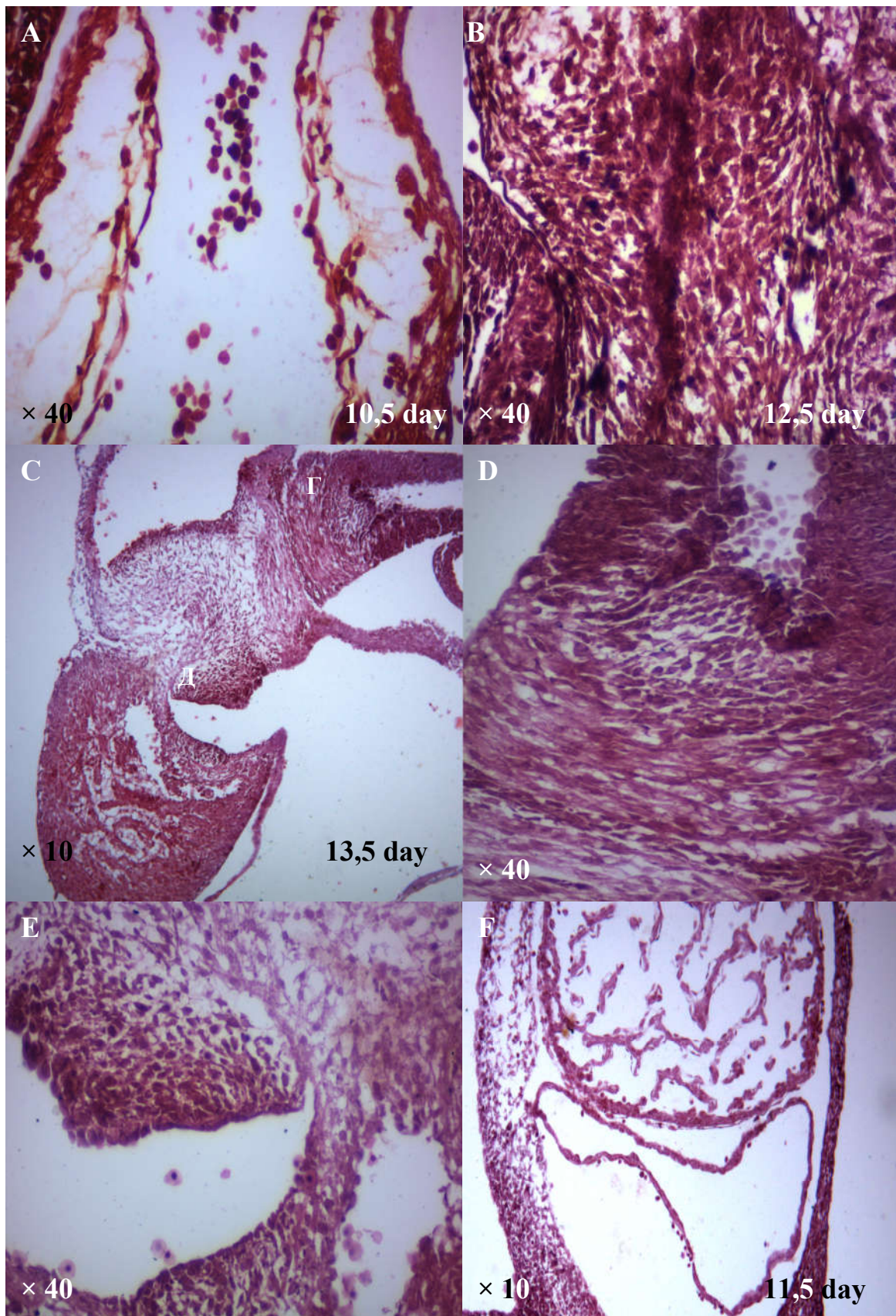


Fig. 1. Histological sections through the mouse embryo heart. Wiesel's stain. A, B – frontal sections through the conotruncal division; C-E – sagittal sections through the heart; F – horizontal section through the heart.

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